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ORIGINAL ARTICLES.

(No paper published or to be published elsewhere as original, will be accepted in this department.)

CLINICAL NOTES OF A CASE OF CANCER OF THE ŒSOPHAGUS.*

By J. J. CASSIDY, M.D., Toronto.

September 27th, 1894.—P. F., male, aged 50 years, no phthisical history, no cough, has been steadily losing flesh since May. In January, 1894, weighed 175 pounds, height 5 feet 5 inches; in June, 168 pounds; present weight, 145 pounds; color of face pale and sickly-looking. The lungs, heart and liver were normal, the urine was free from albumen or sugar. He complained of pain behind the ensiform cartilage, and on the left side and back over the region of the stomach. This pain was increased by taking food, and he found it difficult to swallow food unless fluids were taken at the same time. The difficulty in swallowing was felt after the food had gone down the gullet. I passed the tube of the stomach-pump, and found some obstruction just before entering the stomach. He vomited some acid semi-digested food through the tube, with much glary mucous. The vomiting gave a sense of relief. I dilated the stomach with carbonic acid gas, and on examination found the organ much enlarged. No tumor was discoverable. He slept badly owing to pain. He had been of alcoholic habits in former years. I prescribed gr. 10 bismuth subnitrate of lead, advised him to give up tobacco and alcohol, and ordered a diet of milk and lime water.

October 5th.—Passed stomach-tube and washed out the organ with warm water. Just where the œsophagus joins the stomach noticed a stricture. It

* Read at the February meeting of the Toronto Clinical Society.

was tender, but no blood escaped. Examined for aneurism but found no signs of that disease. There being no history of syphilis or of swallowing corrosive substances, no bruit or bellows' murmur at the back or front over the aorta, together with the bad color of the patient's face, his increasing emaciation, and the constant pain he felt behind the ensiform cartilage radiating from this spot, I concluded that I had to deal with a growth probably cancerous in the lower part of the œsophagus. The disease had been steadily advancing, and there had been a steady loss of weight of thirty pounds in eight months. I advised, in addition to milk, the use of finely-minced meat and soft-boiled eggs.

October 20th.—Decided not to pass the stomach again. The patient is hoarse, voice much enfeebled, and he coughs a good deal of phlegm. He has pains in the jaws and gums as if from cold. Weight 142 pounds, pulse 83. Daily food four eggs, four pints milk, two pints broth, one slice bread.

November 3rd.—Cannot walk as well as before, the gait being feeble, though not shaky; soon gets tired. Very anæmic-looking. Pains in jaws and gums as well as the hoarseness continue. Weight 141½ pounds.

November 27th.—Hoarseness and pain in the œsophagus continue, also pain in the left side. Takes six eggs and one dozen oysters per diem; the oysters have to be well chewed. Pulse 99, temperature 98⅗°. Weight 141 pounds. Ordered enough belladonna to seat of pain and an emulsion of ol moorhuæ.

December 6th.—Takes eight eggs, four pints of milk, one and a half pound beef made into beef tea, one slice bread, ℥ p. emulsion ol moorhuæ per diem. Pain in epigastrium and left side getting severer. Pulse 85, temperature 98⅘°, respiration 23. Advised him to take a glass of grog so as to help him to sleep.

December 20th.—Sweats at night. Swallowing is getting to be rather difficult; cannot swallow bread or oysters last two days. Pain in side very severe. On examination found rhonchus, particularly on right side. Percussion sounds good on both sides; chest measurement on inspiration, 27 inches; on expiration, 28⅝ inches. Weight 146 pounds, pulse 100, temperature 99⅗°, respiration 26. Prescribed gr. ¼ morphine to be taken at night.

January 4th, 1895.—Pain in side very severe; coughing or any sudden motion makes him suffer acute pain in the epigastrium. The huskiness is as marked as ever. Swallowing very difficult. Noticed on this and some previous occasions a very disagreeable odor when he forced air up the œsophagus. Weight 141 pounds, temperature 98°, pulse 98, respiration 26. This was the last visit he paid to my office.

January 18th, 9 p.m.—I saw him at his house. His wife informed me that for the last two days he had spent most of the time in bed. At 6 p.m. he was quite conscious and replied to a question. Shortly afterwards he became insensible. Pulse 135, respiration 50, temperature 101⅘°. Comatose mucous rales on trachea pupils rather small and not responsive to light. No morphine had been taken during the day. In moving him the odor from the breath was very offensive.

