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## *Original Contributions.*

### NO EVIDENCE IN AMERICA OF PRE-COLUMBIAN LEPROSY.*


BY ALBERT S. ASHMEAD, M.D., NEW YORK.


As a continuation of my answer† to the Berlin Anthropological Society's discussion on my paper, the question of "Pre-Columbian Leprosy in America," contributed to the Berlin Lepra Conference, I submit the following letter which I wrote to Dr. Dorsey, of the Field Columbian Museum, Chicago:

"I am going to ask you to do me the favor which you promised when I sent you my little pamphlets. Will you look over your Huacos pots and send me a photograph of such of them as represent disease deformation of faces and amputated feet? I contributed a paper to the Berlin Lepra Conference on Huacos pots, in which I claimed that they did not represent leprosy, but syphilis and lupus, or uta. Virchow, in discussing that paper, said that the question remained still in abeyance. He presented a figure from Dr. Von den Steinen, representing a beggar who, said Virchow, was a leper. Carrasquilla, of Colombia, thinks that the amputated feet of some of the images represent Inca punishment. Polakowsky and Von den Steinen reject the punishment theory, and stand by my opinion that there is no leprosy expressed. I shall be much obliged to you if you can help me in further research."

Here is Dr. Dorsey's reply:

"FIELD COLUMBIAN MUSEUM, CHICAGO, *June 11th, 1898.*

"DEAR DOCTOR ASHMEAD,—Your letter of April 20th was duly received, in which you make inquiry in regard to certain pathological conditions appearing on Peruvian pottery. I have been unable to take this matter up before, owing to certain extensive changes in our department of photography, but will have the matter attended to at once, and you may expect two or three interesting

* Written exclusively for THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

† See "Transactions Berlin Anthropological Society, 1898."

photographs very soon. I remember that you wrote me when I was in Cambridge, inquiring as to whether I had any skeletons in which the phalanges presented a 'fused' condition. *I am glad to be able to report to you that in* an 'Ancon' mummy which I recently unwrapped, this condition prevails to a very marked degree: the similarity of the conditions and those of the photograph (bones of a leper's hand) which you then sent me, is very great. I am extremely interested in this entire subject, and will be very glad to help you in every way I can. Yours, very truly, GEO. A. DORSEY."

Here are two Peruvian photographs (Fig. 1) sent by Dr. Dorsey. They are unpublished, and represent Huacos pottery from Chimbote. The deformations are the same as those represented in some of my figures to the Berlin Conference: Soft part of the nose gone, septum showing that there has not been any falling in of the

*Field Columbian Museum Collection.* FIG. 1. HUACOS POTS FROM CHIMBOTE, PERU. *Dr. Dorsey's Photographs*

bridge of the nose, as occurs in leprosy; upper lip is retracted or eaten away, which does not happen in leprosy. In one of these images a tooth is lacking. There appears no tuberculation of the face. The most important part of these photographs is the hand of one of the figures, showing perfect fingers. If that type of leprosy had destroyed the nose, it would also have mutilated the hands. Even if the fingers had not gone so far as mutilation, they would at least have been *clawed*.

Regarding the Peruvian mummy, mentioned by Dr. Dorsey, I wrote him as follows:

"If you can give me X-ray photographs of the mummy whose hand bones and feet bones are very similar to my photograph of a leper's hand bones (published in my article, 'Pre-Columbian Leprosy,' *Jour. of Amer. Med. Assoc.*,

April, May and June, 1895), and also give me information as to whether the nose, fingers or toes are mutilated, I shall be extremely obliged. I have a paper in readiness for the Berlin Anthropological Society, and I should like before sending it to make my deductions on the question of leprosy in your Peruvian mummy. I wrote Dr. Kaurin, of Molde, Norway, for some photographs (X-rays) of hands and feet of living lepers. Of these I shall send you copies when I get them. With such photographs, compared with your Peruvian mummy, the conclusion will be decisive."

Here is my letter to Dr. Kaurin:

"Can you send me an X-ray picture of a leper's hand and foot for comparison with a Peruvian mummy just unwrapped in Chicago? This mummy's hand shows absorption of bones, as might occur in leprosy; at least, so says Dr. Dorsey, the Physical Anthropologist of the Field Columbian Museum. You know that I do not believe in pre-Columbian leprosy; therefore this unique finding is of extreme interest to me, for I never saw anything that suggested leprosy in the least in any pre-Columbian human remains."

Under date 16th July, 1898, Dr. Kaurin writes:

"I have sent your letter to my friend, Dr. Lie, at the Leper Asylum in Bergen. Perhaps he could send you an X-ray picture of a leper's hand and foot. As I have told you, the Leper Asylum, Reknas, in Molde, does no more exist; it is changed to a sanatorium for tuberculosis, and I have no lepers here now."

As yet I have received no X-ray pictures from Dr. Lie. Should I receive any I shall promptly transmit them to the Berlin Society.

As Dr. Dorsey was in Europe last summer, Mr. E. P. Allen, of the Field Columbian Museum, has kindly interested himself on my behalf in this mummy question. Here are three photographs which he sends me—a right foot, a right hand, and the face of the mummy (Figs. 2, 3 and 4). He says that at the end of ten days he will be able to send me the X-ray photographs which I want.

I may say here, that in all the Peruvian mummies which I have examined in various museums of America, I did not find one that showed the least evidence of leprosy. However, I have written to Mr. Allen the following letter, and I shall transmit the X-ray photos as soon as I receive them.

"NEW YORK, *October 3rd, 1898.*

"DEAR MR. ALLEN,—I have received the three photographs which you so kindly sent me. An examination of them shows not one sign of leprosy. If there was any doubt about this question in the hand and foot, the condition of the nasal bones, which are perfect, would settle the question. For the loss of nose in a leper shows a falling in of the nasal bones. There is no visible symptom of melting in the metatarsal, metacarpal bones, nor in any of the phalanges. However, to determine beyond cavil the question of leprous evidence in this mummy, which I presume is the one from Ancon, referred to by Dr. Dorsey, I should be extremely obliged to you if at the end of the ten days (necessary to get a satisfactory bulb for this work) you would send me those X-ray photographs of the mummy in question.

"With many thanks, very sincerely yours,

"ALBERT S. ASHMEAD."

I add here the translation of a work published in Dr. A. Petermann's "Mitteilungen," 1898, Part VIII., by Dr. H. Polakowsky, Berlin:

"*Was there a pre-Columbian Leprosy in America?* In the meeting of the Berlin Anthropological Society, of the 27th of April, 1895, Prof. Dr. Virchow

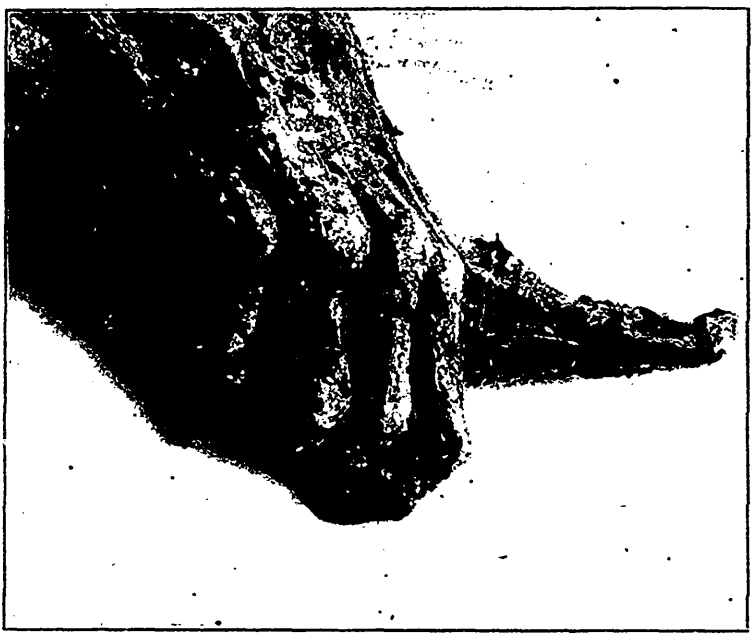

FIG. 2.

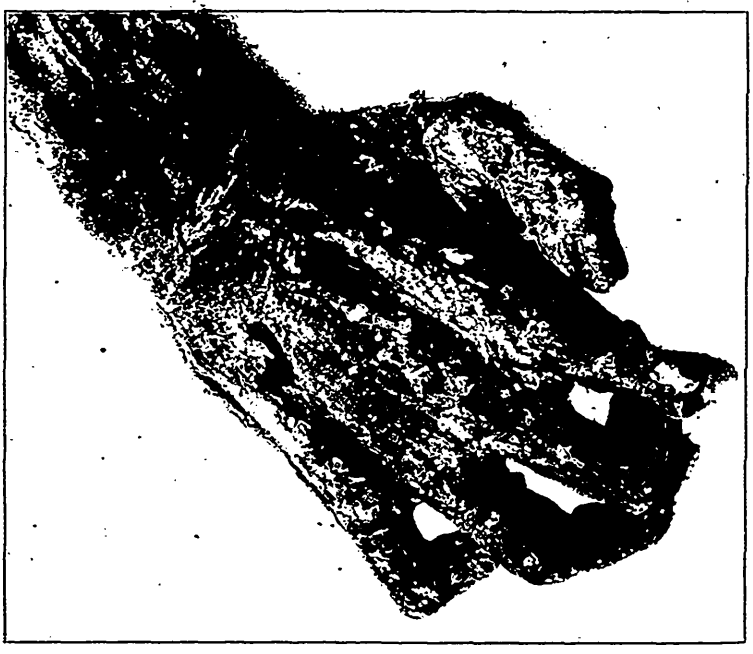

FIG. 3.

read a letter of Dr. Ashmead's, dated 26th of March, in which this gentleman informed him that he was a student of pre-Columbian leprosy in America, and called our attention to some earthen vessels which had been found along with mummies in old Peruvian graves. He declares that he could neither affirm nor admit that the mutilations of the human forms represented in them are necessarily or probably the work or the consequence of leprosy. He asks for the opinion of Mr. Virchow about them. Mr. Virchow declared hereupon that neither in the bones nor in the mummies of Peru, or of other parts of America, had he seen alterations which might have suggested the idea of leprosy. He said further that he had seen no proofs so far of pre-Columbian syphilis.

FIG. 4.

"In the meeting of the 18th of May, 1895, Prof. Bastian reverted to this question, and presented two of the Peruvian vases from the Berlin Museum. But Mr. Bastian does not express any opinion as to the meaning of these vases. On the other hand, Mr. Virchow remarked that these clay figures represented certainly pathological conditions; the head makes you think of leprosy, but it might also be syphilis. Mr. Virchow then speaks of the spreading of syphilis. He asks for more thorough searching in our collections, and assures us that so far the collections have furnished no proofs for leprosy or syphilis in pre-Columbian times.

"In the meeting of the Lepra Conference of 13th of October, 1897, Mr. Virchow presented a rather large number—about ten—of these Peruvian clay vessels, and referred in his speech to a rather voluminous manuscript on this

question sent by Dr. Ashmead. I think I may assume that Mr. Virchow referred to the manuscript which is printed in the first volume of the 'Mitteilungen der Lepra Konferenz,' and of which I shall speak presently. From the speech of Mr. Virchow I quote the following passages: 'The most interesting and also artistically most remarkable piece is a small kneeling figure which seems to represent a beggar, a leper—we may, at least for the present, assume that it was a leper—who addresses himself to the charity of the passers-by. He has a kind of drum with which he rattles, and has a very imploring and humble expression of face.' Mr. Virchow says further, if the question was only about the destruction of the nose, it might be lupus, and then continues: 'The thing would become a little more difficult through the feet, for that just these mutilations, which are undoubtedly spontaneous, should appear with perfect cicatrization, lies, at least in my experience, outside of the scope of known epidemic or endemic diseases, and I cannot deny that in the coincidence of these two conditions I see a strong argument that we have indeed to do with a representation of leprosy. So far, I differ from Dr. Ashmead, who in his memoir admits a certain mitigation.' Mr. Virchow further declares that the probability that we have here to do with syphilis is very small, and then says: 'I should, therefore, be disposed to interpret the matter thus, *that we have facts which speak for the pre-Columbian existence of leprosy.*'

"Dr. Ashmead had sent to the Conference a paper on the question of pre-Columbian leprosy; it was accompanied by three plates (photographs). One of the plates represented three skulls. Mr. Ashmead explains that the lesions were certainly not caused by leprosy. As to his remarks whether it is a case of syphilis, I cannot consider them in this place. The two other plates represent ten earthen vases, human figures, which are in part strikingly like those of the Berlin Ethnological Museum. Dr. Ashmead says that he has never found signs of leprosy on pre-Columbian bones. He says further that the clay figures with their deformed faces, while the fingers and toes never show any change, show very little resemblance to leprosy. He declares that the vases represented are undoubtedly of pre-Columbian origin. On what this affirmation is based he does not say, but names only the places where the vessels were found. The missing feet he always calls amputated. He says that the noses are, in several figures, eaten away, but that in no case this mutilation of the nose shows any likeness to the mutilations which leprosy produces on the nose. The lip also, says he, has been eaten away, and has not dwindled away through cicatrization, as would happen in a case of leprosy. He ends with the words: 'Tuberculosis, lupus alone could have done such work. If it was not one of these, then it was syphilis, *but it could never have been leprosy.* Two of our figures show strong prognathism, and apparently a diseased condition is meant. Could leprosy have produced that? Never!'"

Polakowsky continues: "The above is from the publications of Messrs. Ashmead* and Virchow, who have again stirred up the question of pre-Columbian leprosy (in America) in these last times. I cannot here speak and explain as to the clay figures in question. It would require the addition of a larger number of good plates. I advise the reader to read the debates of the Berlin Anthropological Society of the year 1897, where I have referred to the in-

* See also, "Pre-Columbian Leprosy," by Albert S. Ashmead, in *Journal of American Medical Association*, Chicago, 1895. Under date June 7th, 1898, Mr. Ashmead writes to me: "My studies in Yucatan proved to me that there was no pre-Columbian leprosy among the Mayas. In this opinion I am fortified by letters from Teoberto Maler, of Ticul; Thompson (of the Royal Geographical Society), of Merida; from Brinton, of Philadelphia; and Prof. H. C. Mercer, of the American Archæological Department of the University of Pennsylvania. Professor Virchow has absolutely no leg to stand upon when he asserts that this question is open. I proved it to the satisfaction of the Smithsonian Institute, Washington, and had supposed the matter ended." Just now (25th July) a larger manuscript of Dr. Ashmead's has been handed to me, which I shall submit to the Berlin Anthropological Society, and which will be published there.

ion of some distinguished Americanists about these vases, and where I have more largely developed my own idea and explanation. I will only remark here that the old Peruvian earthen vessels of the Berlin Museum, which represent human heads and figures with mutilated or lost noses, upper lips and feet, certainly do not represent lepers. They are probably persons who suffered from a terrible form of lupus, endemic in Peru, and called 'uta,' or 'llaga.' This is the opinion of Dr. Marcus Jimenez de la Espada, whose letter was printed in the debates of the Berlin Anthropological Society, 1897. Moreover, it has not at all been proved, and it is not even probable, that the whole lot of the vases which Mr. Wilhelm von den Steinen has put together from the Berlin collections (Ethnological Museum) are (tumblers or votive images?) of pre-Columbian origin. If, then, these clay vases represented really lepers, which, according to a number of experienced leprologists whom I have consulted, and according to my own knowledge of leprosy, is most certainly not the case, even then they would not prove anything for the pre-Columbian existence of leprosy.

"We come now to the theme which is announced in our title. If we want to answer the question whether leprosy is of pre-Columbian origin, that is, whether it has already existed in America, at the beginning of the sixteenth century, at the time of the invasion of Spaniards and Portuguese in Central and South America, and before the introduction of the Africans, we find that an answer is possible through different sciences. We shall, therefore, divide the principal question into a number of subordinate questions:

"No. 1. What is taught by the history of the discoveries and conquests in America regarding the age of leprosy? I have occupied myself specially with a part of the discovery stories, and more carefully with the history of Southern Central America and Chili. I have thus examined a great number of the old documents which the Spanish Government publishes, or which were made known by special works. Nowhere, as far as I can remember, have I found any indication which could prove, or only make it likely, that the Spaniards have found this disease among the natives. The same experience has been made by many other Americanists, whom I have consulted recently, either orally or in writing. They all declare that they have never found such a passage. However, it is not altogether impossible that such indications may still be found. Especially in the records of proofs (probanzas), where a great number of persons express their opinions as to the acts of their leaders or companions, we find in the answer to the general question the most wonderful testimonies, exaggerations and untruths. I shall only mention the sensational book of the celebrated Spanish historian, Ces. Fernandez Duro, Colon y Pinzon, where on the foundations of such 'probanzas,' a quite false estimate of the merits of Columbus as to the discovery of America is given. I found in one of these 'probanzas' the affirmation that the con-

queror of Colombia, Gonzales Jimenez de Quesada, died in Colombia of leprosy, which he had contracted in his expeditions. This fact that Quesada died of leprosy has been mentioned by some as a proof that leprosy was at home in America before the arrival of the Spaniards. The truth is that Quesada had contracted this disease in Spain, a country which he repeatedly visited, and had brought it to America. Similar statements in documents of the time of the conquest, if there are any, ought to be submitted to careful examination.

"No. 2. What results from the study of the natives, whose purity has survived, as to the Indian origin of leprosy? These so-called wild and uncivilized Indians, who have not yet come into lasting contact with whites, mongrels or Africans, are all free from leprosy. I have, during the last twenty-five years, gone through the greater part of the most recent literature of the travels of discovery in Southern and Middle America, and never found any statement that the travellers, who were in a large proportion physicians, ever found leprosy. I mention only the most recent journeys of discovery in Brazil, the opening of Northeasterly Bolivia and Eastern Peru by the commerce of rubber and the search for communicating ways, the definitive submission of the Araucanians (1882), the activity of the missionaries in Bolivia and in the Chaco, and our quite recent knowledge of the Goajira Indians. Everywhere white men and hybrids, during the last twenty-five years, have become for the first time acquainted with new tribes of natives. We have a large number of reports on the customs, manners of living, etc., of these Indians, but leprosy is mentioned nowhere. The Goajira Indians are to this day perfectly free from leprosy, although both the neighboring countries are very leprous. I consider the facts indicated in this subordinate question as being of great value, as these researches may still continue, and as there are in Brazil and Colombia, up to this day, some tribes more or less unknown.

"No. 3. What is taught by the examination of old human bones? Mr. Ashmead, of New York, and Prof. Virchow, of Berlin, have repeatedly declared and written that they had examined thousands of skulls and bones of American origin, and most certainly pre-Columbian, and that they never could discover any trace of the ravages caused by leprosy. I do not know that similar examinations by other physicians have led to other results.

"No. 4. What answer is given by the study of American languages to the question of the age of leprosy? I cannot enter into this question, as I am not a linguist. I allow myself only the following general considerations: The languages of the aborigines of America, as far as they have been preserved or are known in these days, were and are comparatively poor. It is therefore highly probable that several skin diseases were designated by the same word. Also, a positive designation for leprosy may have originated only after the apparition of this disease among the people in question. Moreover, people do not agree yet as to the

real meaning of many words of the Quechua and Aymara language, which is the first to be considered here. For the reasons just mentioned, I do not believe that linguistics can furnish materials, valuable or even tolerably safe, to help us to answer our question.

"No. 5. What do we learn by the study of old monuments? In various parts of Spanish America, ruins with numerous stone figures, stone sculptures, and frescoes have been preserved which are certainly of pre-Columbian origin, and which represent more or less distinctly human figures. I shall mention especially the ruins and stone figures of Southern Mexico, of Guatemala and Nicaragua. Nowhere we find anything that might represent leprosy. As to the clay vases, which represent human heads or whole figures, it is very difficult to say whether a given piece is pre-Columbian or not. This is true especially of the so-called Peruvian vases, which up to the most recent times were fabricated after old potteries in order to sell them to the tourists. Also, it is impossible to say whether abnormal representations of the extremities are due to the awkwardness or negligence of the fabricant, or whether they refer to pathological conditions. This must be said especially of the old Peruvian vases, in which the artist concentrates all his knowledge and all his power on the representation of the head.

"Resuming what I have said so far, I think I can affirm that nothing or very little (eventually in the linguistic domain) speaks for the existence of leprosy in Central and South America before the beginning of the sixteenth century. On the contrary, what we know to-day justifies us in saying, 'There was no pre-Columbian leprosy in America.'"

I received the following letter from Mr. E. P. Allen, of the Field Columbian Museum, Chicago, about the X-ray photographs of Dr. Dorsey's mummy's hand and foot. The concluding sentence of the letter shows that I can depend upon receiving these photographs at an early day; they will then be published before this article is concluded.