January 19th, 3.15 p.m.—Died; no autopsy.

REMARKS.

The symptoms in brief were: Difficulty in swallowing solids, which increased so that a few days previous to his death nothing solid would pass into the patient's stomach; pain behind the ensiform cartilage, at the left side over the sixth, seventh and eighth ribs, and further round at the back; cough, hoarseness and aphonia, emaciation and increasing debility, and considerable mental distress. There was no nausea or vomiting, and he did not die from inanition or pneumonia, but from apoplexy. The hoarseness, aphonia and bronchitis, which appeared October 20th, probably showed that the trachea was involved by the disease. The only medicine used which gave any sense of satisfaction or relief was morphine.

FACTS ATTESTING THE THERAPEUTIC VALUE OF ANTIDIPHTHERITIC SERUM IN THE TREATMENT OF DIPHTHERIA.

By CHARLES FORBES, M.D., London, Eng.,
Late Surgeon Wassa Gold Mines, West Africa, etc., etc.

In opening a discussion on a complex subject such as the therapeutic value of a remedy for diphtheria, a sketch of its common symptoms is invaluable, and is especially so in the case of antidiphtheritic serum. This disease is infectious, contagious, inoculable, and exhibits definite clinical symptoms, viz.: Formation of false membranes on fauces, etc., irregular pulse, irregular temperature, adenitis, profound debility, albuminuria, tendency to death from toxæmia, or from uræmia (from anuria), choking caused by detachment of exudation, cardiac failure (nervosa)?, pneumonia from extension of membrane to bronchi. If patient overcomes primary toxæmia there may be relapse, and among sequelæ are paralyses, laryngeal, diaphragmatic, etc. The main points to be decided are—(1) Is diphtheria a local lesion caused by Klebs-Lœffler bacillus? are constitutional symptoms the result of their ptomaines reaching the general circulation? (2) Or is it a systemic infection manifesting local symptoms? These physicians who advocate injections of antidiphtheritic serum in cases of diphtheria agree with Councilman, Roux and Behring, who contend that diphtheria is a local infection, due to the accession of a morphologically and clearly-diagnosed bacillus (Klebs-Lœffler). This bacillus was isolated by Klebs-Lœffler; Roux and Yersin discovered the toxin of diphtheria, and Behring prepared the antitoxine from the blood of immunized animals; Dr. Wethered (*Lancet*, March 24th, 1894) and Dr. Sidney Martin, whose researches on the toxin of diphtheria are given (*British Medical Journal*, September 15th, 1894), the latter offering direct proof that the Klebs-Lœffler bacillus is the true etiological factor in this disease. The position taken up by these investigators is gradually receiving accumulated facts which demonstrate clearly, as time goes on, the therapeutic value of antitoxine or antidiphtheritic serum at the hands of the under-mentioned ardent workers

in this field of seropathy, viz.: Behring, Roux, Yersin, Martin, Chaillon, Bokai, Katz, Baginsky, Körte, Ehrlich, Korsel, Wasserman, Washbourn, Goodall, Card, Moirard, etc. The reports of above observers go to support certain definite points—(1) The recognition that the Klebs-Lœffler bacillus is the vera causa diphtheriæ, which, despite its variations in size and shape, exhibits unmistakable morphological diagnostic appearances. (2) Dr. Roux assumed that antidiphtheritic serum only proves curative in a high degree in cases of true diphtheria, *i.e.*, those patients' cultivations from whose false membranes in bouillon show after twenty-four hours' typical colonies of this bacillus diphtheriæ; that the serum is in less degree curative in cases of "mixed infection," *i.e.*, when cultivations show colonies of streptococci, staphylococci, or diplococci, etc. Now let us turn to the opposition school, who contend that antidiphtheritic serum has no marked curative effect in diphtheria, nor has it, they say, reduced the mortality one tittle, and further stigmatize the remedy itself as noxious in its effects on the human organism. At a meeting of the Berlin Medical Society, Dr. Hausemann made a virulent and seemingly logical attack upon Behring's theories and serum. This address was a sweeping and plausible criticism on Behring's conclusions on antitoxic-antidiphtheritic serum (it contains dangerous germs of truth, but is illogical almost throughout), stating—(1) Behring's conclusions were hypothetical, and not based on fact. (2) He mentioned a gangrenous (?) form of diphtheria; from this Lœffler isolated a microbe, but did not dare to term it the cause of diphtheria, it not having been found in some cases of diphtheria, and has been found in healthy persons. (NOTE.—But these people have been in contact with diphtheritic patients.) That the bacillus was never met with alone. (3) That the diphtheria set up in guinea pigs was not identical with Bretonneau's diphtheria. (4) That it had been said that where bacillus was found diphtheria must be present (a false conclusion, as it merely signifies that the individual is immune from it). In rhinitis fibrinosa we see this microbe; he asks us to conclude that this disease is diphtherial (a mere *petitio principii*). (5) Then he attacked Behring's serum therapy, stating that the whole structure rested on the notion that the cure of an infectious disease was a process of self-immunization. (6) He then drew a line between true diphtheria and the disease (*sui generis*) set up in animals by the Klebs-Lœffler bacillus. (7) Behring claimed for his curative serum that it (*a*) Immunized; (*b*) Cured; (*c*) Was harmless. He reported cases in which immunized children had contracted the disease. (8) That Körte's and Kossel's statistics were inaccurate. (9) Then disputed all Behring's conclusions, that if cases were treated early with a full dose of the serum the mortality would be practically *nil*, instancing deaths occurring in patients who were treated on the second or third day of the disease (another fallacious remark). (10) He admitted that the serum was sometimes curative, but said it was by no means harmless; *per contra*, cutaneous rashes made their appearance in nearly all the cases. (Dr. Caiger's cases gave 50 per cent. of urticarial rash; Dr. Washbourn, however, a very much smaller percentage of cases of rash.) "These," says Hausemann, "may

be hæmorrhagic; there may follow cardiac failure." (11) That the "serum" irritates the kidneys and blood, setting up dangerous nephritis and albuminuria solution of hæmocytes, and that these results of seropathy were of a grave character. These were Hausemann's chief objections, and are apparently borne out by some case reports; but similar symptoms with fatal results are met with in diphtherial cases treated by other remedies. We may point out that all the clauses of this address are based on insufficient evidence (as does the *British Medical Journal*, December 15th, 1894, page 1,387, in its rightly scathing criticism of this unscientific attack on the serum treatment), and that there are so many testimonies to the therapeutic power of antidiphtheritic serum. Von Bergmann stated that in 450 cases examined bacteriologically, the Klebs-Lœffler bacillus was seen in 430.

Then arose the President, Rudolf Virchow, who gave statistics of cases, some treated with serum and some without, at the Emperor and Empress Frederick's Hospital during 1894: Total of cases treated, 533; treated with serum, 303; mortality, 13.2 deaths; treated without serum, 230; mortality, 47.8 deaths. "All theoretical considerations," he added, "must give way to the brute force of these figures," saying that the theories on which this treatment is based were probably erroneous, but he strongly recommended its clinical employment as a remedy in diphtheria. Dr. Benda said he had made necropsies on thirty-nine cases "who had died of this disease, some treated by serum, some not." Only six of these patients were without some trace of nephritis. Dr. Gottstein, "though admitting Virchow's remarks, called in question Roux's statistics." Baginsky stated that his clinical experience alone sufficed to convince him of the therapeutic value of the serum as a remedy for diphtheria. Drs. Washbourn, Goodall & Card brought forward a series of eighty cases, giving full explanations of their results obtained, which go far to confirm the conclusions of Dr. Roux. This was read at the Clinical Society's meeting and reported in the *Medical Press and Circular*, December 19th, 1894, *et seq.;* their notes on this splendid series of cases most definitely answer most of the queries put forward by certain doubting practitioners. In the adjourned discussion of this paper, Drs. Washbourn and Goodall reply to the remarks of Mr. Lennox Browne quite in a satisfactory vein, and we may note that the latter specialist's results in five cases can hardly be looked upon as conclusive or as any reason why a reliable serum such as that now being prepared in London on Roux's lines, and known as antidiphtheritic serum (B. W. & Co.), should not prove a valuable addition to therapeutics. I am indeed glad the Clinical Society have determined to further investigate collectively the therapeutic value of the remedy. Baginsky held the crux of the question at issue when he said "it was extremely difficult to gauge the exact value of any therapeutic agent in diphtheria. The time is not yet come when this matter is to be fought out." In closing this short discussion on the subject of antidiphtheritic serum, one of the most cogent arguments in favor of this treatment of

diphtheria are numerous statistical reports which I here give in tabular form, published during 1894-5, up to February 2nd, 1895 :