"My Dear Dr. Ashmead,—I am afraid I will have to disappoint you at this late date in not being able to supply you with the X-ray photographs promised some days ago. I have had any amount of trouble getting a satisfactory tube; as yet have not been able to stand the necessary current. I am, however, in hopes of finding one that will work, when I will send the photos, too late for your purpose I am afraid. [I wanted them for the October, 1898, Berlin Anthropological Society meeting.] I am obliged to experiment just when I can spare the time, and that has been but a few minutes lately. *I am satisfied there is no sign of mutilation in this mummy* [Italics are mine], as I have had glances through the 'fluoroscope' in my attempts to photograph. However, I have nothing to say until you have passed upon it. I am indeed sorry I cannot keep my promise at this time. You may expect photographs as soon as practicable."

Here is a letter from Dr. H. Polakowsky, Berlin, published with his permission, and my reply to it:

"I must give you a short account of my adventures in the last meeting of the Anthropological Society. On the 22nd of this month (October, '98), I gave, in presenting your manuscript, a short supplement to the debates of the last three meetings of last year. What I said I do not want to repeat here, as my words will be printed, and as I allow to be printed only what I really said. It is not at all the same thing with Mr. Virchow, as is proved by the reports of the last three meetings of the year 1897. I will, therefore, write to you what Mr. Virchow said when I had finished my little speech, and I will say a few words of criticism about what he said.

"He declared first, in great excitement, that he was not the first who had exposed the vases in question. Now, it is certainly true that about three years ago three vases from our Museum were presented to the Society These vases represented apparently sick persons, and came from old Peruvian graves. But for the Lepra Conference, Mr. Virchow had all the twelve Peruvian vases, which represent mutilated human heads and figures, sought out and presented to the Conference. These same vases he has, then, in two sittings brought before the Anthropological Society. Secondly, Mr. Virchow said that Mr. Ximenes de la Espada and Prof. Bandelier were not competent; that outsiders can only say what the figures do not mean, but not what disease they are meant to represent. To this I answered: "When Mr. Virchow presented the objects to the Lepra Conference, and invited to a debate, I alone spoke. The same thing repeated itself here before the Anthropological Society, where again all the physicians were silent. Mr. Virchow did not say that only physicians are allowed to give their judgment. But now when I, as an outsider, make opposition to him, outsiders, and among them such eminent Americanists as Mr. Ximenes and Mr. Bandelier are not competent! But the question here is not about corpses or bones, but about clay vessels, and therefore I believe that Americanists, who like myself have occupied themselves somewhat with the study of leprosy, have a very good right to give their opinion." To conclude: Mr. Virchow advised me to study lupus a little more carefully. I shall not follow this friendly advice. The indications about uta (lupus), of whose existence certainly not one member of the Society had had the least idea before, I have studied, and it seems to me, as to Messrs. Ximenes and Bandelier, yourself and Mr. Seler, that these two descriptions agree perfectly with the clay vessels in question. As it seems, the displeasure of Mr. Virchow has been caused by my speaking out these opinions of mine openly.

"H. POLAKOWSKY."

Dr. Ashmead to Dr. Polakowsky:

"Your interesting letter of the 26th October has been duly read and digested. In consequence I have sent you by to-day's mail, in one package a copy of the *Journal of Cutaneous and Genito-Urinary Diseases* of February, 1896, containing Mr. Bandelier's letter to me. You will also receive in another package several other numbers of the same paper containing articles of mine. I think the most important of them is that which gives Hansen's opinion about the same vases. In one of the articles you will find these words of Hansen's: 'As to the photographs of Peruvian bottles, I can only say that the faces do not present any signs of leprosy; the noses seem to be somewhat damaged at the tip, but perhaps the old Peruvians were stump-nosed; there are no tubercles, and no phenomena of anesthesia.' If Virchow is not satisfied with the opinion of the most eminent leprologist, at least in the opinion of Berlin, what other opinion does he want? He says that I am not always to be relied upon; but should not the inventor of the bacillus be relied upon in a question of diagnosis of leprosy? This is also Dr. Leopold Glück's opinion, which he published in Lassar's Own Journal, July, 1898. I shall also send you on Saturday some copies of the *Journal of the American Medical Association* of 1892, '94 and '95. You will find something from me on pre-Columbian syphilis and leprosy. The Peruvian mummy of the Field Columbian Museum shows no evidence of leprosy, although Dr. Dorsey said that the hand and foot looked like the photograph of the bones of a leper's hand which I had sent him I shall send you a copy of this publication, which will be the conclusion of my discussion with the

Berlin Anthropological Society, unless new material arrives from Colombia. Bandelier, although he is not a physician, is perfectly competent to judge in these matters; and this is the opinion of Prof. F. W. Putnam, of Peabody Museum, and the American Museum of Natural History. Pasteur was not a physician either. Yours respectfully, ALBERT S. ASHMEAD."

I merely add here that all the photographs of all my Huacos pots, that is, those of the Bandelier collection in the American Museum, were submitted by me to Dr. Hansen, and his opinion was given after he had looked at all of them. These same pots are published in the "Transactions of the Berlin Lepra Conference" In that Conference Dr. Virchow did me the honor to descend from the president's chair to discuss my paper, "The Question of Pre-Columbian Leprosy in America." He thought that one pot especially, an identical copy of Dr. Von den Steinen's little image, which Virchow had exhibited there, represented certainly a leper. Dr. Polakowsky replied on the floor of the Conference to Dr. Virchow's refutation of my claim, which is, that it was lupus (uta), or syphilis, that was expressed thereon; that in all his studies in Spanish America there was no evidence of any kind, either written or traditional, that such a disease as leprosy ever existed in those countries. The matter then was laid before the Berlin Anthropological Society, and there the discussion still goes on.

Finally I have received from Dr. Dorsey the following letter regarding that Ancon mummy (will-o'-the-wisp), whose hand and foot bones he thought resembled a photograph of the hand-bones of a leper which Dr. Hansen sent me some years ago, and which is published in my article, "Pre-Columbian Leprosy," *Journal of the American Medical Association*, 1895:

"FIELD COLUMBIAN MUSEUM, CHICAGO, *November 18th, 1898.*

"DEAR DR. ASHMEAD,—I have just returned from my vacation and find your letters awaiting me. Am very sorry I did not save you the trouble by taking time before I went away to find the specimens you wanted. I have now spent two days nearly going over Ancon skeletons (over one hundred), but I am much disappointed. I have not found what I expected, what I am still convinced I have, and I told you I have. I now can no longer continue the search. Sometime I may find the specimen I had in mind when I wrote you. To-day I mail you two small bones which may interest you—Ancon, Peru. Kindly return them when you are through with them.

"Very truly yours, GEORGE A. DORSEY."

I do not believe, and will not believe, until Dr. Dorsey produces the specimen, that any Ancon mummy can show evidence of pre-Columbian leprosy. (The two small bones, in my opinion, are metatarsal bones of a club-footed individual.)

In corroboration of my position against Dr. Virchow, that is, that there is no evidence of pre-Columbian leprosy in America shown on Peruvian potteries, I give here the opinion of Hansen and Leopold Glück, both doctors, which Virchow believes to be a *sine qua non* to competency in these questions. Hansen is, as the whole world knows, the discoverer of the bacillus. Glück is admitted the ablest nasal and throat specialist in leprosy.

Hansen, regarding the photograph of Huacos potteries (which I published in an article, "Pre-Columbian Leprosy," *Journal of the American Medical Association*, 1895):

"I can only say that the faces do not present any signs of leprosy. The noses seem to be somewhat damaged at the tips, but perhaps the old Peruvians were stump-nosed. There are no tubercles, and no phenomena of anesthesia."

Glück (from Prof. Lassar's *Dermatologische Zeitschrift*, July, 1898), "On the Question of Evidences of Leprosy on Old Peruvian Pottery":

"LETTER TO THE EDITOR,—You would oblige me very much if you would publish the following lines in the next number: Mr. Dr. Polakowsky was kind enough to send me a reprint of the Berlin Anthropological Society, what Virchow says about the morbid representations on old Peruvian pottery. In the last of the communications of the 18th December, 1897, Mr. Polakowsky refers to my humble person, saying: 'You will find three papers about the leprosy of the nose in the first volume of the communications of the leprosy conference. Among them there is also a great work of Dr. Glück, chief physician of the leper hospital in Sarejivo (Bosnia). This gentleman said to me, after the October sitting, that I had been quite correct in my judgment that these vases did not represent leprosy. He asks me to say at the next opportunity, referring to himself, that the nasal leprosy has another aspect, that the bridge of the nose sinks, that the openings of the nose are closed, that the wings of the nose swell consider..bly, giving the idea of an opera-glass; these are the *ipsissima verba* of Dr. Glück. Dr. Leloir, one of the first leper physicians, who died prematurely, uses the same designation. It is correct that after the meeting of the Berlin Anthropological Society, 16th October, 1897, at which I assisted, on the invitation of Dr. Virchow as a guest, I have declared to Mr. Polakowsky that these vases represent no leprosy. It is likewise true that I have spoken with the said gentleman about the deformations of the nose in lepers, but I cannot remember whether I have mentioned then only the opera-glass nose, or also the other deformations of this organ. At any rate, I want to declare here that I distinguish not one, but three types of nasal deformation in leprosy, as appears from my report published in the first volume of the communications to the Berlin Lepra Conference, "Leprosy of the Upper Respiratory and Digestive Tracts." But it was not the defect of nose and lips alone, which compelled me to believe that the vases did not represent leprosy. In considering these vases, I asked myself what form of leprosy we could have here? The faces of the figures show no vestige of leontiasis, the tips of the ears are rather thickened or elongated, the hands are not swollen, therefore we can exclude lepra tuberosa, especially as extensive mutilation of the inferior extremities never occurs in this form of leprosy. It could then only be lepra nervorum seu anesthetica. It is true I know neither by the literature nor by personal observation any case of lepra nervorum, in which the tip of the nose, part of the wings of the nose, and of the septum, as well as the upper lip have perished; yet this would not be impossible, especially if one considers that paralysis of many facial nerves with consequent inflammations and ulcerations of the skin are not particularly rare in this form of leprosy. The mutilations (?) of the legs, it is true, do not occur frequently, either in the form which is represented in our vases, but this is also possible in lepra anesthetica. But now the hands of the figures show absolutely nothing abnormal, which alone speaks already quite decidedly against the assumption of leprosy.' It may happen here and there, now and then, that the affections on the legs are more advanced than on the hands, but it is entirely improbable that the latter in such a late stage of disease as that represented on the figures, could remain entirely intact. The muscular atrophy and the contractures of the fingers are in all cases of lepra nervorum which have reached any considerable degree of development, manifestations so conspicuous and characteristic that the old Peruvian artists would certainly have been aware of them.

"Finally as to the legs, I see in them no mutilations, but amputation stumps, as those which remain after a regularly executed amputation of the leg. The stump has a smooth hemispherically-shaped extremity, deep horizontal or vertical furrows, which must be considered as retracted scars after flap-amputation on the legs.

"If we consider all these facts, one becomes convinced that the old Peruvian potteries which Mr. Virchow, on the 13th of October, 1897, has demonstrated in the third sitting of the Lepra Conference, and which afterwards have repeatedly been the object of debate in the Berlin Anthropological Society, certainly represent no leproses.

"It must be left to the investigator of the old Peruvian civilization to explain in a positive manner the meaning of the vases in question, that is, of the figures which adorn them. The leprologist can do that only in a negative manner by declaring that the affections which are apparent in them can certainly not be considered as leprosy."—*Letter of Mr. Counsellor of Sanitation and Chief Physician, Dr. Leopold Glück, in Sarejivo, to the Editor.*

As further corroborative proofs, I have studied and put on record the conditions of leprosy in Mexico, Nova Scotia, the United States, Peru and Bolivia, Brazil, Colombia, and Argentina, and in none of these countries did I find any historical evidences of leprosy.

In the *Berliner Klinische Wochenschrift*, No. 46 (-49), 1897, Virchow, in discussing a paper on leprosy in Brazil, by Dr. Havelburg, of Rio de Janeiro, in the German Medical Society of Berlin, disputes Dr. Havelburg's claim that the leprosy in Brazil was *post*-Columbian. Here are his remarks:

"Before I open the discussion, I should like on my side to observe in regard to the observation of Mr. Havelburg, that it is historically established that leprosy was brought into Brazil by people coming from Europe—that is, at least, how I understood it. That this is rather a well-meaning than a sure interpretation of historical facts, as far as I know there is nothing sure in that direction, and I will only emphasize, what I have done before, that just in the last times new researches in America—as well in North as in South America—have commenced in order to decide the question whether there has been a pre-Columbian leprosy. I have, at the occasion of the Jubilee Lewin, already called the attention of the public to this, that there are really all kinds of objects which may be interpreted in an affirmative sense. The most striking, according to my opinion, are certain earthen or clay figures which have been found in old Peruvian tombs, and which certainly show mutilations and changes of other sorts which might easily be referred to leprosy. These researches are not concluded, because we have not to do with real works of art which might be used as authentic interpretations. Anyhow, the things are very strange, and Mr. Ashmead, who at this moment is travelling about America in order to pursue the question still further, would probably have much to say against the theory that leprosy has surely been introduced into America. The reverse opinion is, according to my opinion, still discussable."

Dr. Havelburg answered:

"The much honored Mr. Chairman has criticised my historical indications that leprosy was imported into Brazil by the Portuguese. Any findings that leprosy existed in prehistorical times in Brazil are not existing so far. In a work based upon historical foundation, of Dr. Marcus Pareira, a jurist, and which I should like to bring to your library, there is an historical representation of the appearance of lepra in Brazil, and the development of the Hospital dos Lazaros, in Rio de Janeiro. The Portuguese are supposed in that work to be the importers of leprosy. In the year 1420, the Portuguese discovered the

island of Madeira; in the year 1498, under Cabrel, Brazil was discovered. Into the same period falls likewise the discovery of the Canary Islands by the Spaniards. According to the communications of different authors, and especially of two gentlemen in the 22nd Volume of the 'Archives for Pathological Anatomy,' as answers to an appeal made in the year 1861 by Mr. Secret Secretary Virchow in the case of lepra science, leprosy was most probably brought by Spaniards into the Canary Islands. In the fifteenth century leprosy was abundantly existing in Spain and Portugal. In 1542 the first leproserium was established in the Canary Islands by means of the men who, under the Portuguese flag, populated Madeira. In time, leprosy reached that island, so that in the year 1640, an especial lepra hospital had to be established there. But the greater part of the emigrants directed themselves to the greater colonial possession of Portugal, Brazil, so that the same was done there as in Madeira. I have received by good chance a small pamphlet of my colleague, Azevedo Lima. He has much to do with the leper hospitals of Portugal. He mentions it as a fact, that in the sixteenth century leprosy was carried into Brazil by Portuguese colonists. Two years ago I was asked by Prof. Ashmead, of whom Secret Secretary Virchow also makes mention, to give him some information about this matter, as he was occupied with a work on the spreading of leprosy through the Spaniards of the American continent. And on that occasion I found that the Brazilian authors were unanimous in this idea that the Portuguese carried leprosy into Brazil. Of course this is not a proof, and I am indebted to Secret Counsellor Virchow for the appeal which he made to me to search after the foundation of this historical idea so generally admitted in Brazil."

I received from Havelburg a copy of this discussion, and I sent Havelburg the following letter which he published in the *Wochenschrift*, Berlin, 1898:

"DEAR DR. HAVELBURG,—In the discussion in Berlin, on a certain paper of yours on leprosy in Brazil, Prof. Virchow disputes your claim that it is historically established that leprosy was brought into Brazil by people coming from Europe. He does not think this to be a sure interpretation. The earthen images, the Huacos of Peru, he says, show certainly mutilations and changes which could easily be referred to leprosy, and the question of pre-Columbian leprosy is still open. I think with you that the disease was imported by Spaniards and Portuguese, perhaps negroes—by the last not very probably; there is not a scintilla of evidence that leprosy was here before Columbus. I have sought over all America for some possible evidence of that kind, and have not found it. As to the deformations on the Huacos pottery, I have shown to the satisfaction of the Washington Smithsonians, and Prof. Brinton, the ablest American paleontologist, that these potteries show no evidence of leprosy; they are to be interpreted as syphilis and lupus, both of which diseases undoubtedly existed before Columbus on this continent. In the matter of syphilis, Virchow is the last to hold out against a pre-Columbian syphilis. He will not admit it. Prof. Brinton wrote me some time ago that I should endeavor to convert Virchow to my view and I wrote to Prof. Putnam, of the American Museum of Natural History, to forward to that German scientist a Pachacamac skull, which was sent to the Museum by Prof. Bandelier, now at Lake Titicaca, Peru. This skull was dug out from a depth of twelve feet at Pachacama. There has never been found at Pachacama any *post*-Columbian bones buried at such a depth. Bandelier wrote me that this skull was without question pre-Columbian. It bears osseous evidences of pre-Columbian syphilis, so that we have two evidences in favor of the latter, the Huacos pottery and this skull. The bones of Colombia, the most ancient seat of leprosy in South America, have never been studied. Now Colombia is the country where this disease is most prevalent. It is my desire some day to go through this bone work for such evidence. I do not think I shall find it. As far as negative evidence can count for anything, leprosy did not exist in pre-Columbian days in the Micmacs of Nova Scotia, the Aztecs of Mexico, the Aymaras and Incas

of Peru, nor among the Indian tribes of Brazil, nor in Alaska and British Columbia. You are at liberty to send this letter to Prof. Virchow, or to any Berlin authority you please. A. S. ASHMEAD."

I also wrote to the editor of *Janus* as follows:

"I enclose to you some pictures of those Huacos potteries, some of which were published in the *Journal of the American Medical Association*, *Journal of Cutaneous Diseases*, and 'Transactions of the Berlin Lepra-Conference.' One of them, sent to me by Prof. Bastian, through Dr. Ed. Seler, of the American Department of the Royal Ethnological Museum, Berlin, represents a dwarf with evidences of lupus eating away the lip, and what I consider Peruvian Verrugas on the body. Mr. Jonathan Hutchinson, however, publishes this last in his *Archives of Surgery* for February, 1897, under the title, 'Molluscum Fibrosum.' I think he is wrong. By no means is this tuberculation to be considered leprosy, for the image is represented scratching; therefore no anesthesia. I have coming from Peru a consignment of some of these Huacos pots with deformations; these are picked from the largest collection in Peru (over a thousand) for possible evidence of leprosy. I shall be very glad to publish some of them in your journal when they arrive. I will only add that, as the matter stands now, *there is no such thing as pre-Columbian leprosy.*

"A. S. ASHMEAD."

Besides these researches I have hunted as far as I could through the Jesuit Archives in South America, and the Vatican Library, and the Archives of the Indies, in Seville, Spain. That my search has been a real one, and properly backed up by Catholic authorities, is shown by the following correspondence:

From the Apostolic Delegate in Washington:

"WASHINGTON, D.C., 201 I STREET, N. W., *July 26th, 1895.*

"*To Dr. Albert S. Ashmead, New York.*

"DEAR SIR,—Yours of 20th inst. received with pleasure. I comply with your request, and enclosed please find a letter of introduction for the Most Rd. Archbishop of Buenos Ayres, to whom I explain the purpose of your studies and researches. I take this occasion to thank you for the pamphlet you sent me, which proves to be very interesting.

"Yours respectfully, † FRANCIS, ARCHBISHOP SATOLLI,
"*Del. Apost.*"

Enclosure:

"WASHINGTON, D.C., *Dec. 28, Jul. 1895.*

"Apost. Del., U.S.A.

"Cum Albertus Ashmead, medicinæ doctor historica studia circa leprarum morbum in ista regione peragere cupierit literas introductionis apud A. Zuam a me petierit, ego licet personaliter eum non cognosco tamen quia jam graphalum cui titulo—*pre-Columbian Leprosy*—ediderit, eum A. Zuz commendo ut ea ratione quam opportuniorem censebit, subsidio esse velit ad faciliores ejus inquisitiones reddenda.

"Omni qua parest reverentia et benevolentia permanes.

"Excellentia V. Allmy et Remy.

"Addictusque in Xto. † FR., ARCHBISHOP SATOLLI,
"*Apost. Del.*"

Translation:

"As Dr. Albert Ashmead has begun studies about the leprosy disease in this land, he has asked of me letters of introduction to A. Zuam. Although I do not know him personally, yet, as he has published a pamphlet whose title is

'Pre-Columbian Leprosy,' I recommend said Dr. Ashmead to A. Zuz, in order that he, by what means he will think fit, may assist him and thus facilitate his researches.