AUTHORITIES.	LOCALITY.	NO. OF CASES TREATED BY SERUM.	DEATHS.	MORTALITY PER CENT.
Behring & Kossel	Germany	30		20
Ehrlich	"	96		15.05
Kossel & Wasserman	"	153		23.60
Weibgen	"	66		28.0
Weilger	"	53		28.0
Aronson	Berlin	192		14.0
Roux	Paris	448		24.30
Strahlman	Wildershausen	48	3	
English cases up to October 20th, 1894		36	2	5.05
Bokai	Buda-Pesth	35	5	
English cases by various physicians	Bartholomew's Hospital, etc.	32	4	
Damieno	Naples	2	0	
W. Körte	Berlin	132	45	33.1
Drs. Goodall, Card & Washbourn	London	72	(pure diphtheria) 14	19.4
Mr. L. Browne	"	5	2	
M. Moirard	Paris	231	34	14 71
Baginsky	Berlin	303	40	13.2
Dr. P. Hawkins		4	2	
Dr. Macombie	London	31	4	
Dr. Caiger	"	30	8	
Drs. Tirard & Wilcocks	"	8	1	
Th. Eastes	Folkestone	13	4	
Dr. S. Ringer	University College Hospital	8	5	
O. T. Stephenson	Southampton	1	0	
T. H. Jones	Liverpool	8	2	
Dr. Eugen Hahn	Friedrichshain Hospital	205	49	24.0
Dr. Rose	Aberdeen	6	3	
	Reval (Russia)	2	0	
	New Orleans	24	3	
Dr. Mya	Florence	18	3	
Dr. v. Wiederhofer	Vienna	100	24	
Dr. Hager	Germany	25	1	
J. C. Hall	Monaghan	11	3	
Desvernine	Cuba	2	1	
C. L. Fraser	Berwick	2	0	
Dr. Heim	Vienna	49	0	24
Dr. Logan	Liverpool	2	0	
Dr. Ganghofner	Prague	110	14	12.7
Dr. Germonig	Trieste	224	42	
	Denver, U.S.A.	2	0	
Dr. Matthews	Fountain Hospital, Tooting, Surrey	61	10	16.3
Dr. Macombie	Southeastern Fever Hospital, London	72	(new cases) 11	
Dr. Gayton	Northwestern Fever Hospital, London	43	2	
Dr. Bruce	Western Fever Hospital, London	68	10	14.7
Dr. R. P. Waring	Kansas City, U.S.A.	34	2	

NOTE.—I cannot claim for antidiphtheritic serum that it is a *specific* for diphtheria, as Behring does, but it is the nearest point to that desideratum which we have yet attained.

London, February 7th, 1895.

Reports of Societies.

THE MEDICAL ASSOCIATION OF HURON.

The Huron Medical Association met in Seaforth on the 15th ult., with Dr. Turnbull, president, in the chair. Papers were presented by Drs. Campbell and Burrows, of Seaforth. Dr. Graham, of Brussels, introduced the question of the manner of collecting the Medical Council fee, and this elicited considerable discussion. The subject of medical ethics was taken up by Dr. Wood, of Mitchell, Dr. Bethune, of Seaforth, and Dr. Shaw, of Clinton.

The annual election of officers resulted in the appointment of Dr. A. Dalton Smith as president, Dr. Bethune, vice-president, and Dr. Mackay, secretary-treasurer.

WEST TORONTO TERRITORIAL MEDICAL DIVISION ASSOCIATION.

The annual meeting of the West Toronto Territorial Medical Division Association was held in Broadway Hall on January 12th, at which a large representation of the members of the Division was present.

The subjects of lodge practice, account collecting (including a blacklist of bad pay patients) and repetition of prescriptions by druggists were discussed, and committees appointed to consider each of these and report at the April meeting.

The election of officers resulted as follows: President, H. T. Machell; First Vice-President, A. A. Macdonald; Second Vice-President, A. Hamilton; Secretary-Treasurer, Geo. H. Carveth; Council—A. McPhedran, J. Spence, J. Ferguson.

The next regular meeting of the Association will be held in Broadway Hall on Wednesday, April 10th, at four o'clock.

Special Selections.

ON EMIGRATION FROM TOWN TO COUNTRY AND VICE VERSA IN THE PROPHYLAXIS AND TREATMENT OF TUBERCULOSIS.*

By PROFESSOR VERNEUIL.
(Translated by J. J. Cassidy, M.D.)

GENTLEMEN,—In looking over the programme of the Congress, you will see that the scientific side of tuberculosis is largely represented. Allow me to address you to-day on this question as a simple practitioner, and to lay before you, under the form of propositions, some reflections which my long experience have suggested to me on a very important point in the treatment of tuberculosis.

A change of residence from city to country exercises a considerable influence on the development, progress and termination of surgical and medical tuberculosis. These changes work in two directions: from the city to the country (urbi-rural emigration), and from the country to the town

* A paper read at the Congress for the Study of Tuberculosis, 1891.

(ruri-urban emigration). The first renders great service to the tuberculous patient; the second, on the contrary, favors the appearance or progress of tuberculosis.

These two facts, which have been solidly established by clinical observation, are of the first importance from the standpoint of the prophylaxis and treatment of tuberculosis.

Doubtless physicians know the practical deductions, but they do not always pay sufficient attention to them or else utilize them too frequently in a perfunctory manner, with neither conviction nor precision, and particularly without the necessary rigor and perseverance. The public, who are naturally not so well informed, although more interested in knowing the truth, willingly acknowledge the utility of emigration from town to country; but with few exceptions they do not submit to the measures which make it really efficacious, and do not decide to do it, until, in general, it is too late, for too short a period, or under conditions which are not always the best. On the other hand people quite ignore, misconstrue, despise, or are ignorant of, until too late, the dangers which inhere in emigration from the country to the city, at all events they do not weigh them in the balance against the desire to satisfy their appetites, their interests or their ambition. The physician's strict and imperious duty is to enlighten the innocent and to warn egotists by telling them the whole truth, without other preoccupation than to preserve or re-establish their health.

Emigation to the country is intended to replace a place more or less impure by another place more or less pure. Every displacement which would not fulfil this essential condition would be useless if not hurtful. Cities are generally considered less good for the tuberculous than the country. Cities differ, however. The transfer of a tuberculous patient from a large unhealthy city like Paris to a small healthy city (Saint Cloud) might realize a large part of the advantages of emigration to the country.

Country-places also have their differences, and in the matter of salubrity and therapeutic action in tuberculosis, country-places differ much more than do city ones. Cities, in fact, only vary according to the more or less considerable degree of impurity or contamination of the respirable atmosphere. In country-places not only is the air free from morbid germs and deleterious chemical products, but the air may be charged with medicinal properties: iodine, sulphur, chloride of sodium, and, finally, in certain thermal stations waters holding these elements in solution, and others such as arsenic, which has a recognized influence on country tuberculosis.

Country-places, then, considered from the hygienic or curative standpoint, contain the elements of many therapeutic methods: ærotherapy, thalassotherapy, hydrominerotherapy, without counting the action, not to be neglected, of altitudes and temperatures.

Patients may be sent, according to the case, from a warm to a cold place, or the reverse; from the plain to the mountain, or the reverse; or from a simple hygienic locality, field or

forest, to a curative one, the seashore or thermal stations.

It is important to study the qualities and curative properties of different rural localities, experience showing that one station will not suit all cases. Speaking generally, however, emigration to the country suits the majority of consumptives, renders them great services, and, until the discovery of the anti-tubercle, or vaccine, or of the specific medicine which will destroy the tubercular virus, emigration to a more suitable locality (breathing a purer air) constitutes the simplest, most efficacious and most generally applicable means of resistance which we can offer to tuberculosis.

The benefits resulting from emigration are, in the first place, amelioration, characterized by an attenuation or disappearance, wholly or in part, of symptoms or accounts, then the temporary cure, which I prefer to call the truce, which existed already at the time of emigration; finally, the radical cure, which, unhappily, is impossible to affirm or show in the actual state of our knowledge, and which is only made likely by the long truce and the apparent restoration of health.