"I remain, with all due reverence and love of your excellencies, most devoted in Jesus Christ. † FRANCIS, ARCHBISHOP SATOLLI,

"*Apostolic Delegate.*"

Here is a letter from Archbishop Corrigan to the American College in Rome:

"ARCHBISHOP'S HOME,

"452 MADISON AVE., NEW YORK, *January 30th, 1895.*

"*Rev. Lr. Farrelly, Rome, Italy (American College), Via dell Umilta 30.*

"REV. DEAR DR.,—Dr. Albert S. Ashmead, of this city, is interested in tracing the history of certain diseases, and he finds it important for the success of his labors to be able to consult the Vatican Library. As Monsignor Carini, so well known in connection with the Vatican Library, died suddenly last week, and as I do not know who his successor may be, I take the liberty of asking you to have the kindness to interest yourself in behalf of Dr. Ashmead, so that he may obtain, if possible, the information which he desires. I am sure the Holy Father will be gratified in having the Vatican Library contribute to the diffusion of scientific knowledge, as his object in throwing open its treasures to the world was precisely this, that truth might be better known and more fully appreciated.

"With thanks in advance for your kindness,

"I am, Rev. dear Doctor, very faithfully yours,

"M. A. CORRIGAN, *Abp.*"

And here is the reply of Reverend Farrelly:

"AMERICAN COLLEGE, ROME, *July 15th, 1895.*

"*Dr. Albert S. Ashmead.*

"MY DEAR SIR,—I had hoped to have given you long before this a satisfactory answer to your questions, regarding the disease of leprosy in Mexico, Colombia and Peru; but the investigations have not as yet thrown any light upon the subject. The Vatican Archives, I am assured by a friend who has made a very thorough examination of them, contain nothing whatever having any bearing upon the matter. As he is a most competent student, who has familiarized himself with these archives during the past ten years, I think his assertion may be taken as final.

"Probably something may come of a search which is being made among the archives of the Jesuit Fathers here.

"Professor Filippo Scalzi, a most noted medical archæologist, is much interested in your questions, and has several of his friends helping him to find uments relative thereto; but owing to the want of precise classification of correspondence in the archives here, there's no telling when they will succeed in finding anything.

"As the rector of the College has been in bad health for so long, and we have no vice-rector, I have been so busy of late that I hadn't the opportunity, during the hours in which the archives of the different libraries were accessible, to devote my personal attention to the search. Consequently I have had to rely entirely upon the kindness of friends. I can assure you that you may count upon their willingness and ability to find whatsoever is to be had.

"Meanwhile, please accept and convey to His Grace, the Archbishop, the expression of my regret at not being able to give you a more satisfactory answer at this late date.

"In thanking you cordially for your very interesting article,

"I am, my dear sir, sincerely yours in Xto,

† "JOHN P. FARRELLY.'

I have published also a letter from Dr. Francis G. Delgado, who has charge of the Archives of the Indies at Seville, Spain. His answer will be found in my article, "Leprosy in America before the Advent of Spaniards and Negroes," *Journal of the American Medical Association*, December 8th, 1894.

Mr. W. T. McGee, the ethnologist in charge of the Bureau of Ethnology, Smithsonian Institute, Washington, in reply to my inquiry, wrote me, July, 1895:

"Recurring to previous correspondence, I beg to say that, at your request, I had a search made in the United States National Museum for abnormalities in skulls and other bones from Central and South America, such as might be ascribed to leprosy; but I regret to say that no material of value was found."

Mr. Tweddle, of Talara Paita, Peru, whose mother owns the largest collection of Huacos pottery in the world, wrote me, October 15th, 1895, as follows:

"In answer to your inquiries I would say, that in looking over our collection of Huacos, there are several specimens which would probably interest you, as they represent figures which may be suffering from leprosy, syphilis, or a disease known in Peru by the name of 'Uti,' and which resembles tuberculosis. This disease, like Verrugas fever, is confined to certain districts of Peru.

"I have spoken to several medical men in Lima, and they have told me that what is called leprosy in Peru is not a true leprosy."

To conclude: Dr. Brinton, in his article on "Various Supposed Relations between the American and Asian Races," published in the "Memoirs of the International Congress of Anthropology in Chicago," learnedly refutes the theory of any communication between America and Asia. He says:

"Do any of the numerous languages and innumerable dialects of America present any affinities, judged by the standards of the best modern linguistic schools, which would bring them into genetic relationship with any of the dialects of Asia?

"I believe I have a right to speak with some authority on this subject, for the American languages have constituted the principal study of my life; and I say unhesitatingly that no such affinities have been shown; and I say this with an abundant acquaintance with such works as 'The Prehistoric Comparative Philology' of Dr. Hyde Clark; with the writings of the Rev. John Campbell, who has discovered the Hittite language in America before we have learned where it was in Asia; with the laborious 'Comparative Philology' of Mr. R. P. Greg; with the 'Amerikanisch-Asiatische Etymologien' of the ardent Americanist, Mr. Julius Platzmann; with the proof that the Nahuatl is an Aryan language, furnished by the late Director of the National Museum of Mexico, Senor Gumesindo Mendoza; with Varnhagen's array of evidence that the Tupi and Carib are Turanian dialects imported into Brazil from Siberia; with the Abbe Petitot's conviction that the Tinneh of Canada is a Semitic dialect; with Naxera's identification of the Otomi with the Chinese; and with many more such scientific vagaries which, in the auctioneer's phrase, are too tedious to mention. . . . I maintain, therefore, in conclusion, that up to the present time there has not been shown a single dialect, not an art nor an institution, not a myth or religious rite, not a domesticated plant or animal, not a tool, weapon, game or symbol, in use in America at the time of the discovery, which had been previously imported from Asia, or from any other continent of the Old World."

Now, I ask any reasonable man, how could there have been a

pre-Columbian leprosy without contamination from Asia? Let Dr. Virchow answer this. If all that I publish does not convince him of the error of his ways, then he must be utterly unteachable, and I should think that he might adopt the motto: *Sic volo, sic jubeo; stat pro ratione voluntas.*

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## ASYLUM OR HOSPITAL—WHICH?

BY ERNEST HALL, M.D., L.R.C.P. (EDIN.), VICTORIA, B.C.,
Fellow of British Gynecol. Society, etc.

HEREWITH are given the brief histories of two cases that have apparently been saved from the necessity of a residence in the Provincial Asylum. In each case had a local physician, without a thorough examination, recommended commitment, but after a pelvic examination the hospital was chosen instead of the asylum, with results more than satisfactory.

CASE 1. Mrs. O., aged 27, family history excellent, no insanity in relatives, one child six years ago, not pregnant since. After confinement gained strength very slowly, was practically an invalid for four months. During the last five years and a half she suffered with pains in the back and sides, but continued able to attend to domestic duties until she began to give signs of mental instability, said her husband tried to poison her, would run away from home and be found in the house of some acquaintance in a distant part of the city. The writer found her in the house of a friend, and with some little persuasion induced her to submit to examination, which showed retroversion apparently with adhesions. As the patient was not under anesthesia and sensitive, the condition of the appendages was not determined. Upon this finding I advised her being sent to the hospital. She again ran away, thus delaying the treatment a few days.

*Operation.*—Curettement, the uterus was not adherent. Abdominal section, right ovary cystic was removed with its tube, left tube thickened and was also removed, the ovary only partly diseased was resected and the remaining part was fitted cap-like over the ligament stump. Post-operative history normal, leaving hospital eighteen days after operation. Once after returning to her home she had a desire to get up and go out, but latterly has become herself again, and at the present time, two months after the operation, is physically sound, showing no indication of mental irregularity.

CASE 2. Mrs. S., aged 42, kindly referred by Dr. John Duncan, six children, three miscarriages, youngest child eight years old, no miscarriages since, no menstruation for four months. Had complained of pain in the head for eight months, became physically weak and very

anemic, with attacks of "epilepsy" (probably hysteria), three or four times a day, but for three weeks had been better. For two years patient had shown intermittent melancholia, latterly thought her husband was going to leave her, ran away from home and was found wandering aimlessly in the streets. She destroyed the house furniture, threatened to commit suicide, pawned her jewelry, had to be kept under restraint at home, broke out of the house and was taken in charge of by the police, etc. An examination showed bilateral cervical tear, retroversion, left ovary enlarged and hard, right ovary apparently in a mass of adhesions.

*Operation.*—Curettement, removed a mass resembling decidua but detected no ovum; as no microscopical examination was made it is impossible to state definitely its nature. The cervix was repaired, abdomen opened. The pelvic peritoneum showed small millet and cysts somewhat resembling tuberculosis. The right ovary was enlarged, the left enlarged and cystic, with varicocele of both broad ligaments. The appendages were removed; post-operative history normal, left hospital the twenty-second day, and to-day is managing her household, giving no indication of mental abnormality.

These cases require little comment, the facts speak for themselves. When will the prevalent and erroneous conception of insanity give place to one based upon scientific findings? Must the symptoms continue to be mistaken for actual disease, simply because pulse and temperature are wanting in febrile manifestations? Are we ready to admit that the delusions of the insane, or the delirium of pneumonia or typhoid are similar in their symptomatic classification? In theory we may affirm, but in practice a denial of such identity is manifested in the different treatment awarded to such cases. Each of these patients presented symptoms common to many who have spent the greater part of their adult lives in the insane wards, and it is not beyond the probable that had these cases been committed to the asylum they would have found their environment not calculated to eradicate the underlying disease, and barely possible a tendency to intensify their delusions. The necessity of making a thorough pelvic examination of these cases before suggesting asylum life, cannot be too strongly urged. This, if systematically followed would at least send two patients to the hospital for one sent to the asylum.

Why is it, let me ask our sceptical friends, that the proportion of insanity in the females, as given by the official reports, is two of the married to one of the single, while in the males the reverse is the case? Is it not probable, as stated by Hobbs, that the relation of wife and mother, with their attendant genital lesions, is at least one great factor in the production of insanity? If this be the case, then let us no longer be negligent in our duty to those who bear the burden of life's duties, and consider such symptoms as formerly were but finger-posts pointing to the asylum, as indications of the necessity for a closer examination and more skilful treatment.

Upon the whole, my work in this department, although not assuming great proportions, has been satisfactory. During the last fifteen months I have examined twenty-four women, all of whom, with the exception of one, were insane when seen, this one having been affected two months previously. Of these (24) I found pelvic disease in all but two, and one of these two, after her return from the asylum where she regained her reason, gave me a history of a year's illness following birth of one of her children and of subsequent hemorrhage and prolapse, also the removal of uterine polypus. Although no abnormality was discovered by pelvic examination, there is every reason to believe the probability of intra-pelvic trouble.

Fourteen cases have been subjected to operation, with the following results: Cured, five; improved, one; improving, two; too early to report, four; died, two. Of those cured, one had a history of mental disturbance covering the space of eight years, with two years and a half in the asylum, and one with a history of nearly three years of insanity. One not insane at time of operation is included, as there have been no manifestations of insanity since, now over six months, while the other two were recent cases. Of the two deaths, one resulted from tubercular meningitis seven weeks after the operation for the removal of enlarged and cystic ovaries, not connected in any way with the operation, as the wound had healed and the nurse discharged two weeks previously; the other followed infection of the pelvic veins, the probable result of a general infection which existed in the hospital at the time of the operation, which was the result of three other deaths at the hands of most careful surgeons and also infected several wounds.

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**A Proposed Bacteriological Laboratory for New Brunswick.**

The *Maritime Medical News* for December states that a movement is on foot to bring about the establishment of a provincial bacteriological laboratory, under the care of a competent bacteriologist, for the Province of New Brunswick. The Provincial Board of Health has had the matter under consideration for some time, and has urged the local government to make provision for the salary of the bacteriologist in charge. It is proposed that every physician in the province shall command, *without charge,* the services of the bacteriologist for the early diagnosis of diphtheria and typhoid fever. Should the laboratory be established, it is expected that a small fee will be charged for sputum examinations and for tumor cuttings.

The *News* expresses the hope that the entire profession in New Brunswick will unite in support of the Provincial Board of Health in its effort to secure the establishment of such an important and necessary adjunct to the practice of medicine, and such a valuable means of preserving the public health.

# Clinical Medicine.

...IN CHARGE OF...
ALEX. McPHEDRAN, M.D.

## INFLUENZA: ITS PROGNOSIS AND TREATMENT.

In an able article on "Influenza: Its Prognosis and Treatment," appearing under the heading, "Cyclopedia of the Year's Literature," in *The Monthly Cyclopedia of Practical Medicine* for January, 1899, Dr. N. S. Davis says, in reference to treatment, "that to allay the pains and soreness and restore active elimination from the skin, kidneys and intestines are the rational indications to guide us in the choice of remedies. If called in the early stage of the disease, in all the milder cases he administers a single powder—containing from 15 to 18 grains of Dover's powder, 3 grains of calomel, and 3 grains of pulverized gum-camphor—given at bed-time. This is followed in the morning by a saline laxative sufficient to procure two or three intestinal evacuations. This is usually followed by relief of all the more important symptoms; by giving 3 grains of quinine sulphate three times a day for three days the convalescence is completed. In the more severe cases, instead of one powder at bed-time, the same is given every four hours until four have been taken. The bowels are then acted upon by means of the laxative and followed with moderate doses of quinine alternated with 5-grain doses of sodium salicylate until all the active symptoms have disappeared. When the bronchial symptoms have been persistent, with soreness in the chest, instead of the sodium salicylate Dr. Davis has given with very good results, a teaspoonful of the following mixture every four or six hours until the chest-symptoms were relieved:

| | |
|---|---|
| "℞ Ammoniæ hydrochloratis | 3½ drachms. |
| Ant. et potass. tart. | 2 grains. |
| Hydrarg. bichloridi | 2 grains. |
| Morph. sulph. | 3 grains. |
| Syr. glycyrrhizæ | 5 ounces.—M. |

"When the influenza has involved at its beginning so much irritation of the gastric and intestinal mucous membrane that the doses of Dover's powder and camphor would not be retained, he gives instead 4½-grain doses of salol aided by 1½ or 3 grains of calomel at night for the first two days, with entirely satisfactory results. Then smaller doses of the salol, alternated with very moderate doses of quinine, has been all the medication necessary to complete the recovery of the patient. In all cases, during the active

stage the patient is kept at rest, and, as far as practicable, in a well-ventilated, warm, but not overheated room.

"When the temperature reaches 104° F., it is readily reduced by free sponging of the whole surface or a few doses of aconite or veratrum viride. The diet should be light and carefully adjusted to the ability of the digestive organs to receive and appropriate it. When pneumonia or any other complicating disease supervenes, Dr. Davis treats it on those principles that would govern its treatment under other circumstances. Cases of heart-failure may require the diligent and protracted use of strychnine, strophanthine, and other vasomotor tonics, with rest and fresh air.

"*Calomel.*—Freudenthal* claims to have discovered in calomel a true, absolute and unfailing specific for the treatment of influenza. The author has employed it during the last five years, and with invariable success. It must, however, be administered on the first or second day, but not later than the third day, as then its specific abortive treatment is lost. The calomel is given in doses of from 1 to 1½ grains for children, or in doses of ⅛ grain for each year of the age. Two or three doses always suffice to produce the favorable effects. In a statistical table of thirty-two cases the average duration was three days. That the epidemic was not of a mild type, or that the cases are not selected ones, the severity of the initial symptoms, the temperature of 105°-106° F., the severe cough, hallucinations, etc., prove conclusively. In many cases the calomel was the only medication needed; in others, mild antipyretics and diaphoretics were added.

"The following combination is highly recommended by Baccelli† for influenza ushered in by severe fever and nervous disturbances:

| | | |
|---|---|---|
| "℞ | Quin. salicylate | 3 grains. |
| | Phenacetin | 2 grains. |
| | Camphor | ⅓ grain.—M. |

"The above dose to be administered up to six times in twenty-four hours."

In our own experience, in the more common cases in which there is moderate fever, with pains widely distributed, we have found the following usually give satisfactory results:

| | |
|---|---|
| Strontium salicylate | 10 grains. |
| Para Acetphenetidin (Phenacetin) | 5 grains. |
| Pulverized sugar | 5 grains. |

This quantity is directed to be given every two hours until the pains are relieved. If there are signs of prostration, caffeine, one or two grains, is added to stimulate the heart. Calomel followed by salines was given if there was derangement of the digestive organs.

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* *Therap. Monats.*, October, 1897.

† *Gazetta degli Ospadelie e delle Clin.*, No. 43, 1898.

Three classes of cases are met with that occasion anxiety. In one class, often with mild symptoms, marked cardiac weakness and severe prostration follow the attack. In these absolute rest is most essential. General and cardiac stimulating tonics do some good, but time, with good care, is the most important factor in securing restoration to health. In a second class there is marked irritation of the respiratory tract, often without signs of bronchitis beyond the harassing cough. For these sedatives are necessary, of which the following is useful and easily taken:

| | |
|---|---|
| Codeine | gr. $\frac{1}{6}$ to $\frac{1}{4}$. |
| Acid citric | gr. 5. |
| Sp. chloroform | m. 5. |
| Vin ipecac | m. 3. |
| Elixir simplex | ʒj. |

This quantity may be repeated frequently.

In the third class there is much gastro-enteric disturbance, occasioning diarrhea, with offensive stools. In these it is essential that the bowels be well acted on daily to remove offending material, and for this purpose calomel is probably the best remedy. Intestinal antiseptics are useful in restraining decomposition, among the most effective being bismuth naphtholate, resorcin, guaiacol carbonate, and bismuth salicylate. If the motions are too frequent, and especially if they follow immediately on taking food, a sedative should be given before food to lessen irritability, for which purpose the following is usually effective:

| | |
|---|---|
| Codeine | gr. $\frac{1}{4}$. |
| Acid hydrocyanic dilute | min. 3 to 5. |
| Bismuth carbonate | gr. 15 to 30. |
| Mucilage of acacia | q. s. |
| Water to | ʒij. |

A. McP.

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**Solution of Gelatin as a Hemostatic.**

Garcia (*Gazette of Medica de Mexico*, May 1st, 1898), after exhaustive experiments to confirm those of Dastre and Floresco, thinks that a sterilized 5 per cent. to 10 per cent. solution of gelatin in water (or better still in a decinormal salt solution) is of the greatest value, and he has used it many times to stop an epistaxis that otherwise would require complete plugging before it yielded. He submits the following conclusions: 1. It is a hemostatic of the first order. 2. It coagulates blood from a wounded vessel, which coagulation is very rapidly organized. 3. It thereby facilitates primary union. 4. It is applicable in all hemorrhages where it can be brought directly into contact with the bleeding point. This holds true of epistaxis, cutaneous wounds and metrorrhagia.—*Annals of Otol., Rhinol. and Laryngol.*

# Medical Jurisprudence and Toxicology.

IN CHARGE OF . . .
N. A. POWELL, M.D., AND
W. A. YOUNG, M.D.

## PROGRESS OF MEDICO-LEGAL SURGERY.*

BY CLARK BELL, LL.D.,

Honorary Member International Association of Railway Surgeons; Honorary Member New York State Association of Railway Surgeons; President International Congress of Medical Jurisprudence.

IN considering "Medico-Legal Surgery," I shall treat it under three separate heads: "Military Surgery," "Naval Surgery," and "Railway Surgery."

Recent events, which have unfortunately resulted in a war between the United States of America and Spain, into which the American Government has just entered, and is devoting its highest energies, will give additional interest to a study of the first two of three subdivisions, Military and Naval Surgery, which for the present purpose may be considered together.

### MILITARY SURGERY.

In all countries the military surgeon forms a fixed and distinct arm of the service of the army of the nation; and its relation to medico-legal science has been well defined in the past in the service of the American Government.

The Army Medical Department, as organized in the American Government, constitutes one of the bureaus of the War Department, and is composed of one surgeon general, with the rank of brigadier general; six surgeons, with the rank of colonel, and styled assistant surgeon general; ten surgeons, with the rank of lieutenant-colonel, styled deputy surgeon general; fifty surgeons, with the rank of major, and one hundred and ten assistant surgeons. All assistant surgeons enter the corps by competitive examination, and are commissioned as first lieutenants; after five years, and upon passing successfully the required examination, they are promoted to the rank of captain. Promotion throughout the corps is by seniority. There are no regimental surgeons, but

* Read before Medico-Legal Society, June, 1898. Read before American Association of Physicians and Surgeons, at Chicago, June Session, 1898. From advance sheets of *Medico-Legal Journal*.

medical officers for posts, armies and commands are detailed for whatever duty may be required.

The Medical Department of the army also comprises the hospital corps, made up of hospital stewards, acting hospital stewards and privates, the number of each determined by the necessities of the service. The hospital corps is divided among the several posts where troops are stationed, and in force proportionate to the size of the post.

The army medical officer of whatever grade is a regularly commissioned staff officer, appointed by the President and confirmed by the Senate, holding his commission for life unless deprived of same by sentence of court-martial. The medical officer *cannot assume command* except in his own department, but by virtue of his commission he *may command all* enlisted men like other commissioned officers. Medical officers, by virtue of commission, are entitled to sit on courts-martial, boards of inquiry, or other boards or commissions, taking their places by seniority.

Each military department is entitled to a medical officer on the department staff, known as the chief surgeon of the department, and in times of war, or of active field duty, a chief surgeon of an army, army corps, or division, is detailed to duty with the general officer commanding such forces.

A more specific and detailed account of the duties, etc., of medical officers of the army is contained in the "Army Regulations, U.S.A." A "Circular of Information for Candidates Seeking Appointment in the Medical Corps of the United States Army" can be obtained on application to the Surgeon General's Department of the Army. (*Vide* also "Medical and Surgical History of the War of the Rebellion"; Buck's "Reference Handbook of the Medical Sciences," Vol. III., p. 105 *et seq.*; *Ibid.* Vol. IX. Supplem. 640 *et seq.*; Piecher's "First Aid to the Wounded"; "Index Catalogue," Library of the Surgeon General's Office; Taylor's "Medical Jurisprudence," 12th American edition, Lea Bros. & Co., Philadelphia.)

In the several American States the National Guard has attached to it the regimental surgeon as the basis of its system.

*The Association of Military Surgeons of the United States.*

In the United States of America the military surgeons of the country have united in an organization—The Association of Military Surgeons of the United States—which embraces all branches of surgeons connected with the regular army and navy, as well as the military surgeons connected with the National Guard of the several States of the American Union. This body meets annually to consider questions connected with military surgery, and its contributions to the literature of this branch have been most important, and form a valuable contribution to the literature of military and naval surgery.

*The National Guard of the States.*

The medical service in the National Guard of the several States of the American Union is organized under the State Laws of the States upon a wholly different system. Each state has in its National Guard a Surgeon General, who is the highest officer in the medical service of the State. The basis of the practical service is a regimental surgeon to each regiment. Each regiment has its own surgeon, and in the great army now organizing to carry on the war with Spain, the call has been made by the President upon the Governors of the several States, who have thus far each furnished their quota from the National Guards of the several States, under the regimental system, and a surgeon goes out with each regiment of the volunteer force of the American Army.

In Great Britain, France, Germany, Italy, Spain and the Continental countries, the Army Regulations in each nation fix the status, powers, duties and responsibilities of the Army Surgeon.

NAVAL SURGERY.

The medical jurisprudence of naval surgery does not materially differ from that of army surgery, but it is perhaps proper to speak of it by itself.

The Medical Corps of the American Navy is allowed by statute law a membership of 170. The corps is divided into five grades, to wit: Medical director, medical inspector, surgeon, passed assistant surgeon, and assistant surgeon, which have the relative rank respectively of captain, commander, lieutenant-commander, lieutenant and lieutenant junior grade, and ensign.

Admission to the corps is based entirely upon merit as determined by examination before a board of medical officers, carefully selected for this purpose. A copy of circular showing scope of examination can be obtained on application to the Surgeon-General of the United States Navy. When a candidate is successful before the Board, he is commissioned by the President, by and with the consent of the Senate, as an assistant surgeon, with the relative rank of ensign. After three years' trial in the service as an assistant surgeon, he is examined by the Medical Examining Board for promotion to the grade of passed assistant surgeon. In the event of failure he is again examined at the expiration of another year, and should there be a second failure he is dropped from the naval service. On promotion to passed assistant surgeon a new commission is issued by the President. Promotion from the grade of passed assistant surgeon and the other higher grades is by seniority, after examination before a board of medical officers.

The rank of the members of the Medical Corps, while conferred in the same manner as in the case of the members of the line corps, is relative, and in two grades, as shown above; there may be two ranks in the same grade, depending upon promotion in the line corps.

In Great Britain and in most foreign countries the naval surgeon occupies a similar position in relation to the service of his Government in the department of the navy; and the officers of both arms of the service usually unite in practical recognition in army and navy clubs, and in the united service of both branches of the service on land and water, which is also true of the Dominion of Canada and the colonial dependencies of the English crown.

## Railway Surgery.

Railway surgery has become by far the most important branch of surgery in its relation to medical jurisprudence, when considered in its volume and as affecting the great body of the people, especially in the United States of America. The evolution of the railway system, especially upon the North American continent (which now has more miles of railway almost than all other countries combined) has in its train, and as a necessity, wrought radical changes, to both the legal and the medical professions, and has brought every inhabitant in the United States of America and the Dominion of Canada into the new and, at the same time, more immediate and direct communication and relation to and with the management of railways. The railway has revolutionized commerce, manufactures, mining, agricultural production and development, and indeed every branch of human industry. All manufactures, all products, are now brought to the market by the railway. It has superseded all other methods of travel or transportation where distance is a factor, and has become to the body politic—the State—what the arterial and venous circulation is to the human structure. In 1891 the Dominion of Canada had completed and in operation 14,000 miles of railways, while the United States had 214,000 miles, including double tracks and sidings. An enormous impetus and increase has since constantly occurred. (*Med.-Legal Jour.*, Vol. XI., p. 37.) Mr. Justice David J. Brewer, of the Supreme Court of the United States, in his address before the New York State Bar Association, stated that in 1893 there was $11,000,000,000 invested in railway property in the United States, whose shareholders in this country number less than 2,000,000 persons. (*Med.-Legal Jour*, Vol. X., p. 404.)

From an inexorable necessity, where the railways transport such vast numbers of the population, in all the varied pursuits and business of men, accidents have become a part and feature of the system; and the well-equipped railway of the present day must almost of necessity have its surgical system and its legal system. Chief Surgeon C. W. P. Brock, in his presidential address before the National Association of Railway Surgeons, in June, 1893, stated that "During the year ending June 30th, 1891, 7,029 persons were killed on railways in the United States, 40,910 injured. Of these 2,660 employees were killed and 293 passengers, and of the total injured 26,140 were employees." (*Med.-Legal Jour.*, Vol.

XI., p. 64.) There are a few railways who have perhaps not yet recognized this as indispensable, but only a few; and it may be stated as a truism, that every first-class railway must have its legal advisers, attorneys and counsel on the one hand, and its chief surgeon and surgical staff on the other. The railway that neglects to provide these two important adjuncts for its operation is not fully equipped for its work, and without proper surgical organization it would not only pay double what it should in accident and damage cases, but would not properly provide for the care of the wounded and sufferers from accidents of its own employees in its practical operation. The railway counsel has long been a conceded and recognized factor in railway administration; the railway surgeon is quite as necessary, almost as important, and his field of duty is an outgrowth of the railway system which is to a large extent a part of the growth and evolution of the railway itself. The railway surgeon has, in the United States of America, become a distinct and representative part of the medical profession, and he has come to stay as a fixed part of our railway system.

*Section of Medico-Legal Surgery (of the Medico-Legal Society).*

The growing importance of railway surgery in medical jurisprudence was distinctly recognized by the Medico-Legal Society, on September 6th, 1893, by the organization of a Section of Medico-Legal Surgery, embracing railway counsel and railway, military and naval surgeons, under a chairman and twenty vice-chairmen, selected ten from each profession from the various States of the American Union. This action was based upon recommendation made in an address, entitled "Railway Surgery in Law and Medicine," made before the National Association of Railway Surgeons, at Omaha, Nebraska, June 7th, 1893. (*Vide Med.-Legal Jour.*, Vol. I., p. 37, June, 1893; *Ibid.* Vol. XI., p. 203.) Chief Surgeon Granville P. Conn, M.D., of Concord, New Hampshire, was its first chairman, and was succeeded by Chief Surgeon J. B. Murphy, M.D., of Chicago, Ill. The chief merit and usefulness of this organization lay in its uniting in its labors railway lawyers of eminence and distinction, and the leading chief surgeons of the prominent American railways, so that both sides of all questions could be studied, as well from the legal as from the surgical and medical side.

The record of the labors of this body can be best considered and appreciated by its annual reports. The first annual report of the year 1894, showed the history of the organization, and gave its officers and a list of members, embracing twenty-eight of the leading chief surgeons of American railways, and a large number of local surgeons, military and naval surgeons and eminent railway counsel. It defined its province and domain by the following resolution:

"*Resolved*, That all questions in medico-legal surgery are

to be deemed within the province of the Section, including military, naval and railway surgery and the broad domain of surgery in its relation to medical jurisprudence." (*Vide* full report, *Med.-Legal Jour.*, Vol. XII., p. 471.)

"The following abstracts are made from its second annual report, January 2nd, 1896.

"The Section is intended to embrace, beside naval, military and railway surgeons and counsel, railway managers, railway superintendents and claim adjusters—railway officials, whether lawyers or s. , eons, many of whom have already united with the body and who are eligible to membership under the statutes of the society. The officers of the Section are annually chosen. Three members of the Executive Committee constitute a quorum, and five of the board of officers of the Section.

"The work of the Section during the preceding year has been devoted to the advancement of the science of the medical jurisprudence of surgery in all of its branches. The papers contributed upon these branches of science have been in part published in the *Medico-Legal Journal*, which is the official organ of the Section, except those contributed to the Medico-Legal Congress, of September, 1895, which will appear in the Bulletin of that Congress."

Its annual reports January 1st, 1897, and January 1st, 1898, published in the *Medico-Legal Journal*, show the great field of its usefulness and utility. (*Vide* March Nos. *Medico-Legal Journal*, Vols. XIV. and XV.)

This Section now embraces about one hundred and twenty members, of which twenty-three are chief surgeons of railway systems; two surgeon-generals of States, and the remainder local surgeons, railway counsel and railway officials, of which a list is contained in March number *Medico-Legal Journal*, 1898, with a detailed statement of its section work.

### *The National Association of Railway Surgeons.*

This is, so far as numbers go, the most powerful of the societies of railway surgeons. It was founded in June, 1888, and its first President was Surgeon J. W. Jackson, M.D., elected at Chicago, Ill. The idea of its founders was to open its doors to every railway surgeon in the United States and the Canadas, and it soon grew into a very large body. At the meeting held at Galveston, Texas, in May, 1894, the enrolled membership exceeded 1,700 names, and there were nearly one thousand persons in attendance at the session. Some there thought that the body was too large and unwieldy, and that that period was perhaps the maximum of its growth. It has not increased since then.

The scope of the work of this society is very broad, covering the entire field of railway surgery, and it aims to interest and associate every railway surgeon. It has held annual meetings in May of each year. It has made large contributions to the literature

of railway surgery, and has published a journal which was for all the earlier years under the editorship of Prof. R. Harvey Reed, then the treasurer of the organization.

Perhaps the most active and influential man of this body is and has been Wm. B. Outten, M.D., Chief Surgeon of the Missouri Pacific Railway system, of St. Louis, Mo. He was president for one term, and on the retirement of R. Harvey Reed, M.D., became editor of the journal, now called *The Railway Surgeon*, a position he still holds.

Its presidents have been as follows: Surg. J. W. Jackson. Surg J. B. Murdock, M.D., of Pittsburg, Pa, was elected May, 1889, at St. Louis, Mo. Chief Surg. Wm. B. Outten was elected May, 1890, at Kansas City. Dr. J. H. Murphy, of St. Paul, was elected May, 1891, at Buffalo. Chief Surg. C. W. P. Brock, of Richmond, Va., was elected May, 1892, at Old Point Comfort. Chief Surg. W. J. Galbraith, M.D., of the Union Pacific R. R. Co., was elected May, 1893, at Omaha, Neb. Chief Surg. Samuel S. Thorn, of Ohio, was elected May, 1894, at Galveston, Texas. Chief Surg. J. B. Murphy was elected May, 1895, at Chicago. Surg. F. J. Lutz, M.D., was elected May, 1896, at St. Louis. Dr. George Ross, of Richmond, Va., was elected May, 1897, at Chicago.

Present officers. These are as follows: President, George Ross, Richmond, Va.; Vice-Presidents, (1st) J. A. Hutchison, Montreal, Can.; (2nd) A. L. Fulton, Kansas City, Mo.; (3rd) De Saussure Ford, Augusta, Ga.; (4th) John J. Buchanan, Pittsburg, Pa.; (5th) H. L. Getz, Marshalltown, Ia.; (6th) R. R. Lawrence, Hartford, Mich.; (7th) W. Q. Marsh, Sierra Mojada, Coahuila, Mexico; Treasurer, E. R. Lewis, Kansas City, Mo.; Secretary, Louis J. Mitchell, 71 Laflin Street, Chicago, Ill.; Executive Committee, W. B. Outten, St. Louis, Mo.; J. B. Murphy, Chicago, Ill.; James H. Letcher, Henderson, Kentucky.

At its last meeting in May, 1897, this body changed its name to "The International Association of Railway Surgeons," and it selected Toronto, in the Dominion of Canada, as the next place of meeting in July, 1898.

### *The American Academy of Railway Surgeons.*

This is an organization founded in 1894, composed of railway surgeons of eminence in the United States, and is an outgrowth of the National Association of Railway Surgeons. Its origin was due to differences of opinion existing among the original founders and prominent members of the elder society, both as to basis of organization of the National Association of Railway Surgeons, and its methods of work. Surgeon-General R. Harvey Reed, M.D., now of Rock Springs, Wyoming, was an important factor in the organization of the American Academy of Railway Surgeons, and one of the leading spirits. Since its organization he has been its editor.

This body has a membership (limited by its constitution to two hundred) of about 130 at the present time.

Its first president, elected in November, 1894, was Chief Surgeon C K. Cole, of Helena, Montana, of the Montana Central Railway. Chief Surgeon John E. Owens, of the Chicago and Northwestern Railway Company, of Chicago, was its second president. L. E. Leman, M.D., of Denver. Colorado, was its third president, and Prof. R. Harvey Reed, M.D., now Surgeon-General, of Montana, is its president. It holds annual meetings.

Its present Board of Officers is: President, Dr. R. Harvey Reed, Rock Springs, Wyo.; First Vice-President, Dr. W. J. Mayo, Rochester, Minn.; Second Vice-President, Dr. A. D. Bevan, Chicago, Ill.; Secretary, Dr. D. C. Bryant, Omaha, Neb.; Treasurer, Dr. C. B. Kibler, Corry, Pa.; Editor, F. J. Hodges, Andeson, Ind.; Ch. Executive Board, F. K. Ainsworth, Los Angeles, Cal.; Ch. Com. on Transportation, Dr. W. J. Galbraith, Omaha, Neb.; Ch. Com. Arrangements, Dr. Milton Jay, Chicago, Ill.

Its next annual meeting will be held October 5th, 6th, and 7th, 1898, at Chicago.

*State and Other Associations of Railway Surgeons.*

In many of the American States, state associations of railway surgeons have been organized, and several large trunk lines have organized associations of railway surgeons. These bodies meet annually, choose officers and discuss papers and are composed, mainly of the local railway surgeons of the locality under the dominion of the Association. Their chief value and importance is in the educational improvement of the railway surgeons of the United States by conference with each other, interchange of thought and experience, and they have resulted in very valuable contributions to the literature of the science.

The papers contributed by the members of the various state and local societies of railway surgery in the United States during each year in the recent past would fill several large volumes, and the mere enumeration of their titles and authors would be too extended for such a contribution as this.

If the National, State and other organizations thus contributing papers to the literature of Medico-Legal Surgery would name an editorial revising Commission, with instructions to edit and publish all these papers for the benefit of both professions, the volumes would be of very great interest and value.

The following are among the more prominent of these State organizations as organized in the following States, namely, New York, Florida, Iowa, Indiana, Ohio, Texas and West Virginia.

Among the more prominent organizations of the large trunk lines may be named that of the Surgeons of the Big Four Railway System; Chicago and Northwestern Railway System; Wabash Railway System; The Pennsylvania Railway System; The Plant System; Santa Fé System; The St. Joseph System; The Southern Railway System, and the Northwestern Railway Surgeons' Association.

## The Progress of Medico-Legal Surgery.

The methods of surgical practice since the last war in our country (1861), so far especially as it concerns military and naval surgery, have been marvellously changed.

In no branch of science has there been such stupendous changes and advances.

Surgery has become a more fixed and definite science in the past quarter of a century than in all the centuries before.

There has been a complete revolution in methods and in treatment by the military, naval and railway surgeon.

In 1861 a gun-shot penetrating wound of the abdomen severing the intestines was regarded as almost certain to be fatal. To-day the surgeon who lost such a case would be compelled to make an explanation or might be mulcted in damages in an action for malpractice if he did not do so satisfactorily.

The whole field of antiseptic surgery has been changed.

### Electricity.

Electricity has come to be the hand-maiden of the surgeon, and sheds light upon the darkest and most impenetrable problems that surround his path. The Roentgen ray has no use anywhere at all comparable to its magnificent contributions to Medico-Legal Surgery.

The magic lantern, in the whole domain of electro-therapeutical surgery to-day, illumines the hand and the path of the surgeon, and the splendors of its achievements in abdominal surgery alone are resplendent and read like the tales of the lamp of Aladdin

With a view of obtaining the views of the most eminent surgeons upon the evolution of modern Medico-Legal Surgery I addressed the following letter to Surgeon-General Nicholas Senn and Surgeon J. N. Hall, two of the most eminent American authorities, the one on military surgery and the other on gun-shot wounds, and its other eminent surgeon.

"Medico-Legal Journal," Office of the Secretary,
New York, May 16th, 1898.

*Dear Colleague*,—I am announced to write shortly on the Progress of Medico-Legal Surgery, and I wish to touch on the more important changes that have occurred in military surgery, since the period of our Civil War in 1861, more especially in gun-shot wounds of the abdomen and the whole field of antiseptic surgery.

Will you please name four or five of the most important advances in modern military surgery in this intervening period?

The war on which we are now entering will make such an inquiry all the more interesting now; and your large experience will be of value.

I shall, of course, credit you with anything you furnish me.

Believe me, dear sir,
Very faithfully yours,
Clark Bell.

Surgeon-General Senn replies as follows:

CAMP TANNER, ILL., May 20th, 1898.

MR. CLARK BELL, 39 BROADWAY, NEW YORK.

*Dear Mr. Bell,*—The most notable improvements in military surgery since the War of the Rebellion consist of protecting the wounded by strict antiseptic precautions. The wounds made by the small calibre bullet will present features which will require extensive observations to determine whether they are more mortal than those inflicted by the large bullet. One of the important features in the war which faces us, will be the prompt treatment by operative measures of abdominal wounds, which I am sure will be the means of saving many a valuable life. My future headquarters will be with the Sixth Army Corps, Camp Thomas, Chickamauga, Ga.

Very truly yours,
N. SENN,
Lieutenant-Colonel, U. S. V.

Surgeon J. N. Hall replied as follows:

DENVER, COL., May 20th, 1898.

HON. CLARK BELL, 39 BROADWAY, NEW YORK CITY.

*Dear Sir,*—The most important improvements in military surgery have been, I think, as follows:

The introduction of asepsis and antisepsis and consequent disappearance of the scourge of hospital gangrene, and, owing to healing by first intention, shortening of the time in hospital, and consequent increased efficiency of the surgical department.

Secondly, the wider application of resection of joints and saving of useful limbs in place of amputation. An improvement in this connection is the use of plaster-of-Paris and similar dressings.

Thirdly, the introduction of stitching or uniting by means of the Murphy button, or otherwise, of wounds of the intestines.

Fourthly, improved means for checking hemorrhage in parenchymatous organs; as, for example, the liver, kidneys and spleen, and in allowing a freer access to them because of the improved methods of operation and consequent improvement as to the mortality rolls after such wounds.

Yours very truly,
J. N. HALL.

Dr. J. Mount Bleyer is one of the most experienced of the junior American surgeons in electro-therapeutic surgery, and his experiments with the Roentgen ray are the best I have seen produced.

I addressed him a similar inquiry as to the advance in modern surgery by the use and application of electricity since the War of the Rebellion, of 1861.

His reply is as follows:

460 LEXINGTON AVENUE, NEW YORK, May 23rd, 1898.

CLARK BELL, ESQ.

*My Dear Sir,*—You ask me to give you the progress of the surgery of electro-therapeutics since the period of the War of the Rebellion.

I should state them briefly as follows:

1. The electro cautery, which renders many operations bloodless.

2. The destruction of tumors by electrolysis, which is a complete atrophy of the tumor, cutting off the blood supply completely and successfully.

3. Electric illuminations by which the bladder, stomach, throat, ear, nose and in fact all the cavities of the body can be successfully examined and explored.

4. The X-ray which still in its infancy is one of the most marvellous aids to surgery.

5. Electro diagnosis.

6. The treatment of certain forms of disease by various electrical contrivances, as electro-chemically disintegrating diseased tissues.

7. Electro-motor powers with most marvellous results.

8. The useful effects of high tension currents.

9. The accurate dosage of electricity by means of delicate apparatus.

Yours very truly,

J. MOUNT BLEYER.

Chief Surgeon Granville P. Conn, of Concord, N.H., was the first chairman of the Section on Medico-Legal Surgery of the Medico-Legal Society, and an authority of eminence and distinction. His reply to a similar letter as to the evolution of railway surgery during the same period was as follows:

CONCORD, N.H., May 30th, 1898.