All consumptives are not indiscriminately destined to gain the same benefits from emigration, and under this head they may be divided into three categories: The first show local and general signs of the disease in full activity—these are tubercular patients properly so called; the second class have exhibited their symptoms already, but for a time, at least, appear to be free from them—these are the tuberculous in a state of truce; the third class are, to use a singularly appropriate expression, candidates for tuberculosis, that is to say, predisposed to it because the diathesis has struck one or more of their relations, direct, indirect, or collateral, because they have begotten tubercular children; finally, because they are, or have been, in intimate or prolonged contact with tuberculous patients. These candidates are all the more in danger of being attacked if they are feeble, young, degenerate, and are in bad circumstances.

Daily experience shows the excellence of emigration from the city to the country in a number of tubercular diseases which are in process of evolution. In many surgical and peripheral tubercular diseases, glandular diseases, scrofula, ulcers, fistulas, different bone and joint diseases, etc., a residence in the country is excellent, but thalassotherapy is still better, as may be shown by the unhoped-for results obtained in our maritime hospitals, Berck, Sur Mer, Pen-Bron, and at all the seaside resorts. Some consumptives who went on shipboard almost half dead to go to a distant country, have arrived at their destination after a long voyage almost in a state of quasi-resurrection.

The advantages of emigration are not less striking in tubercular patients in a state of truce, and I place in juxtaposition with these a series very interesting for us surgeons of tubercular cases which have recently undergone surgical operations. The results in these cases, though as certain, are less frequently demonstrated, as the result of a very regrettable illusion. When a city surgeon has

obtained, by medical or surgical treatment, the apparent cure of a local tubercular affection, he considers that he has won a victory, folds his arms, and does not trouble himself about trying the most potent factor in the post-operative treatment, viz., change of air to the country.

For those who know that a primary tubercular disease, removed by any treatment whatsoever, reappears in the greater number of cases in a severer form; for the surgeon who, after ten or twelve years, does not find alive any of the tubercular patients he had operated upon, and who continued to live in the city, the suspension of this disease, instead of indicating a cessation of hostilities, should induce him merely to prepare for or make sure of a definite cure by securing for his patient post-operative emigration to the country.

If emigration to the country is not generally prescribed, except to cases of acute tuberculosis, if the urgency of this plan is not made to apply to cases of tuberculosis in a state of truce, still less is it imposed on the simple candidates for tuberculosis. This negligence is all the more regrettable, as it is precisely by emigration to the country that the last class would have a chance of absolutely escaping the invasion of the disease or of crushing it at its beginning.

However precious emigration from the city may be, it cannot be the only treatment of the diease. The consumptive ought to have in his new house as much material comfort as in his city home, ought to observe the same hygienic and prophylectic rules, ought to follow a suitable diet, take useful medicines, and, if occasion require, undergo needful operations. Nevertheless it is only fair to say that, thanks to the curative aid furnished by ærotherapy, the medical treatment of tubercular cases is certainly more simple in the country than in the city. The open-air treatment can be more easily realized, resistance to atmospheric conditions is greater, appetite is better, sleep is deeper, medicines are more easily tolerated and more efficacious in action. Frequently, if they cannot be laid aside altogether, one can at least abstain from polypharmacy and content oneself with some specifics, iodine and its compounds, iodoform, tannin, creasote, arsenic, sulphur, etc., given for a long time in small doses. These medicines may be given up when the patients do not take them well or absorb them naturally on thermal or maritime stations.

You will be perhaps surprised to have these rather solemn allusions to facts and precepts of ancient date. Emigation from town to country is prescribed every day by physicians, and carried into practice by patients and families. During summer, country houses, the seashore, the spas, the sanatoria, the hill stations, are filled with tubercular patients, of whom a few during the winter will seek the shores of the Mediterranean or some southern resort; but how few these fortunate ones count in the countless host of tuberculous people who, from lack of means, are forced to remain in the large cities?

Who are these privileged ones? To what class of patients do they belong?

During the holidays we meet out

in the fields, on the seashore and in various country-resorts candidates for tuberculosis and persons usually called lymphatic, in whom the disease is only in a state of truce or incubation, but how many others do we meet who have been ordered away to the country, not for pleasure, but of necessity and as a last resource, who are less curable patients than candidates for a dissolution more or less near well, all because they have waited too long before removing from the unhealthy air of the city.