HON. CLARK BELL, Editor *Medico-Legal Journal*,
39 BROADWAY, NEW YORK, N.Y.

*Dear Sir*,—Yours of May 26th is at hand, asking for the most notable advances in the department of surgery, especially in railway surgery.

In the first place, the department of railway surgery has actually been entirely evolved as a department of general surgery since the War of the Rebellion. Second, the introduction of antiseptics in surgery, and the possibility of performing aseptic operations, has entirely come to the front since the close of the War of the Rebellion. Since the introduction of antiseptics, and the possibility of aseptic surgery, operators have been enabled to perform, with perfect impunity, an operation that was not considered feasible prior to 1861.

The opening of cavities, the resection of bones and internal anatomosis become matters of almost every-day experience, and these were looked upon with especial disfavor in ante-bellum times. It is but natural to ask how much has been accomplished in so short a period. The answer is plain but significant, in the fact that it has all been brought about and made plain by hygiene, which takes cognizance of everything connected with medicine and surgery. It has pointed out that cleanliness and the destruction of disease germs, prior to operations, will insure almost perfect results, when proper hygienic measures have been introduced, and their principles thoroughly carried out.

Very truly yours,

G. P. CONN.

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## A "Home-made" Milk Sterilizer.

Dr. McClanahan states that a cheap and efficient sterilizer can be made in the following manner: Take an ordinary one-gallon tin bucket, twelve inches high, having a movable, close-fitting lid. Have a handle soldered to one side for convenience in handling. Have a false, perforated bottom, to which are attached three legs, each one inch long. This is to be slightly smaller in circumference than the bucket, so it will go inside and rest upon the bottom of the bucket. In the lid a small opening is to be made for the escape of steam. This sterilizer can be made by any tinsmith at a nominal cost.—*American Journal of Obstetrics and Diseases of Women and Children.*

# Surgical Pathology.

IN CHARGE OF . . .
THOMAS H. MANLEY, M.D.

## THE ROLE OF EPOCH IN THE EVOLUTION OF THE PATHOLOGICAL ANATOMY OF HERNIA.

BY THOMAS H. MANLEY, M.D., NEW YORK.

THE presence of a visceral protrusion through any of the apertures or inter-muscular planes of the abdomen always implies a faulty or defective development. This vice of conformation may appear at, or even before, birth, or in the senile stages of advancing age. Thus Forgue describes three types of hernia: 1, That of the new-born—*embryonic;* 2, that of early childhood—the *infantile;* and 3, that of matured development—the *adult.*

### ARREST OR DEFECT OF DEVELOPMENT.

The infant at birth has but reached one stage of development, and many physical imperfections now obvious tend to obliteration or repair with the evolution and growth of the body. It is curious to note here, that after mid-life is past, reversion to the infantile, or fetal, type is most pronounced. The hair falls, the teeth are shed, the spine tends to straighten, the organs reduce in volume and energy.

The abdominal viscera, which in early fetal life are enclosed in the vitelline membrane exterior to muscular plates, in advancing years tend strongly to leave the abdomen once more.

The most palpable and tangible, as well as the most frequent, form of abdominal hernia we meet at birth, is *umbilical*, and the most common type of it now is the *embryonic.* It is scarcely proper to designate this a hernia at all, in many cases, because its contents were never *within* the abdominal cavity. The abdominal walls failed to completely close in over it. It is essentially a hernia into the funis, is invested by a thin, translucent and brittle envelope. Delanglade regards this type of eventration as dependent on two factors; arrest of development of the abdominal walls and defective union at the median line. Sometimes a pouch of this description may contain nearly all the abdominal organs. I recently operated on a case for Dr. L. Zwisohn, of New York—an infant two days old—in which the liver, pancreas, and all the alimentary canal, except the esophagus and rectum, were in the vast gauze-like sac. There was no abdominal cavity, or rather, nothing but a depression which scarcely admitted the tip of the index-finger. In Berger's late and exhaustive treatise, we find thirty-two

of this extreme type recorded, and Thudicum cites twenty-six which ended mortally after a precocious operation.

In *infantile* hernia, which appears at the navel during the first year, there is a dilatation and yielding of the umbilical scar, either marginal or central. This tends to spontaneous cure; but if we cautiously investigate the history of these unfortunate exomphoceles in the adult, said to follow "strain," notably, in females after labor, it will be found that they have had navel hernia in infancy. The *adult* type of exomphocele is marked by special and definite characteristics in its etiology and pathology. It tends to progressive increase in volume; the median line gives way, and coil after coil of the intestine passes out into their new abode, to become adherent, acquire union with the divesticulum and become irreducible. This hernia never undergoes retrogressive tendencies, but rather augments as age advances.

## Inguinal Hernia.

Epochal influence in inguinal hernia is quite as obvious as in the umbilical variety.

In frequency, it takes the lead of *all* others as a congenital infirmity in the male, as *embryonic hernia*. Its presence at this epoch is explained by the anatomical vagaries attending the descent of the testes.

But, why do the testes descend in the male, and bring such misery in their trail? We can easily understand why the ovaries would be safer outside the pelvis. This question, like that inquiring into the need or use of the gall-bladder at the appendix, cannot be answered. The physiology of testicular descent is of great interest, though it certainly is not well understood.

Hernia or the hernoid state is a subject of great importance in pediatrics, because, in a large number of cases, hygiene and simple measures may accomplish as much or more than radical methods.

During the descent of the testes it may be arrested in any part of its passage, to later descend, any time from one month to ten years after birth. The fascia which lines the peritoneo-vaginal canal in the infant, tends to spontaneous and complete closure. In the horse, the lumen of the tunica-vaginalis and funicular process remains widely open. The fibrous cord, its remaining relic in the child, is known as Cloquets' ligament. According to John Hunter, obliteration begins at the internal ring. Féré claimed that closure was first obvious at the external ring, while, according to the later observations of Broca and Jarjavy, fusion is nearly always first noted in the centre.

It is curious to note that in inguinal hernia of the female infant, the ovaries or tubes are prone to escape; and also, that though inguinal hernia is comparatively infrequent in the adult female, in old women it is more common than in males at same age; in whom femoral is now rather more frequent than in the opposite sex.

# Ophthalmology and Otology.

. . . IN CHARGE OF . . .

JAMES M. MacCALLUM, M.D.

## NASAL CATARRH IN CHILDREN: ITS CAUSE AND TREATMENT.

At the November meeting of the New York Academy of Medicine, Dr. C. C. Rice, in a paper on the above subject, said: Many acute coryzas in children are simply symptomatic of pathological conditions in the nose or pharynx. In almost 80 per cent. of cases of chronic nasal discharge in children, the chief cause was some enlargement of the post-nasal or pharyngeal tonsil, which might or might not be accompanied by enlargement of the faucial tonsils. Only a very small amount of adenoid hypertrophy was necessary to produce chronic catarrh in young patients, because of the narrowness of the space. Purulent rhinitis in children was really an atrophic rhinitis from the beginning, and could be recognized by the condition of the nasal passages. All acute coryzas are most amenable to treatment, and the purulent discharge usually ceases when all nasal obstruction has been removed and the passages cleansed. Chronic hypertrophic rhinitis was comparatively rare in children. Many apparent hypertrophies are caused by interference with the nasal circulation, and disappear as soon as the real cause is removed. Naso-pharyngeal catarrh does not appear in children except as a symptom of the enlargement of the pharyngeal tonsil. Atrophic rhinitis was present in some degree in about 10 per cent. of children suffering from nasal disease over five or six years of age. Enlargement of the pharyngeal tonsil was the most common cause of nasal catarrh in children. This adenoid enlargement is common to all classes of children, and is often the result of the acute coryzas accompanying the eruptive fevers. In most cases, if the adenoids were removed by early operation, the hypertrophic changes in the nostrils would disappear and the nasal passages become normal. It was the imperative duty of the physician to remove enlarged pharyngeal tonsils.

Dr. A. Jacobi said that many infants suffer from nasal catarrh. Adenoids are rarely found in very young children, but nasal catarrh is common and severe. One reason for this was the small space in the nose. The lower passage hardly exists in the baby, and the middle passage is very narrow. The septum is more horizontal in the newly born, more vertical in the adult. Accumulations of mucus in that neighborhood are not expelled, and hence

give rise to irritation and nasal catarrh. The lymphatics in the baby are more numerous and larger than in the adult, hence any irritating material is absorbed very readily. One result of such absorption is enlargement of the lymph bodies about the neck. The adenoids are lymph-nodes, but contain much less connective tissue. Just as the cleansing of the nose would remove the enlargement of the lymph-nodes externally, unless too old and hyperplastic, so the adenoids, if they had not existed too long, would be removed. He wished to emphasize the fact that, in many cases, adenoids are not the cause, but the result of the nasal catarrh. The rhinitis was often the primary affection, and existed for years before the development of the adenoids. The latter are not common in children of two or three years of age, and common in children of eight or ten years. It was his rule to insist upon having babies' noses irrigated once daily with warm salt water, even in the entire absence of symptoms of nasal catarrh. The nose should be washed on the inside just as regularly as it is on the outside. Another reason for insisting upon this cleasing process was that the little ones are constantly putting their soiled fingers and all sorts of foreign bodies into the nostril. That is why all sorts of pathogenous and non-pathogenous microbes are found in the healthy as in the diseased nares. Dangers will arise from the presence of these microbes as soon as the mucous membrane is sore, the epithelium thrown off or injured, and absorption either of microbes or their toxins becomes possible. Here is the connection with all sorts of meningitis. It was very exceptional for children over ten years of age to have meningitis; on the other hand, the various forms of meningitis were most frequent between two and five years of age, or just at that period when the child was crawling around the floor and most apt to introduce all sorts of germs into the nasal passages.

Dr. Henry D. Chapin said that in children of four or five years, with more or less persistent nasal catarrh, he had found marked hypertrophy of the adenoid tissue almost without exception, and irrigation did not seem adequate to cure the condition. Sometimes a small amount of hypertrophy would cause great disturbance, so that these children would be constantly developing acute coryza. It was his practice to prescribe for these children irrigations with albolene, and if this were not sufficient, he scraped away the adenoid growth.—*The Laryngoscope.*

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**The British Medical Association.**

At the next meeting of the British Medical Association, which will be held at Portsmouth, August 1 to 4, 1899, the address in Medicine will be given by Sir Richard Powell, and the address in Surgery by Prof. Alexander Ogston.

# Public Health and Hygiene.

. . . IN CHARGE OF . . .

J. J. CASSIDY, M.D., AND E. H. ADAMS, M.D.

## HYGIENE IN SHAVING AND HAIR-DRESSING PARLORS.

INSTRUCTIONS APPROVED BY THE BOARD OF HEALTH OF THE PROVINCE OF QUEBEC, AT ITS MEETING OF THE 17TH OF JUNE, 1898.

WHEREAS syphilis and other diseases of the skin and scalp may be propagated by the instruments and hands of barbers and hair-dressers, the Board, after having carefully examined into the various suggestions made to date to prevent such danger, and also into the discussion which has followed their publication, recommends the following measures:

I.—*To encourage customers* to have each his own instruments (razors, soaps, brushes, etc.), and to make it obligatory in the case of sick customers. It is also advisable, in the interest of the barber himself, to attend sick customers at their own homes.

II.—*Disinfection of razors, combs and clippers.*—

(As the processes of disinfection hereafter described may sometimes spoil tortoise-shell, celluloid, horn combs or razor handles, metallic combs and razor handles should be used in preference.)

Immersion, immediately after use, in an enamelled or galvanized-iron dish, containing either:

1. A solution of carbonate of potash (one per cent.) which does not spoil the edge of razors; or

2. Soapy water (soapy water preserves steel instruments from rust, provided, however, they be completely covered by the water).

Boil the solution of carbonate of potash, or the soapy water in which the instruments have been placed, for fifteen minutes, by putting a jet of gas or a coal oil lamp under the dish.

It must not be forgotten that by disjointing the scissors and clippers, their disinfection and cleansing is better affected. Scissors which are very easily taken to pieces are found on the market; and with regard to clippers, the preference should be given to models which can easily be taken apart.

Dipping instruments in alcohol, followed by ignition (instantaneous process) and the immersion in solutions of corrosive sublimate or carbolic acid, which processes have been recommended, are now abandoned as they are apt to spoil the instruments.

III.—*Disinfection of brushes.*—Deposit brushes on gratings in a small closet or case which closes hermetically and in which is kept a saucer constantly filled with a solution of formalin (one ounce for every cubic foot of the closet). The brushes are disinfected after two hours exposure to the fumes of formalin, but they may without inconvenience be left in the closet all the time they are not in use. They should be cleaned every evening with bran, clay, etc.

The way to obviate the necessity of disinfecting brushes is to dispense with their use. Even when the brush is perfectly disinfected, a great number of customers would prefer the hair-dresser not to use it at all, or at least that he should use it only after consent has been given by the customer.

IV.—*Purification of the shaving brush.*—The shaving brush can be also dispensed with, as instead one can use a ball of cotton wool, which is thrown away immediately after using. In any case, the shaving brush should never be used before the bristles have been immersed for a few minutes in boiling water.

V. *Purification of the hands.*—Before passing from one customer to another, the barber or hair-dresser must wash his hands, using soap and nail brush, carbolic soap to be preferred.

VI. *The powder puff* will be replaced by a ball of wadding, thrown away after being used; or, still better, by a powder-blower.

VII. *The alum stick* frequently used to stop the flow of blood, will be reduced to small pieces, so that each piece be used for one customer only. Calcined alum—a powder which can be applied on cotton wool, which should be thrown away immediately afterwards, is much preferred by most people.

VIII.—*Linen.*—Only strictly clean linen towels, wrappers (*peignoirs*), etc., will be used for each customer. If a freshly laundered wrapper cannot be supplied for each customer, discard it and use simply a clean towel. The customer will prefer having his own hair fall on his clothes than to have around his neck a wrapper which has only been shaken since the last customer had it on.

IX.—*Cleaning the head after cutting the hair.*—If the scalp is not washed, use only the comb to clean the head. The use of a stiff brush to clean the roots of the hair, followed by the use of a soft brush, or duster, on the scalp and face, is, to say the least, very disagreeable to most customers.

X.—Immediately after cutting the hair, sprinkle the floor with wet saw-dust and use a mechanical broom, the receptacle of which should be emptied into a covered bucket. The contents of the bucket should be burnt every evening.

XI.—*Razor strops.*—The only way to disinfect them would be to expose them to the fumes of formaldehyde (formalin); but as this is not a very convenient method, one must avoid contaminating them. To this end, they should only be used for razors which

have been previously disinfected, and, therefore, the barber should never stop shaving a customer to strop the razor he is actually using.

XII.—*The use in common of the same vaseline pot* should also be avoided. It is better not to use any vaseline unless the hair-dresser is prepared to use a spatula to take the vaseline out of the pot or bottle, being careful not to apply directly said spatula to his contaminated hands.

XIII.—Finally, *sponges* should never be seen in shaving or hair-dressing parlors. Although they may be disinfected in a solution of bichloride of mercury (a 1,000th solution), they will always be looked upon as suspicious and disagreeable by refined customers. J. J. C.

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## MUDDY SKIRTS.

LADY HABERTON sees, in the attention at present being drawn to the spread of tubercular disease, an opportunity for again warning her sisters of the danger they incur in wearing long skirts. She is quoted in the *Times*, and as asserting that "she considers tuberculosis is greatly assisted by the ladies who drag their skirts through the filth of the streets." Her charge has stirred the soul of a *Westminster Gazette* poet, "R. C. R.," who produced the following lines:

Life is not a bed of roses,
When the vile tuberculosis
Has the upper hand.
But the *rational*isation
Of the ladies of our nation,
So I'm given to understand,
Will remove its awful terrors,
Due to skirts and *sweeping* errors
In the costume à la mode.
Yet I never had a notion
That the poetry of motion
Gathered microbes from the road.
And the cause of all distress is
Mud that dries upon the dresses,
Harboring a wealth of dirt—
At least Lady H. supposes
This to be the diagnosis
Of the fell tuberculosis.
Why not try the "Bloomer" process
And eschew the poisoned skirt?

—*The Sanitary Record, London.*

# Proceedings of Societies.

## PROVINCIAL BOARD OF HEALTH MEETING.

THE Provincial Board of Health assembled for its quarterly meeting at the office of the Secretary, Dr. Bryce, January 31st, 10.30 a.m., Dr. Macdonald, Hamilton, presiding. There were also present Drs. Kitchen, St. George; Vaux, Brockville; Cassidy, Toronto; and Bryce, Secretary. A large amount of correspondence was read and acted upon. The request of the School Trustees of Horton Township, Renfrew County, for an analysis of the water supply was concurred in.

The Medical Inspector of the district reported that the camps of the Victoria Harbor Lumber Company are now in good condition and free from disease.

The opinion of the Provincial Law Clerk was read, stating that the Act respecting contagious diseases empowers local Boards of Health to require physicians to report cases of tuberculosis to the Health Officer.

The Secretary reported upon the outbreak of smallpox in the Irish Creek district, and also that no new cases have been reported, but that he had that day received advices that four new cases had developed in St. Telesphore, Quebec, just across the river from Hawkesbury, in the same house from which a case had previously been reported.

The health authorities of Madoc raised an interesting question in connection with the recent outbreak of diphtheria among the employees at the Gilmore lumber camp. One of the men went home, carrying the infection with him, and the township was put to an expense of $225 in buying food, etc. for the sick people. The municipality wanted to know whether the lumber company could not be compelled to recoup the township for this expenditure. This proved a knotty question, and the Secretary was instructed to send a copy of the health regulations to the municipal authorities.

At the afternoon session the quarterly report on epidemics was adopted. From the report it is gathered that the past quarter has not been marked by any special prevalence of contagious disease in the Province, dealt with under the Public Health Act, although the remarkable climatic changes of the past month have been productive of an abnormal prevalence of diseases of the respiratory tract, and notably of influenza, showing in many instances a markedly infectious character. Such influences have similarly tended to an increase in diphtheria, of which the monthly reports show fifty-one deaths, or a rate rather above the average for the year.

Typhoid fever has shown a notable decrease in deaths, there having been in December only twenty-one deaths. Reports from Kaladar Township have come to hand telling of a notable prevalence of the disease for several months past in a rural district amongst poor settlers, and points to the obvious need of some means of systematic investigation and control superior to that possible in a township with a population of 360 ratepayers and an assessment of $73,000, with a tax of nineteen mills on the dollar. Such outbreaks illustrate the absolute necessity for a trained county officer, who could devote the necessary time to the control of such an outbreak.

Scarlatina shows a low incidence during the quarter.

Smallpox is, however, again present in the Province, while its prevalence in surrounding States, with its appearance in immigrants from a European port, and its presence in Quebec, Manitoba and British Columbia, all call for the prompt action of the local boards of the Province in preparing for its approach by at once taking steps for a general vaccination of our people, who have greatly neglected this precaution since the great Montreal epidemic in 1885.

A statement is given showing that during the past three months there have been eleven cases of smallpox reported in Ontario, of which eight have recovered, one died and two are still sick. The two cases which are still under treatment are at North Colchester and East Hawkesbury. The report continues:

"The scientific progress in the last few years in the preparation of aseptic glycerinated vaccine lymph has made great strides. The Local Government Board of England has instructed public vaccinators to use glycerinated calf lymph in preference to humanized lymph. Health authorities of New York, Chicago and other places are preparing and using it. Large private firms have it on the market, and it is advised that the proprietor of the Ontario Vaccine farm be requested to arrange for the preparation of lymph in a similar manner. The splendid results of such glycerinated preparations in successful vaccinations, and the absence of suppuration when the operation is carefully performed, encourage the hope that apprehensions on the part of any person as to the results of vaccination may be wholly removed.

"What the unvaccinated are exposed to is seen in the unfortunate case of the young man in Walford Township who died on Saturday last. The Medical Health Officer reports the receipt by deceased of a letter from a brother in British Columbia, and written apparently from a house wherein, as the letter states, 'his employer had just died of smallpox.' No other source of contagion seems possible, so far as reports go. Owing to delay of six days before the nature of the disease was discovered, others of the family are likely to take smallpox, neighbors exposed, and there is almost a certainty of more cases occurring. With prompt action by the local authorities, there is reason to hope the outbreak will be limited. There will, however, be a serious expense to the municipality

involved, yet if municipal authorities and private persons continue to neglect vaccination such expenses may be expected.

"Owing to cases reported in East Hawkesbury Township, in Prescott, contiguous to the Quebec County of Soulanges, where several cases exist, a medical inspector has been despatched to visit the districts where cases are reported and to take steps to have the local authorities active in the suppression of the outbreak. What further steps may be deemed necessary to be taken in view of the present situation will be for your Board to determine.

"The past year has been marked by remarkable activity in different countries as well as in the Province in the progress of the movement for suppressing the prevalence of tuberculosis. This has taken two directions,—the one, the establishment of sanatoria for treatment and notification of cases; and the second has been the renewal of the crusade against milk and its products, which may carry the germs of tuberculosis."

The report pointed out how in Germany practical use was being made of the consumptive sanatoria by the workmen's insurance societies. A brief sketch of the societies was given, in which it was shown that in them, $7,300,000 was spent as the cost of medical attendance and medicine in a single year, and that $21,300,000 was the actual cost of sickness paid out in sick benefits by these associations. The associations having observed how in the first sanatoria early consumptive cases had been cured, seized the idea that if the disease can be cured it is better for their funds that they pay the cost of maintaining sick work people insured by them in these sanatoria than to pay death claims. So successful has the treatment proved, that, as the report states, over $1,000,000 was spent in 1898 alone for the construction of sanatoria and maintenance of patients in them by the insurance associations alone. The report of one of the largest of these on 1,541 patients treated shows that general improvement took place in 85 per cent., and complete restoration of working capacity in 71.8 per cent. The time which these companies are required to maintain a sick patient is a minimum of thirteen weeks. Their physicians thus are required to report consumptives at the earliest moment they are seen. The report urges that if such results are obtainable in Germany equally good results ought to be obtained for the thousands insured in our friendly and other insurance societies in Ontario, where, as the reports state, probably more than a third of all deaths in them are due to consumption.

Data were also given showing the presence in milk and butter of bacilli tuberculosis.

The report was adopted.

The Board resumed its session February 1st, 10.30 a.m., Dr Macdonald presiding. The report of the Health Officer of the Sudbury district stated that diphtheria had broken out on January 30th at Holland and Emory lumber camp, and that prompt action had been taken to suppress the disease.

Renewed complaints were received from Oakville in reference to the location of slaughter houses. Similar complaints from Uxbridge were also repeated. The authorities of Gloucester Township reported that arrangements had been made for general vaccination, and Dr. Macdonald, of Alexandria, Glengarry County, recommended general vaccination. A report from Irish Creek, Walford Township, stated that another member of the Brown family was probably down with smallpox.

The plans of the proposed sewer in Bentinck Township were approved of, subject to the provisos that the local Board of Health of Bentinck Township signify their consent to the Knechtel Furniture Company for the construction of the sewer; that the sewer be discharged into the Saugeen River direct by a tile sewer; that the Knechtel Company agree to assume any responsibility which may arise from the pollution of the Saugeen River, and that the local Board and the Knechtel Company agree to adopt such other method of sewage disposal as may be approved by the Provincial Board should necessity arise.

The Secretary was instructed to prepare a circular to local Boards of Health in the Province urging the need of providing for general vaccination of school children and other unvaccinated persons.

The Chairman, Dr. J. D. Macdonald, of Hamilton, presented his annual address, in which he referred with approval to the fact that the membership was unchanged owing to the advantage which arises from continuity of policy. In opening the year it is a pleasure, the Chairman said, to say that the health of the country has been good during the year which has passed. No epidemic has appeared, nor have infectious diseases obtained a footing in the land. Some of the latter kind have appeared, as appear they will, from time to time; but whenever such have occurred they have been promptly suppressed by measures directed by the active Secretary of the Board. Diseases of that nature may be seen tabulated in the monthly reports, but the cases have not been so numerous as to enable us to say that they have had any prevalence. Here too, however, exception should be made with respect to our old enemy, tuberculosis. It is always present, a persistent life destroyer, and during the year past has been true to its history. It has cost the country more lives than all the other diseases reported when added together. The Chairman, in discussing the causes and remedy of tuberculosis, referred to the action of the Board upon Dr. Cassidy's motion, which was that the Board declare phthisis to be a notifiable disease, and expressed regret that, while the necessity for carrying out of such decision is urgent, owing to public sentiment, it will need much time to reconcile the majority to the decision. The separation of the tubercular from the healthy by means of consumptive hospitals was approved.

The report of the Committee of Ventilation was presented by Dr. Cassidy. The report contained data of tests, which had been

applied and results obtained, respectively in (*a*) a system of heating and ventilation, invented by Mr. Shantz, school-teacher of Caledonia; (*b*) a ventilating and heating drum, used in connection with stoves, patented by Mr. Tracy, Toronto. Mention was also made of a system of heating and ventilating schools, described by Mr. Dearness, Inspector of Public Schools, London, Ont. The report was adopted.

At the afternoon session the Board discussed a number of amendments to the Health Act, relating to the appointment of county medical health officers. The matter was referred to the Committee on Legislation, to take charge of the matter and report the matter to the next quarterly meeting.

The legislation contemplated is an addition to subsection 44 of the Health Act, providing that within a certain period the present township health officers will be replaced by a single county officer for the area similar to that now under the supervision of the County School Inspector, that such medical health officer shall not engage in private practice, thus removing one of the chief objections to the present system, by which one rival practitioner is placed over his competitor in the capacity of Medical Health Officer. Such county officer shall be required to possess definite qualification by examination in medicine, and shall be prepared to examine chemically and bacteriologically water, milk, diseased tissues, etc., for the benefit of practitioners of his county. He will also be required to perform the duties now supposed to be performed by the Medical Health Officers nominally appointed in most cases by the Township Council. Provision is also made for fixity of tenure of office, and the officer would be charged with the duty of examining into the injurious effects of microbe organisms upon butter and cheese products. It is proposed that towns up to a certain limit may unite with the townships in the appointment of a county officer.

The Board then adjourned. J. J. C.

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**Thomas Dover, Physician and Buccaneer.**

As Sir Thomas Brown remarks in "The Hydriotaphia": "The iniquity of oblivion blindly scattereth her poppy and deals with the memory of man without distinction to merit of perpetuity." Thus it happens that Thomas Dover the doctor has drifted into our modern life on a powder label (to which way of entering the company of posterity, though sanctified by Mithridates, many would prefer oblivion even to continuous immortality on a powder so potent and palatable as the Pulv. Ipecac. Co.); while Thomas Dover, president of the council of the *Duke* and *Duchess*—privateers of the ancient and honorable city of Bristol—discoverer of Alexander Selkirk (the original Robinson Crusoe), in spite of more enduring claims to our gratitude, has been forgotten.—*N. Y. Med. Record.*

# The Canadian Journal of Medicine and Surgery

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# *Editorials.*

## THE X-RAYS IN DERMATOLOGY.

REFERENCE is occasionally made in the medical press to cases in which, after applications of the X-rays have been made to an individual for a long period of time, notable injuries have resulted. Proximity of a portion of the patient's body to the effluent tube of the electrical machine is also thought to have something to do with the bad result, and predisposition on the part of the individual may also have a certain influence. Alopecia, eczema, thickening of

the integuments and falling of the nails have been observed; bullæ and sloughing of the integuments may appear, not only on the part of the body directly exposed to the electric current, but even in parts at a considerable distance from it. It has also been observed that in animals experimented with, such as the guinea-pig, previous to the appearance of alopecia, the skin becomes thickened, and presents other notable lesions.

At a recent meeting of the Society of Dermatology and Syphilography of Paris, these questions were pretty fully discussed. A patient was exhibited who had been employed in radiography, and had been exposed to the X-rays at short distances. On the right side of his body he presented a dermatitis of an eczematous form. Over the hand and forearm the skin was red, inflamed, thickened, almost indurated, and desquamating as in dermatitis. The nails, which had fallen, were growing again, but were much altered in appearance. The hair had fallen over a considerable extent of the surface of the right temporal region; the right eyebrow and the moustache on the same side were a good deal thinned, and such hairs as remained were very much decolorized. He had been exposed to the influence of the X-rays, off and on during one year; the lesions mentioned above began to appear during the last seven or eight months. A strongly marked predisposition was, however, present in this case, because a companion of his, who was exposed to the same influences, exhibited similar injurious effects, but in a much less marked degree.

It appears that some enterprising dermatologists have taken advantage of the power of producing alopecia, which resides in radiography, and are using it in the treatment of hypertrichosis of the face. A number of cases treated in this fashion were exhibited at the Moscow Congress of Medicine. Recently a Parisian lady, who consulted a Viennese dermatologist for seborrheal acne, accompanied by hypertrichosis of the face, was treated on seventeen occasions by applications of the X-rays to the affected parts, the hairy scalp and the eyebrows being protected by thin plates of lead. The acne and seborrhea were considerably irritated, but in spite of this fact the Viennese dermatologist advised the lady to have two fresh applications of the X-rays made at intervals of fifteen days, promising her a certain cure. His advice was not accepted. This treatment seems all the more extraordinary since so accurate an observer as Barthélémy, of Paris, has noted that the hair grows as thickly and strongly as ever on parts denuded of hair by the

action of the X-rays. Certainly, to get such a meagre result it is not worth while exposing a patient to the possibility of some grave lesion of the skin, or even the nerve centres themselves. Barthélémy has seen guinea-pigs, in which an effort had been made to produce alopecia by the X-rays, afterwards attacked with paraplegia, without shedding a single hair. In the seven or eight cases of alopecia in man, produced by the X-rays, which had come under his observation, the hair had constantly grown again.

J. J. C.

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## TREATMENT OF ABORTION WITH RETENTION OF THE PLACENTA.

THIS important subject was very fully discussed in an illustrated article which appeared in *Le Progres Medical*, September 17th, 1898. The eminent Professor Budin, whose views were expressed in this article, is strongly opposed to the use of the curette, believing that, with skill and good management, all necessary manœuvres can be affected by the fingers of the accoucheur. According to him, when, after the expulsion of the fetus, the placenta remains behind in the womb, the following procedure may be safely adopted:

Chloroform is given, as the abdominal walls, the vagina and perineum should be in a state of complete relaxation. The operator takes the severest antiseptic precautions in regard to the genital parts of the patient and his own hands, and proceeds to obtain the dilatation of the cervix uteri, by first introducing the forefinger, and afterwards the forefinger and the third finger. Should the uterine tissue be too resistant, after lowering the womb with a vulsellum forceps, dilatation is effected with Hegar's bougies. When sufficient dilatation has been obtained, that is to say, when two fingers can be introduced, if it is a case of abortion at three or four months, or when a single finger enters the womb in an abortion at two or three months, digital cleansing of the womb is employed. One hand is placed on the abdomen, keeping the womb in place, and holding it solidly, while the finger, or fingers, introduced into the interior of the organ, detach the placenta slowly, regularly and completely.

Evacuation is the next stage. Sometimes the placenta may be drawn away by the two fingers, which seize it between them, or by

one finger curved like a hook and resting on the placental tissue or preferably on the resisting blood vessels, which penetrate the cotyledons. But if these attempts are unsuccessful, if the after-birth is too large, or the uterine orifice too small, the operator should not use a forceps. After breaking up the placenta he should practise *abdomino-vaginal expression*, which is effected in the following manner:

The fingers of one hand are introduced into the posterior vaginal cul-de-sac, which they depress, and are then applied to the wall of the womb; their palmar surfaces being directed upwards towards the symphisis pubis. The other hand placed over the hypogastrium, strongly depresses the walls of the abdomen, which, during anesthesia, are in a state of complete relaxation. Between the fingers, which are curved like hooks, and the palm of the hand, pressure is made on the fundus uteri, as well as the anterior surface of the organ. The womb, being thus grasped and compressed, the placenta, or the pieces of the placenta, and the membranes pass through the cervix uteri and drop into the palm of the hand in the vagina. The womb is afterwards explored to see that nothing remains behind. A douche of corrosive sublimate, 1-4000, is given through a uterine catheter. Swabs, dipped in the same solution, are introduced into the womb. They are moved about in the cavity of the organ from above downwards, and from below upwards, so that the anterior, posterior and both lateral walls are successively cleansed, and finally they are moved about in a rotary direction. When two or three swabs have been introduced and bring back no more *debris* of after-birth or membrane, two swabs are passed, which have been dipped in a solution of creasote and glycerine, 1-5, or equal parts, and the vagina is afterwards douched with a solution of the bichloride, to remove any excess of creasote, which is caustic in its action.

If there is no hemorrhage, and the uterus contracts well, the tampon need not be used. Under opposite conditions the womb and the vagina should be tamponed with iodoform gauze.

J. J. C.

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## ONTARIO MEDICAL LIBRARY.

AT the annual meeting of the Library Association in June last, the President, Dr. J. E. Graham, made a strong plea for the establishment of a fund, the interest of which should be devoted exclusively

to the purchase of "new books." He felt that the tables were fairly well covered with the best journals, but that the shelves were wanting in the latest "book" publications.

The suggestion was taken up at the next meeting of the directors. As a result an Endowment Fund is now in actual existence, and we trust before long it will have swollen to such proportions that the interest will ensure the annual purchase of a goodly number of new books as they appear. The President was the first one to subscribe to this fund, and he promised $500, as per this memorandum:

We, the undersigned, promise to give to the Endowment Fund of the Ontario Medical Library Association the sums written opposite our names, on the following conditions:

1st. That the principal shall be safely invested, and the interest alone used for the purchase of the new books.

2nd. That the sum be paid in five equal annual instalments the first payment to be made in three months after date of subscription.

3rd. That in case of decease of a subscriber his heirs shall not be bound to continue the payment of the instalments.

4th. That the subscriber pay interest at the rate of 5 per cent. per annum on the unpaid instalments.

A number have subscribed to this fund in amounts ranging from $500 to $25. While $100 or $200 may seem a fairly good-sized subscription to the average practitioner, it must be remembered that this amount is spread over five years, and that the Library receives only the benefit of the interest. Will the readers of the CANADIAN JOURNAL OF MEDICINE AND SURGERY help to swell this "Fund" and thus increase the usefulness of the only professional library in the province—a library originated by the profession for the profession.

In a previous issue we noted with pleasure that Dr. Wm. Osler had volunteered to found a "Bovell Library" in connection with the Medical Library, to perpetuate the memory of his first teacher in medicine—the late James Bovell.

The following is a list of books purchased for the Bovell Library. It is the first of the five annual instalments bought with Dr. Osler's donation:

The most recent edition of "American Text-book of Therapeutics," "Diagnosis" (Vierordt), "Chemical Physiology and Pathology" (Haliburton), "American Text-book of Physiology,"

Vol. I. (Schafer), "Pathological Technique" (Mallory and Wright), "Clinical Methods" (Hutchinson and Rainy), "Clinical Diagnosis" (Simon), "Medical Diagnosis" (Musser), "Diseases of the Skin" (Hyde), "Tumors" (Sutton), "Diseases of the Stomach" (Hemmeter), "Diseases of the Stomach" (Sydney Martin), "Pyogenic Infective Diseases of the Brain and Spinal Cord" (Macewen), "Diseases of the Heart" (Broadbent), "Genito-Urinary Tuberculosis" (Senn), "The Tongue as an Indication of Disease" (Dickinson), "Clinical Examination of the Blood" (Cabot), "Gout and Rheumatism" (Garrod), "Nervous Diseases," two volumes (Gowers), "Heart and Aorta" (Balfour), "Heart and Aorta" (Gibson), "Anatomy," colored plates (Gray), "Tumors" (Senn), "Contributions to Clinical Medicine" (Anderson), "Diagnosis" (Hare), "Journal of Experimental Medicine."

It will be noticed that the works are on medicine, physiology, pathology and allied subjects, departments of medicine in which Dr. Bovell was particularly interested, and in deference to the wish of the donor, who has ever taken a most sincere and frequently a practical interest in the Ontario Library.

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## PHYSICIANS AND THEIR RELATION TO CHARITABLE INSTITUTIONS.

"Put some ginger in yer words
When you greet a neighbor."

THE neighbor we greet is the Hospital for Sick Children. Our greeting takes the two-fold form of congratulation and admonition: congratulation upon the generously accorded Christmas offering made to this worthy institution, a fitting tribute of thanks to the large-hearted and energetic man to whom especially the public owe a debt of gratitude as the founder and financial godfather of this Hospital; secondly, of admonition, because we, as medical men, feel we must appeal to this, and other institutions with similar charitable objects in view, by asking again that these hospitals close up altogether their public dispensaries, or at least make their rules doubly stringent, and the offence of obtaining free medical advice, under *pretence* of inability to pay for it, punishable by law. Again we reiterate, what we have already stated in previous issues of this journal, that these institutions are being

imposed upon by those who feign poverty. Only the other day our attention was called to the fact that a member of the staff of one of our public hospitals tendered his resignation to the Board owing to his being asked to attend as a "charity patient" one who had been, but a short time previously, a private patient of his, and who had paid him promptly and was still quite able to pay for professional attendance. We have heard that the erroneous idea has gone abroad that physicians upon the staff of hospitals are paid for their services by the "management" of these institutions, consequently the sooner the public are made to understand that the physicians are not paid for their ministrations in the public wards, the better for all concerned.

Let it be proclaimed by the united voice of the profession that the public wards and dispensaries are absolutely for paupers. Charity means much, but charity tempered by sound judgment and justice is what the physicians of the twentieth century are going to demand. W. A. Y.

## STUTTERING.

In Denmark, public courses for treatment of stuttering have been held since 1895. Holiger Mygind, a medical member of the supervising committee, publishes an interesting report—abstracted in the *Annals of Otology*—from which may be obtained some valuable information on this neurosis, to the nature of which physicians are too indifferent.

In seeking for physical causes of stuttering, adenoid vegetations were found in nearly 40 per cent. of the cases. They bear only a predisposing relation, for their removal greatly aided subsequent treatment, or improved speech very much, but did not cure the stuttering.

For some reason males are more subject to stuttering than are females. Nature seems to hold an even scale, for while man monopolizes stuttering, woman has migraine pretty well to herself. When the child is learning to speak stuttering is very apt to occur —it is noteworthy that many stutterers are late in beginning to speak. Between seven and eight—the usual age to commence school—and puberty are other periods during which the infirmity is very apt to manifest itself, or, if present, to be aggravated. In each of these periods the peculiar nervous influences at work are evident.

Heredity plays an important part in the causation, whether direct inheritance from the parent or psychical contagion. Mygind regards stuttering as a neurosis related to the so-called neuropathies of degeneration, the stigmata of which may be "nervousness," megrim, asthma, epilepsy, neurasthenia, hysteria or stuttering.

J. M.

## EXULTATION AND—REFLECTION!

WHILE our glum doctors, wrought to anger solemn,
Write magazine epistles by the column,
We, too, may lay claim, like our English betters,
If not to genius, yet to "Men of Letters."

True, no one reads the grievances they tell us,
Knowing *a priori* that the pair are jealous;
For talk is cheap, and has its cause, says Rumor,
In too much leisure and too little humor.

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## GERMS AND TELEPHONES.

PRESIDENT MURPHY of the New York Board of Health recently sent out a staff of inspectors to examine public telephones, to determine whether they also are centres for the dissemination of disease germs. Dr. Murphy believes they are, and has determined that, if the inspection indicates the presence of germs, measures will be taken to render the instruments aseptic. We understand that in some of the large cities of the United States, if not as yet in Canada, complaints are being made in regard to the dirty condition of public telephones, and it can be quite easily understood how disease germs find lodgement in the receivers and transmitters. It could be quite easily discovered as to whether such were actually the case or not by swabbing the transmitters with cotton wool moistened in sterilized water, from which cultures could be made in potato starch. If telephones were sterilized once a year, they could be rendered innocuous and safe for public use. Dr. Murphy has determined that if his inspectors find that germs do exist on public telephones, he will cause the telephone companies to wash the apparatus every day with boracic acid or some other

disinfectant, and see that the rule is strictly enforced. Some may think that this is a little too loud a cry in favor of asepticism, but it remains a fact that in large centres where telephones are being used by different persons every hour of the day, accumulation of dirt is bound to be the result in and around the instrument, and there is no reason why a system of cleansing should not be adopted, and thereby decrease any risk of contagion.

W. A. Y.

## EDITORIAL NOTES.

OUR STAFF AGAIN ADDED TO.—We have again the satisfaction of informing our readers that our staff has been still further strengthened by the addition of Dr. Newton Albert Powell, of Toronto, who will appear under the department of Medical Jurisprudence and Toxicology. Dr. Powell has for years been a keen student of medical law, and a lecturer on this subject in one of our medical colleges, being also a coroner for the County of York. Were we to say more in this connection than make a simple announcement of the fact it might appear fulsome. Added to his ability as a physician, Dr. Powell possesses the personal charm that accompanies a big bump of natural humor. He never misses the place where the sublime ends and the ridiculous begins. We extend to him a cordial welcome. W. A. Y.