Moreover, the mean duration of this emigration is ridiculously short, a few weeks or months, rarely one or two years; but in a disease like tuberculosis where one knows the treacherous facility with which its superficial lesions are cured when one has taken the trouble to follow for some time the histories of patients in a city or a hospital, what can be expected from such insufficient treatment?

In surgical tuberculosis, to obtain reliable and durable results from a residence in the country, or even thalassotherapy, a good deal of time is necessary for those who have undergone operations, as well as those who have not. I can show by numerous observations that persons who had gained or regained all the appearances of health simply by returning to live in a large city have experienced the return of tuberculosis, which has been brought about often by a slight cause. These truths are certainly not consoling, but of what use would it be to dissimulate, and who would gain by my silence? It would be excessively severe to proclaim an eternal exile from cities, ordering a tuberculous patient to never enter a city, even temporarily or in adult life. However, the interdict should not be raised except with reserve and under certain conditions. For instance, emigration begun in childhood or adolescence ought to be kept up till majority is reached. For reasons easily understood return to the city would be particularly dangerous in boys at the age of puberty and the subsequent years. It would be equally perilous to bring back a young girl and let her marry in the city if she had been exiled in the country from her tender years, as pregnancy and the duties of a mother have the sad privilege of reawakening tuberculosis. The graver the form of tuberculosis in a given case, his parents or collateral relations, or if a considerable number of his family have been attacked, or the more tenacious the primary attack has been, the more a return to the city should be discouraged. In opposite conditions benign tubercular lesions, slight disorder of an otherwise vigorous constitution, a pretty rapid cure, a rather long truce, the age of reason protecting the organism from excesses and abuses, may be sufficient reason for the medical adviser to try a city life, with this clause, however, that if tuberculosis should reappear the patient should return and forever to the country.

An exile who, recommencing city life, would be thrown into an infected centre, or who would be exposed to the ills of poverty, excessive fatigues, or grave moral preoccupations—such a return would be tantamount to a condemnation to death, and he should be informed of the fact.

A physician, knowing his moral responsibility to the public, and un-

derstanding the misfortunes which he would be partly guilty of causing in concealing the truth, and the important services he can render by revealing it, will proclaim boldly everywhere and always the preceding propositions, using all his influence to have them executed; if by carelessness or lack of firmness he ceases to be a mentor the public will shun him, and will unfortunately seek advice from worthless and unscrupulous guides. For the dignity and authority of the medical profession, therefore, it is important that they direct and lead to a triumphant conclusion the *cause*—emigration of tuberculous patients from city to country.

It is easy to foresee objections which can be made to the application of this rather radical measure. Tubercular patients, past, present and future, are so numerous in large cities that their exodus would cause a notable decrease in the population. This decentralization of the unhealthy would doubtless have the advantage of purifying the cities, and also the grave inconvenience of scattering broadcast the germs of tuberculosis, and therefore causing the infection of country-places, so that after a short time the emigration would no longer have either object or effect.

Finally, where would the numerous emigrants settle down? Should they be collected together or scattered? Who would undertake the duty of looking after these isolated individuals? In what places should they be gathered together? When the law takes cognizance of the protests raised against the establishment of unhealthy industries, how could any municipality be compelled to receive guests so dangerous as a few hundreds of tuberculous patients would be?

All these arguments can be easily answered. In the first place, the depopulation of cities, in which air and space are wanting, would be an advantage to the country whose air and space are abundant. Doubtless the increase of population would not be advantageous for our provinces if the emigrants were exclusively consumptives and cachectic persons, weak and broken down in health, or cripples; but it would be quite different if the emigration were conducted after the rules and according to the conditions announced before in this article—if it applied to a great number of candidates for tuberculosis, or possible tubercular patients, or those in whom there was a suspicion of the disease, or children, or adolescents, affected with glandular enlargements, king's evil, slight bone disease, spina ventosa, etc., besides, in addition to the fact that these patients, although tubercular, could not infect the air and wide spaces in which they would live, they could, in place of cumbering the country-places, fulfil later on the office of useful citizens, and pay their debt to society, since, after some months or a few years, they could work on the land, which is their second mother in the exact sense of the word, and make up for that want of workers of which agriculture, horticulture and forestry are incessantly complaining. Admitting, besides, that the application of this emigration on a large scale is surrounded with inconveniences and difficulties, we may, however, safely, in order to advance