VIOLATIONS OF THE ONTARIO MEDICAL ACT.—Madame Clair, 227 Major Street; Miss Alice Whatmough, 613 Church Street; Miss Mary J. Seabrooke, Yonge Street Arcade; Miss Maria Fleming, of the Gunagathon Company, Temple Building; Miss Cooper, manager of the Canadian Viavi Company, Confederation Life Building, and Dr. Ellen Burt Sheratt, 179 Jameson Avenue, were arraigned last month in the Police Court on a charge of breaking the Medical Health Act. They all pleaded not guilty, and were remanded. All the women except Mrs. Sheratt have been running medical concerns for the treatment of women, and Detective Wasson, who laid the information, says that this is contrary to statute. Mrs. Sheratt's offence chiefly consists of not being registered under the name she now bears, but as Dr. Ellen Burt, her name before she married.

TUBERCULAR ULCERATION OF THE UPPER LIP.—A case of tubercular ulceration of the upper lip was exhibited to the French Society

of Dermatology and Syphilography, Jan. 12th, 1899, by Dr. Danlos. A month previous the sore was thought to be a chancre; but neither induration nor enlarged lymphatics were observed, though the lesion was of six weeks' standing. Its worm-eaten surface covered with pus and the neatly shaped and cut edges of the sore resembled a chancroid. Under the frenum linguæ there was a rounded, sinuous ulceration, with no granulations, in the midst of which Wharton's duct opened. The patient, who was fifteen years of age, had not seen her menses for eight months; she had pulmonary phthisis. The ulceration of the upper lip, and that on the frenum linguæ were of bacillary origin, although the former assumed the clinical appearances of chancroid at the beginning of its evolution. Dr. Fournier, who discussed the case, stated that buccal phthisis of the lips was extremely rare. Dr. Besnier distinguished two varieties of bacillary ulcerations, the first occurring in tubercular patients; the second, of primary origin. The ulcerations in tubercular cases are obstinate and treatment is rarely successful. Primary buccal ulcerations are often easily cured by local applications of pure lactic acid.

LARGE SUBCUTANEOUS SALINE INJECTIONS IN EXTENSIVE BURNS.—In a case of extensive burns, in which grave general symptoms (alternating delirium and coma, red, scanty urine, pulmonary congestion) threatened a fatal issue, Dr. Duret, of Lille, and Dr. Tommasoli have employed massive, subcutaneous, saline injections of from 1000-1200 c.c. morning and evening. Under the influence of this medication, which was continued for three days, the alarming symptoms disappeared, little by little, and the patient recovered. It seems certain, therefore, that, by diluting the blood and combating the grave symptoms, due to engorgement of the circulation from thickening of the blood, these injections are the very best treatment for extensive burns, accompanied by grave general phenomena.

ARTIFICIAL INDIGO.—Coal-tar has yet another conquest to record. It threatens to supplant the indigo trees of India and Java by supplying an indigo chemically identical with and infinitely purer than that hitherto on the market. As long ago as 1882 a German chemist, Dr. A. Von Baeyers, discovered several methods of obtaining indigo blue from cinnamic acid and bitter almond oil, which themselves are a product of coal-tar, but all were too costly for commercial purposes. Other chemists took up the work where Baeyers had

left it, and after years of toil it was announced eighteen months ago that "The Baden Aniline and Soda Works," at Ludwigshafen on the Rhine, were in a position to supply indigo obtained by an improvement of the process discovered by Dr. Baeyers, and at a price low enough to compete with natural indigo. The raw material for the new product is naphthaline, a constituent part of coal-tar, known to the public as an excellent remedy against moths, etc., and which, by a series of elaborate operations, is converted into indigo blue. The factory has gradually increased its producing powers and hopes soon to be able to export to other indigo-using countries. It may be mentioned that Germany already supplies 70 per cent. of the world's consumption of dye stuff from coal-tar.

NURSERY RHYMES FOR DOCTORS.—The *Dietetic and Hygienic Gazette* gives the following rhyme, which may be of service to some of our confreres:

From Centigrade to Fahrenheit
'Tis easy to divine—
You first must use arithmetic
And multiply by nine.
The answer now divide by five,
And then you have in view
The very number that you seek
By adding thirty-two.

From Fahrenheit to Centigrade,
However, it is plain—
You first must take the thirty-two
And multiply again;
But this time only by the five,
And then you draw a line
Straight up and down, in order that
You may divide by nine.—*Southern Practitioner.*

DR. MALHERBE, of Nantes (*La Presse Medicale*), has employed the modifying influence of heat in the treatment of chancroid. The surface of the sore, having been completely dried with a wad of absorbent cotton, the large blade of the Paquelin cautery, heated to a red heat, is brought quite close without actually touching it. In a short time streaks of blood appear on the surface of the sore, and the procedure is stopped. The chancroid is thus transformed into a simple ulcer, which heals under a dressing of powder of any description in from eight to fifteen days. The pain caused by

exposing the ulcer to radiant heat is generally well borne. If necessary, the chancroid might, previous to the operation, be touched with a solution of cocaine.

TREATMENT OF APHTHÆ BY WASHING OUT THE STOMACH WITH VICHY WATER.—At the Hospital of Assisted Children, Paris, Professor Hutinel employs a very simple procedure, which enables him, in most cases, to effect a cure of aphthæ in two days. The procedure consists in washing out the stomach twice a day with Vichy Water. Under the influence of this treatment, without making local applications to the child's mouth, the aphthæ disappear after three or four washings. Simultaneously the phenomena of diarrhea and dyspepsia disappear, and the accompanying erythema of the anal region is also relieved.

PROF. SCHENCK'S DISCOVERY.—THE Vienna Medical Council is discussing the question whether Prof. Schenck's discovery determining the sex of an unborn child is charlatanism or a genuine scientific discovery. This action is being taken by the council in view of Prof. Schenck's submission of his plan to the Emperor of Russia, who is desirous of hearing the council's opinion.

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DR. HARLEY SMITH has removed to 190 Spadina Avenue.

DR. J. E. GRAHAM went South for a holiday trip a week or two ago.

DR. E. M. HOOPER, lately on College Street, has moved to Merritton, Ont.

CONGRATULATIONS to Dr. and Mrs. H. P. H. Galloway on the birth of a daughter.

DR. G. R. MCDONAGH sailed from New York on January 28th, for a few weeks' sojourn on the Continent.

THE marriage of Dr. Overton Macdonald and Miss Adelaide Sullivan took place at Holy Trinity Church on February 1st.

DR. MONTIZAMBERT has been appointed Director-General of Public Health at Ottawa. He will act as sanitary adviser to the Government, general superintendent of quarantine, and inspector of the Tracadie lazaretto. Dr. Montizambert has been superintendent of the Grosse Isle quarantine station, and for the past five years general superintendent of quarantine.

# Obituary.

## JOHN A. MULLIN, M.D.

DR. JOHN A. MULLIN, one of the oldest and best known physicians in the city of Hamilton, Ont., died on Tuesday, Feb. 21st, having been ill for some time. He suffered from an incurable disease, and his death had been expected for some days. The deceased was born in New York City on June 10th, 1835. The family came to Canada in 1837, settling in South Dumfries, Brant County. After leaving school the deceased studied medicine under Dr. Rolph. He graduated in medicine at the University of Victoria College in 1859, became a licentiate of the provincial medical faculty in 1860, and after a temporary residence in New York and Toronto accepted a position on the medical staff of the Hamilton hospital. After his hospital experience Dr. Mullin settled down to general practice in that city, where he has labored all his life, and has long been esteemed as a leading physician of the district. Both the Ontario and Dominion Medical Associations at different times have placed him in posts of honor. For nearly thirty years he was one of the chief medical advisers to the Canada Life Assurance Company, all the policies of that company being subjected to his expert supervision, and to that of his colleague, Dr. Macdonald: and he did long and estimable service as a visiting physician to the city hospital. In politics he was a Liberal. He was a member of Temple Lodge, A. F. and A. M. He leaves a widow, four sons, and a daughter.

## GEORGE H. ROHE, M.D., OF BALTIMORE.

WE notice in the *New York Medical Journal* an announcement of the sudden death of Dr. Rohé in New Orleans, whither he had gone to attend a meeting. He was a well-known alienist and the superintendent of the Maryland State Insane Asylum. He died at the early age of forty-eight years. He was an active member of the American Public Health Association, and was elected its president at the last meeting in Ottawa. Dr. Rohé was an excellent writer and a highly respected member of the medical profession.

# The Physician's Library.

## BOOK REVIEWS.

*The American Year-Book of Medicine and Surgery*, being a yearly digest of scientific progress and authoritative opinion in all branches of medicine and surgery, drawn from journals, monographs and text-books of the leading American and foreign authors and investigators. Collected and arranged with critical editorial comments by Drs. Samuel W. Abbott, John J. Abel, J. M. Baldy, Chas. H. Barnett, Archibald Church, J. Chalmers DaCosta, W. A. Newman Dorland, Louis A. Duhring, D. L. Edsall, Virgil P. Gibney, Henry A. Griffin, John Guiteras, C. A. Hamann, Alfred Hand, jun., Howard F. Hansell, Milton B. Hartzell, Barton Cooke Hirst, E. Fletcher Ingals, Wyatt Johnston, W. W. Keen, Henry G. Ohls, Wendell Reber, David Riesman, Louis Starr, Alfred Stengel, G. N. Stewart, J. R. Tillinghast, jun., and J. Hilton Waterman. Under the general editorial charge of GEO. M. GOULD, M.D. Illustrated. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899. Canadian agents, J. A. Carveth & Co., Toronto.

When it is remembered that the mechanical part alone of the work in getting out by the first of every year so large a book as "The American Year-Book of Medicine and Surgery" takes months to accomplish, not to speak of the enormity of the task to be done by the different department editors in compiling the various sections, it is little to give even the due amount of praise to the publishers. Such a work, and one of such magnitude, in its entirety carried out in such a first-class manner, is a credit to any firm, no matter under what flag they live. We think this passing word of commendation to the mechanical side of the volume is only just.

Owing to the lamented death a few months ago of Dr. William Pepper, who had charge of the department of General Medicine, it was no easy matter to find some one or two writers of medical lore who could take a position such as his and fill it with the same grace, dignity and ability, that Dr. Pepper did. His was a remarkable career, and few members of the profession have fallen in harness who will be as much missed as he will. Dr. D. L. Edsall, associate in the Pepper Laboratory of Clinical Medicine, Philadelphia, and Dr. Alfred Stengel, Physician to Philadelphia Hospital, undertook to fill the place, and deserve credit for what they have accomplished. General Surgery has been contributed to by Drs. W. W. Keen and J. Chalmers DaCosta; Obstetrics has been taken charge of by Drs. Barton Cooke Hirst and W. A. Newman Dorland, and Gynecology is represented by Drs. J. Montgomery Baldy and W. A. N. Dorland. Drs. Louis Starr and Alfred Hand, jun., have contributed to the department of Pediatrics; Drs. John Guiteras and David Riesman, to Pathology; Dr. Archibald Church, to Nervous and Mental Diseases; and Drs. V. P. Gibney and J. H. Waterman, to Orthopedic Surgery. The only Canadian represented on the staff is Dr. Wyatt Johnston, of Montreal, who has charge of Legal Medicine, and in his work thereon has borne out his already enviable reputation. It is anything but an easy matter to present in so limited a space the latest facts on any subject or department without either appearing wearisome or going to the other extreme and being too brief. Ability is sometimes shown by a writer by being the reverse of voluminous, and "boiling down" to simple facts. We prefer never to be fulsome in the praise of any book; in fact we fear we have been accused in one or two instances of being a little cold, or at least lukewarm; but we wish to be fair at all hazards. Of the 1899 "American Year-Book of Medicine and Surgery,"

we can say that it is as nearly faultless as any book can be. It is, to be short and concise, a "boiled-down" concentrate of everything that is latest and best in medicine and surgery, reviewing facts which have been brought to the front during the past year in a manner that is able, essentially interesting and thoroughly comprehensive. W. A. Y.

*Hallucinations and Illusions*: A Study of the Fallacies of Perception. By Edmund Parish. London: Walter Scott. 6s.

This is a special edition of this work, prepared for the English publisher by the writer, and not merely a translation of the familiar German work. And by the way, too much praise cannot be given to the Walter Scott Publishing Co. for the service they have rendered students of science in the publication of their Contemporary Science Series, a collection of volumes which seem to replace the International Scientific Series of twenty years ago, just as the latter replaced the old Bridgewater Treatises of a still earlier day, long before Darwin, when classical etymology was the *summum bonum* of all human knowledge, and the expositors of the same felt a certain supercilious contempt for all who were not also occupied with the faded and rather dirty rags of ancient history, carefully collected in that great curiosity shop of obsolete notions and edifying mistakes at Oxford. Those who have bivouacked from childhood in the fresh pastures of the Delphin classics could not be expected to have much respect for a "naturalist." The naturalist got a certain amount of humble comfort, however, in religion, and his books read very much in this day like sermons. If he could not be brilliant and inspire the respect which scholars did, the insignificant man of science could at least be very good. The naturalist who wrote the following (in the standard work on zoology of the time) seems to have been most unctuously good:

"To view the Great Creator of all in that peculiarly *parental* character, in which He has been so frequently and touchingly represented to us by His inspired messengers; and to submit without a murmur to the se erest inflictions of His Almighty hand, as a discipline of a father who alone knoweth what is good for his children, and who loveth even while he chasteneth. In the events of life, as in the phenomena of Nature he will be prepared to *trust* where he cannot *trace*."

No wonder the pompous professorial coteries who had complacently witnessed *de haut au bas* a long reign of scientific mildness of this sort found the rather sudden transition to the Origin of Species jarring and offensive. Ah, those Bridgewater Treatises! But to end an unpardonable digression.

In the present volume the writer makes an excellent classification of hallucinations and illusions—the most lucid I think I have met. A large mass of well-selected cases are brought forward, and while the writer is inexorable when examining cases of obviously spurious reasoning, there is no sign of impatience or prejudice in cases where the conclusions arrived at appear superficially logical, though it is the latter, whether in explaining the efficacy of a quack medicine or the disappearance of a star, which is most exasperating to an honest student of psychological phenomena. The material is mostly drawn from contemporary sources; though ancient literature, both Hebrew and classical, and especially Mediæval ecclesiastical literature offer a most tempting field for a writer upon hallucinations and illusions. The chapter upon Telepathic Hallucinations is also most timely.

Taken as a whole it would be hard to say whether the work is of greater medical or legal value. A clear knowledge of the subject would prevent many suits at the bar from terminating in the stupid pantomime of superstitious ignorance so frequently witnessed. E. H. S.

*Studies in the Pathology of Sex.* Vol. I., "Sexual Inversion." By Havelock Ellis. Watford, London: The University Press.

This valuable contribution to the growing literature of degeneration, by a conscientious, sincere and manly writer, whose honor and genius are beyond all

question, has been placed upon the *Index Expurgatorius*, and the author indicted indirectly in a London court for writing "an obscene libel with the intention of corrupting the morals of Her Majesty's subjects." That so immaculate a community as the one referred to should first learn of good and evil at this late day pathetically suggests "Paradise Lost," and one could almost shed a sympathetic tear as he contemplates the vestal innocence, thus rudely smirched, of a people among whom vice (and hypocrisy) are known to be altogether absent. The deliverance of the judge at this celebrated Bedborough trial suggests, on the other hand, by its insolence, the sixteenth century; by its stupidity, the fifteenth; by its ignorance, the fourteenth; and by the combined intelligence of the whole, the immortal "Dunciad," in which the name of Sir Charles Hall might with great propriety be enshrined. But to dwell longer upon such a pitiable spectacle of prejudice, tyranny and intolerance is an indignity to Havelock Ellis, an indignity to science, and an indignity to the liberty of thought of the twentieth century.

Until very recent years this subject has received hardly any serious consideration from the alienist, but has been left almost entirely to be treated by irresponsible writers, who were more or less charlatan in spirit. This has been exceedingly unfortunate, for a plain understanding of these matters might obviate much that has become unwholesome and perilous in our very midst. "In this particular field," the writer remarks, "the evil of ignorance is magnified by our efforts to suppress that which can never be suppressed, though in the effort of suppression it may become perverted."

Until the appearance of Krafft-Ebing's "Psychopathia-Sexualis," and similar works, these forms of perversion were only spoken of in a breathless whisper, and the deep-lying cause of not only these various forms of sexual perversion but also of many other social abnormalities which menace the present social system, was never isolated, though it has never been far to seek. Even at the present day any plain statement of these unnatural social conditions which enjoy the prestige of long usage and ecclesiastical tradition will arouse in many sources, as we have seen, the most violent antagonism.

Havelock Ellis, in this first volume of a long-contemplated work, has, however, fearlessly entered upon an exhaustive study of these conditions. Those in search of pornographic literature will find nothing of that description in this volume, but a plain statement of the more common forms of sexual perversion. The work has merits which will render it for many years a classic in this field of research; and by American readers it will for many reasons be preferred to other treatises upon the same subject, where less delicacy and tact have been used.

E. H. S.

*Saunders' Pocket Medical Formulary*, with an Appendix, containing posological table, formulæ and doses for hypodermic medication, poisons and their antidotes, diameters of the female pelvis and fetal head, obstetrical table, diet list for various diseases, materials and drugs used in antiseptic surgery; treatment of asphyxia from drowning; surgical remembrancer, tables of incompatibles, eruptive fevers, weights and measures, etc. By WILLIAM M. POWELL, M.D., author of "Essentials of Diseases of Children," one of the associate editors of the "Annual of the Universal Medical Sciences," etc., etc. Fifth edition. Thoroughly revised. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899. Canadian agents, J. A. Carveth & Co., Toronto.

The best word to apply as conveying the meaning and object of a book like this would be "Reminder." We can conceive of nothing better suited for a man who does not always carry his memory with him, and who requires to have some body or thing to be constantly coaching him so as to show him the path in which he ought to walk. The list of prescriptions given is good, and, we find, is not old and stale, but in many instances contains the newest preparations. In this edition the posological table has been thoroughly revised and largely added to, also including some of the most recent therapeutical agents

known to pharmacy. The table also gives the dose in both grains and grammes. A most useful table, found toward the end, is that dealing with eruptive fevers, giving in the case of each the period of incubation, day the rash appears, character of the rash, the day it fades, and duration of the illness. The chapter entitled "Surgical Remembrancer" is from the pen of a London surgeon, and contains points which would not come amiss at any time. The diet table is complete, and gives the various forms of food best suited for certain conditions.

*The Psychology of the Emotions.* By TH. RIBOT. London: Walter Scott. 6s.

In this lucid treatise a writer of known eminence has endeavored to give without digression or diffuseness, a complete yet compact *résumé* of this subject as it stands to-day. The result is all that is to be desired. Professor Ribot's earlier writings upon cognate subjects are in the mind of all, and the student of the psychology of feeling will miss none of the old charm of style or symmetry of matter in the pages before us. The book is very aptly divided into two parts, the one dealing with general, the other with special psychology. In the latter more particularly one notices with surprise and pleasure how much originality the author has brought to bear upon considerations which, since the time of Locke, have been placed in every conceivable posture, and viewed in every possible light. Over the so-called writers of "metaphysics" Ribot has the advantage which the careful scientific writer always has over the bemused transcendentalist. E. H. S.

*Sleep: Its Physiology, Pathology, Hygiene and Psychology.* By MARIE DE MANACEINE. London: Walter Scott. 3s. 6d.

There is perhaps no subject which has been more exploited by poets and romancers of all times, and less studied in the light of science in our own time. Friedrich Scholz, of Bremen, issued some years since a brief dissertation upon Sleep and Dreams, but it consisted merely of a few suggestions; and we have since seen no other work of any pretensions upon this most important subject until the present translation from the Russian appeared. The work is not a popular treatise in the usual sense of the word, but is exactly what the title indicates, and the reader will close the book with the feeling that he has had the last word upon the subject. The writer's scientific methods are exact, thorough and authoritative, and her prose manner, even in a translation, easy and clear. E. H. S.

*Three Thousand Questions on Medical Subjects,* arranged for self-examination, with the proper references to standard works in which the correct replies will be found. Second edition, enlarged. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1899.

Nothing is so apt to quickly prepare a student for examination during the day or two previous to that ordeal as to put himself through a system of quizzing. Of quiz compends, so called, there are many, the majority being most useful and helpful. This little booklet will prove a great boon to many, consisting of questions carefully selected and bearing upon the subjects apt to be taken up in the examination room. After each question are two numbers —the first one referring to the number of the volume in a list at the beginning of the book, and the second one to the page of that book on which a complete answer will be found.

*Diet for the Sick.* By MISS E. HIBBARD and MRS. EMMA DRANT, matrons at two large hospitals in Detroit. 103 pages, board sides; postpaid, 25 cents. The Illustrated Medical Journal Co., Detroit, Mich., publishers.

This is the third edition of this handy and popular little bedside book. The recipes for sick dishes have all been tried, and are those largely used by the Detroit hospitals where the two contributors of them served as matrons. Added to these are various diet tables, as for anemia, Bright's disease, calculus,

cancer, consumption, diabetes, dyspepsia, fevers, gout, obesity, rheumatism, uterine fibroids, etc., as given by the highest authorities. The booklet is intended to be given to the family by the physician, and for such purposes one-half dozen will be sent, prepaid, on receipt of $1.00.

*Golden Rules of Surgical Practice*, by E. HARRY FENWICK, F.R.C.S.; *Golden Rules of Gynecology*, by S. JERVOIS AARONS, M.D.; *Golden Rules of Obstetric Practice*, by W. E. FOTHERGILL, M.A., M.D., are the names of vest-pocket editions of three subjects, we might express it, put under a microscope, so small the space occupied and so magnified the result. Each one consists of reminders or rules as to what should be done under circumstances in which a practitioner is frequently placed. Each rule is clear and decisive, and will prove a source of assistance to many. They are published by John Wright & Co., of Bristol, England.

## PAMPHLETS, REPRINTS, ETC., RECEIVED.

"Caries of the Teeth and Diseases of the Stomach." By Charles D. Aaron, M.D., Detroit, Mich.

"The Caustic Action of Arsenic in Treating Carcinomatous Growths Accessible from the Surface of the Body." By C. W. Simmons, M.D., Phila.

"Diseases of the Ear as a Specialty." By Emil Amberg, M.D., Detroit, Mich.

"The English Home Office and Public Sentiment in America and Great Britain." By Clark Bell, LL.D., New York.

## ANNOUNCEMENTS.

J. B. Lippincott Company, Philadelphia, in the ninth annual announcement of "International Clinics," give notice that the price of this well-known quarterly, on and after April, 1899, issue, will be, for cloth binding, $2.25, and one-half leather binding $2.50, per volume; the annual subscription being thereby reduced from $12.00 and $13.00, for the respective bindings, to $9.00 and $10.00. New or renewal subscriptions in Canada may address their orders to Charles Roberts, 593*a* Cadieux St., Montreal.

The firm of E. B. Treat & Co., of 241 and 243 West 23rd Street, New York, announce that The Medical Annual for 1899 will soon be off press and ready for distribution. It is hardly necessary for us to say more than this, that this book has from year to year gained more favor with the profession, until to-day it is almost indispensable to the busy practitioner who wishes to get in small space the most recent points in the etiology, pathology and treatment of different diseases. "It includes a series of articles intended to bring the reader's knowledge up to date on subjects of modern investigation, and the present volume contains new matter of practical interest concerning almost every known disorder." Among the special articles will be found the following: "Practical X-Ray Work," by R. Norris Wolfenden, M.D., B.A.; "Advances in Skull Surgery," by Seneca D. Powell, M.D.; "Surgical Treatment of Paralysis," by Drs. Robert Joncs, F.R.C.S., and A. H. Tubby, M.S., M.B. These articles will be freely illustrated, chiefly by reproductions from photographs. "Climatic Treatment of Consumption," by F. de Havilland Hall, M.D., F.R.C.P. An article on "Legal Decisions Affecting Medical Men," by William A. Purrington, A.B., LL.M., will be found interesting and pertinent. There will also be found an article on "The Chief Pathogenic Bacteria in the Human Subject," with descriptions of their morphology and methods of microscopical examination, by S. G. Shattock, F.R.C.S., the Pathological Curator of the Museum of the Royal College of Surgeons, London, illustrated by a series of finely colored plates.

# Selected Articles.

## THE WIND AS A FACTOR IN SPREADING INFECTION.

BY R. S. THORNTON, M.B., C.M., DELORAINE, MAN.

At this season of the year, when the prevalence of typhoid fever reaches its maximum, the physician is often sorely puzzled to account for the origin of many isolated cases occurring apparently without connection with each other or with pre-existing cases. Now that the bacterial nature of the infection in typhoid fever has been satisfactorily established, we can no longer fall back on unsanitary conditions as being the source of the outbreak of this disease. These can only be regarded as accessory and contributory causes. The drinking water is, of course, the favorite medium of introduction to the system, and it is well recognized that "the maximum prevalence of typhoid coincides with the lowest recession of the ground water from the surface of the soil." This condition favors the presence of organic matters in the wells, which will thus constitute a suitable nidus for the development of the typhoid germs; but the real problem is to account for the presence of the germ itself.

Typhoid has become so generally distributed in the Province that it may be regarded as endemic. We have few cities where large communities are receiving the same water supply. In the towns and villages, and on the farms, the water is almost entirely supplied from surface wells, and not a few people use rain-water collected in cisterns. These sources of water supply are all largely independent of one another. There are few watercourses. In some cases, especially in towns and villages, the wells may be contaminated through direct soakage of surface water containing the germs; but the great majority of cases cannot be so explained.

In trying to account, under these circumstances, for the general distribution of the disease, there is one factor which does not seem to have received the attention it deserves. The wind may be a very potent agent in the dissemination of disease. The tendency of bacteria to cling to dust particles is well known, and they may thus be carried to places where the conditions favor their development.

In this prairie land we are quite familiar with the long distances to which dust may be carried by the high winds, and the agriculturist recognizes this as one of the most active agents in distributing the seeds of noxious weeds. That this agency of wind is also at work in mountainous regions the following incident will show: Early this year there was a fall of dirty, yellow-colored snow at Engadi, in Switzerland. When the snow was boiled and allowed to settle there was a thick deposit of mud, which was found to contain iron in combination with other minerals—a particular combination characteristic of certain iron ores in Hungary, hundreds of miles away. The dust had been swept up from the plains and carried in the higher currents of the atmosphere till intercepted by the falling snow. What happened to the iron ore might also happen to typhoid and other germs which retain their vitality for some time, even when subjected to drying. They could be carried along with the dust particles into open wells, into vessels containing water, milk, butter, and so on; into stagnant sloughs, and be deposited on the roofs of houses, thence to be washed by the next rainfall into cisterns. In this manner many epidemics and isolated cases may be accounted for.

There are two points of practical importance to be deduced from the above. The first concerns the management of the individual case of typhoid. The physician directs the attendant to disinfect excreta-fæces, urine and sputa; but, as the thorough disinfection of a typhoid stool is a matter requiring time and trouble, and is very disagreeable, it is safe to say that it is never completely done. Indeed, there is often great carelessness in the disposal of typhoid excreta, and sometimes they are thrown out on the surface, whence they may be carried by water into the wells, but more likely, on the prairie, after becoming partially dried, to be swept with the dust to neighboring farms. In rural districts, all typhoid stools should be buried in a hole, away from the water supply, the bottom of the hole being first covered with a liberal quantity of lime or other disinfectant; or they should be burned.

The second point concerns the public health authorities, and has to do with the water-closets in use on the railway trains. These are, for the most part, open chutes down which the excreta are projected to the railway track. Many people with ambulatory typhoid, and patients in various stages of the disease *en route* to hospitals or home, use these closets, and thus typhoid stools are spread along the railway, ready for distribution by the wind all over the neighboring country. The same thing might happen were cholera ever to obtain a footing on this continent. But apart from the specific danger in such diseases, the method is unhygienic and offensive. It should not be difficult to attach a box below the chute and adopt some modification of the earth-closet, the excreta being removed and burned at divisional points along the line.—*Manitoba and West Canada Lancet.*

## A CONTRIBUTION TO THE THERAPEUTICS OF IRON.

BY DR. GELLHORN.

THE sceptical assertions of Dr. Bunge, regarding the value of ferruginous medication, at the Congress for Internal Medicine of 1895, evoked an almost unanimous and vigorous opposition in the discussion which followed the reading of his paper. The doubts expressed by him in reference to an insufficient absorption of the inorganic preparations of iron could at that time only be controverted, in the main, by the results of practical experience derived from the administration of iron. However, Quincke even then pointed out that his investigations on the subject, which had not yet been concluded, had demonstrated the absorption of iron preparations given for medicinal purposes, and their utilization in the body. In 1896, at the Congress for Internal Medicine, Quincke reported the results of his experiments which meanwhile had been completed, and which confirmed in every respect the above-mentioned statement. He made it his aim to trace the course of iron along the intestinal canal, by means of micro-chemical reactions, and for this purpose fed white mice for a number of days with cheese, to which had been added various ferruginous preparations. The animals were killed during feeding, or after the lapse of a certain interval, and the viscera, especially the intestinal canal, hardened in alcohol, cut open and examined for the presence of iron with sulphide of ammonium as a reagent. It was thus found that iron is absorbed exclusively in the duodenum, and this applies both to the iron in the food and that administered medicinally. It was detected in the duodenal epithelium and in the stroma of the duodenal epithelium and in the stroma of the villi, and is visible even to the naked eye. Furthermore iron is found deposited especially in the liver cells, in a form perceptible on microscopical examination, and in rare cases could be detected by microscopical means in the cortical tubules of the kidneys.

These investigations of Quincke have demonstrated incontestably that the favorable results which have been obtained, since olden times, from the administration of iron are actually attributable to its absorption, and not, as Bunge would have it, to accidental circumstances, to diet alone, or even suggestion. Control experiments in this direction with indifferent medicaments are readily carried out, and were repeatedly mentioned at the Congress of 1895. It should be added that these control experiments were followed by no change, or only by a transient improvement in the condition of the patient.

At the last Congress for Internal Medicine, the subject of the therapeutics of iron was so thoroughly ventilated by the foremost clinicians, as well as by numerous physicians in late years, that a

new contribution would appear superfluous. This subject, however, is of such immense importance to the general practitioner, that a cumulation of material is necessary in order to eliminate the least doubt as to the efficacy of a therapeutic measure which, originating at first on the basis of speculation, and later supported by the results of empirical observations, has finally been demonstrated to be of value by exact experimentation.

In the following I will only discuss the clinical aspects of this question. I was encouraged in undertaking this work by my honored teacher, Dr. Mackenrodt, who has assisted me in every possible way. In the management of chlorosis and anemia and the host of sequelæ to these diseases, the physician would be powerless if he had not in iron a specific, or at least a potent and indispensable adjunct to his other therapeutic resources. The patients, who belong for the most part to the working classes, give in the main the same group of symptoms: amenorrhea, scanty or profuse, weakening, irregular, usually premature, menses; headache, anorexia and dyspepsia; neuralgias, and almost invariably marked lassitude, which interferes markedly with their ability to work. In these cases prompt and radical help must be afforded, in order to restore to the patients their full working capacity as soon as possible. It is well known that the therapeutic value of the various iron preparations differs greatly. This is shown *a priori* by the abundance of manufactured products of this kind. My experience relates chiefly to three preparations, pilulæ chinini cum ferro, formula magistralis of Berlin, liquor ferri albuminati, and the neutral Pepto-Mangan (Gude). My results with the first of these three remedies have been very indifferent, while with the liquor ferri albuminati of the pharmacopeia they were somewhat better. I have instituted accurate examinations, however, with only Gude's Pepto-Mangan, and the data given further on relate to this remedy alone. Owing to my limited experience with the many other preparations employed by various authors, I would not designate the Pepto-Mangan as a universal remedy, or as the only efficient preparation.

Still another remark: there can be no doubt that our medical intervention, no matter of what kind, is materially assisted by psychical impressions. This applies especially to our female patients, who are extremely susceptible to mental influences of this character. Hence, it may readily occur at the commencement of treatment that the previous disorders are less strongly felt, and it is therefore unfortunate that an objective criterion for the existing improvement is not at our disposal, as such we would regard regular examinations of the quantity of hæmoglobin in the blood. In the observations reported these were made with Gower's hæmoglobinometer. This instrument is very convenient, and is superior to Fleischl's apparatus for the use of the general practitioner, especially on account of its cheaper cost. The tests are very exact; any existing errors are the less to be considered since they occur

uniformly and in about the same degree during the entire course of the experiments.

That dietetic treatment alone may be successful in anemic and chlorotic patients was laid down as a dictum by Immermann and Reinert at the Congress for Internal Medicine of 1895. It is natural to suppose that poor and ill-nourished persons would gain in strength under the influence of a proper and invigorating diet; nevertheless, after eight to fourteen days a cessation in the improvement occurs and the old disorders return. These authors, as well as Nothnagel and v. Ziemssen, consider an invigorating diet as only a valuable adjunct; both of the latter, moreover, regard rest in bed for several weeks as an important factor in the cure. Since several years Mackenrodt has also instituted a large series of observations of this kind, not yet published, in which, for purposes of control, he employed quantitative estimation of the hæmoglobin. It was found by him that under the influence of hygienic and dietetic regulations alone the quantity of hæmoglobin in the blood increased only at the commencement of treatment, and then only in a dilatory manner.

In the case of one of my patients I proceeded as follows: I prescribed Pepto-Mangan (Gude), one teaspoonful three times daily after meals, and regulated the diet in accordance with the directions furnished with preparation. Sour and fatty foods, as well as raw fruits, are to be avoided under all circumstances. Fritsch ("Diseases of Women," 1892, p. 469) advises, indeed, that the desire for acids manifested by chlorotics should be gratified. According to my experience, however, this craving for acids is to be regarded as a pathological condition of the alimentary tract, which is made worse by further supply of acids, but can be successfully overcome by an unstimulating diet. In cases where the social conditions in any way permitted, I allowed the patient to take a small glass of red wine three times daily, but never during a period of one hour before and after the administration of the medicament, in order to prevent the combination of the tannic acid contained in the wine with the iron. The use of potatoes was restricted as much as possible, at least during the first four weeks. Furthermore, I resorted to the dietetic regulations customary in these cases, but changed them to advantage when, as so often happens, obstinate constipation was present, following in this respect the suggestions of Hebra, which have recently been again advocated by Ruge (Transactions of the Obstetrical and Gynecological Society of Berlin, 1, III, 1896), and obtained generally excellent results. In contrast to several authors who made it a practice to remove any existing dyspepsia before resorting to the use of iron, I have followed the method of v. Ziemssen and Baumler, of at once administering iron—unless the presence of a severe gastric affection, especially ulcer of the stomach, could be positively determined—and observed as early as the end of one or two weeks an increase of appetite and subsidence of the gastric disorder.

I would lay especial stress upon systematic exercise in the open air. I ordered the patients, who, with but two exceptions, were treated out of bed, to take a stroll at mid-day, at first, of five to ten minutes' duration. At the end of three to four days they were allowed to remain outdoors for five to ten minutes longer.

After each walk they were advised to take off their corsets, put on their slippers, and rest for an hour on the sofa. Under this treatment the lassitude invariably vanished after a time.

In the manner thus described I have treated in all about sixty patients. In twenty-four cases I instituted quantitative estimations of hæmoglobin at regular intervals of three, five, or eight days. Under normal conditions the quantity of hæmoglobin in woman amounts to 12.59 per cent. when estimated in comparison with the other constituents of the blood. Among my cases the lowest amount met with was, in a single instance, 30 per cent. of the normal, that is to say, of the above 12.59 per cent. Next to this was the following case with 32 per cent. of the normal:

Miss W. G., twenty-two years old, seamstress, related that she had been under treatment for four years for chlorosis. Since the age of nineteen her menses had been scanty, occurring before the usual time, and of three to eight days' duration. On September 26,th 1895, a *remotio secundinarum* occurred, after an abortion induced in the fourth month. At present she complains of darting pains in the upper portions of the lungs, headaches, and rapid loss of strength.

January 9, 1896, anemic appearance; physical examination, especially of lungs, negative. Quantity of hæmoglobin, 32 per cent. Ordered Pepto-Mangan (Gude), diet, etc.

January 13, 1896, considerable improvement of the general condition. Hæmoglobin, 45 per cent.

January 17, since previous day, diarrhea, due to gross errors in diet, troublesome eructations. Ordered tinct. opii. 15 drops, three times daily. Hæmoglobin, 47 per cent.

January 21, improved after use of tinct. opii., no more gastric pains or eructations. Headaches have completely disappeared, lassitude less marked. Hæmoglobin, 55 per cent.

January 31, condition unchanged, ceased menstruating on previous day, the flow having lasted five days.

February 8-28, patient feels well and no longer complains of pains in the lungs. Appetite and bowels regular. Hæmoglobin, constantly 55 per cent.

March 5, no change. Hæmoglobin, 62 per cent.

March 11, Hæmoglobin, 68 per cent.

March 27, Hæmoglobin, 77½ per cent.

Unfortunately, as in most of these cases, the patient's visits ceased as soon as she felt entirely capable of going to work. As a matter of fact, the increase of hæmoglobin in this case was tardy, as in four other cases in which the quantity at the beginning was

34, 35, 37 and 38 per cent. of the normal. In eighteen other instances in which the initial amount was higher, viz., 42-75 per cent. of the normal, progress was more rapid as a rule.

This is most strikingly illustrated in the following case:

Miss C. B., aged fifteen years, complains of violent headaches, visual disorders, loss of appetite, a feeling of pressure over the stomach, constipation and general lassitude.

June 2, 1896, *status presens:* mucous membranes pale; physical examination, negative; heart, normal; quantity of hæmoglobin, 45 per cent. Prescribed as in above case.

June 9, headache has disappeared; condition otherwise unchanged. Hæmoglobin, 45 per cent.

June 16, improvement. Hæmoglobin, 51 per cent,

June 23, decided improvement. Hæmoglobin, 55 per cent.

July 8, patient free from complaints; cheeks ruddy; lips and conjunctiva red. Hæmoglobin, 78 per cent.

July 23 and September 24, continued good health.

I also derived exceedingly favorable results from the use of Pepto-Mangan (Gude), in patients who came to us for operations after having been exhausted by protracted hemorrhages. Of course convalescence in such cases is delayed; the system recuperates but slowly from the double injury inflicted by the losses of blood and the operative intervention. Digestive disturbances are especially apt to be troublesome. In these cases ferruginous medication often produces remarkable improvement.

I cannot close this paper without calling attention to the beneficial influence exerted by Pepto-Mangan (Gude), in anemic neuralgias, and as an illustration of its effects in this class of cases, add in brief the following history of a case.

Mrs. K., aged thirty-five years, very pale and ill-nourished, suffers from intercostal neuralgia on the left side.

January 30, 1896, quantity of hæmoglobin, 68 per cent. of the normal.

February 5, in the meantime has suffered on two days with violent headaches; intercostal neuralgia persists; appetite good; no gastric disturbances. Hæmoglobin, 69 per cent.

February 12, no longer troubled with headaches, with exception of one attack of neuralgia, in the area supplied by the left supra-orbital nerve. The paroxysms of pain on the left side of the chest have become less frequent. The lassitude has subsided. The mucous membranes are still anemic. On the whole, the patient feels better and more vigorous than before the commencement of treatment. Hæmoglobin, 75 per cent.

February 18, considerable improvement of neuralgias; no headaches nor digestive disturbances. General health improved. Menses appear earlier than previously, this being the second day of the flow. Hæmoglobin, 73 per cent.

February 26, during the preceding days transient deterioriation of her con-

dition, owing to mental excitement. Menstrual period has been normal. Hæmoglobin not estimated.

March 2, patient no longer complains. Intercostal neuralgias have ceased to occur, except on rare occasions. Hæmoglobin, 76 per cent.

March 13, health good in general. Iron discontinued on account of gastric disturbances, which are said to result from excitement. Ordered strict diet and iron to be resumed.

March 19, complete restoration to health. Hæmoglobin, 82 per cent.

That the final estimates did not yield the normal quantity is not surprising since it is frequently somewhat reduced even in healthy persons. At any rate, the objective and subjective state of the patients in the above cases, as well as in the others not reported in detail, afforded the impression that a radical cure with complete restoration of the ability to work has been effected.

It must be conceded that in matters of therapeutics it is always difficult to appreciate correctly the relation of cause and effect, and to eliminate the factor of accidents in estimating the efficiency of any plan of treatment. And in order to arrive at a positive and unbiassed decision, it is necessary to resort to a series of observations and control experiments of so great an extent that the single observer, even though he have at his disposal a vast amount of material, is only capable of furnishing a small contribution in the discussion of these questions. Furthermore, a certain amount of latitude must always be allowed to individual judgment.

Yet, while fully conscious of these limitations, I think I am justified in asserting that in my therapeutic trials with Pepto-Mangan I obtained all that can be rationally demanded. And I further consider myself warranted in stating that in view of the unquestionable necessity of ferruginous medication in certain troublesome constitutional affections this preparation acts as a most efficient and useful auxiliary to our therapeutic efforts.—*Therapeutische Monatshefte.*

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WHAT DID THE RECTOR MEAN?—For the sake of the rector, who is young and artless, let his name be unknown. But the story is true and it occurred last week, and each woman is busy with its narration. There is an organization in the church; what its uses are only the members know, but it is called "The Little Mothers of the Church." Now, this rector was giving out a notice about it the other Sunday, and how a woman could join it, etc.; and then he made this announcement, which created a flutter and a gasp: "Any lady wishing to become a Little Mother can do so by calling on the rector any Friday in his study attached to the church." And a murmuring wave, like a sudden wind in the forest, went over that congregation.—*San Francisco News Letter*, *Pacific Medical Journal* (September).