the question, announce the following questions, replies and conclusions: Is tuberculosis more common in cities than in the country? Certainly it is. Does it assume a graver form and a more rapid course in cities? Certainly it does. Is it cured in cities? does it improve in them more rapidly or on a larger proportion? Certainly it does not. Do slight tubercular lesions tend to perpetuate themselves and become more grave in cities? Certainly they do. Is it just the same in the country? Certainly not. Grave forms of tuberculosis scarcely ever improve in cities. In the country one observes pretty often remissions in the disease, a chronicity and a survivance, which is almost equivalent to a cure. The mean duration of life in tubercular patients who live in cities, is less than that of similar patients living in the country. No manner of reasoning can weaken the conclusiveness of these results.

The preceding explanations will make the task easier of pronouncing an opinion on emigration from the country to the city; not being obliged to consider the causes which induce people to flock into cities, from the standpoint of the politician, the economist or philosopher, it is as physicians we study it, and because emigration cityward implies a removal from generally pure surroundings into such as are notoriously impure, that we consider this sort of emigration as most unlucky from the triple standpoint of health, longevity and the multiplication of our race. It certainly contributes in France in no small degree to the decrease of population, which recently has been the subject of very lively debates. Countrymen who come to live in cities pay a heavy tribute to tuberculosis, and in many ways. Some of them, who have been, up to the time of their removal to the city, exempt from any hereditary or personal blemish, catch the disease by chance. In others, who are predisposed or candidates for the disease, it is awakened prematurely with or without apparent provocation, or perhaps it awakens after a period of latency or truce longer or shorter, or, lastly, it extends, propagates, generalizes, if it existed when the individual removed to the city. To put it briefly, in the countryman who has adopted city life it may be reawakened or be aggravated, or may be awakened or acquired by one who was absolutely free from the disease.

All these modes of origin are the more to be dreaded as cities contain more impurity of all kinds, an impurity which depends not only on the abundance and dissemination of the tubercular person, but also on the coexistence of other diseases; eruptive fevers, typhoid fever, and other causes of ill health, cold, dampness, filth, unhealthy trades, etc., and particularly when the emigrants are young, frail, poor, badly fed, clothed and lodged, given to debauchery and intemperance, and when the trade or occupation they follow places them in insanitary conditions or exposes them to great physical fatigue. These causes soon produce results. Often from the first week after arrival in the city a pre-existing tuberculosis becomes severe. Ordinarily it is dur-

ing the course of the first two or three years' residence in the city that it awakes, is reawakened, or contracted.

Once put in movement, it has slight tendency to stop, but rather progresses rapidly in spite of treatment. One of the best means of cure is to send the patient back to a resort in the country, particularly one which has curative properties.

I do not wish to dwell here on the means of improving the prognosis in the tuberculosis of country people who have removed to the city, but only to raise the question of prevention—easy enough doubtless to resolve on principle, since it consists simply in preventing a disastrous pathological centralization, and in retaining in the country all those who may be menaced in any degree by tuberculosis.

The country physician ought to be deeply impressed with the importance of the part which he may play under the circumstances; and in order to interdict emigration to the city by his tubercular patients, past and future, should do all that the city physician does to send his patients to the country.

When consulted by individuals or families on a change of this kind, he ought to make a careful inquiry into the personal or hereditary antecedents, as well as the actual bodily condition of his clients. With what he has learned as medical adviser of the individual or family, he ought to take the initiative and give a useful advice, even when it has not been asked.

If he does not succeed in inducing his clients to follow his advice, if they have made up their minds to enter the morbid furnace of a large city, he ought to inform himself of the new conditions which await them, and indicate the precautions they should take to encounter these dangers with less risk, as, for instance, the medicines they should take, and the hygienic precautions they should observe from the first day they are installed in their new residence.

If a father of a family, evidently tuberculous, is obliged, for reasons of the greatest importance, to go to live in the city, the physician ought to induce him to leave his family and all the candidates for tuberculosis in his household in the country, or, at least, to warn him of the danger to which removal to the city would expose all these innocent persons. The country practitioner who will do his duty, and will plead for justice and truth disinterestedly with conviction and firmness, will sacrifice his private interests occasionally, but he will do honor to his profession, and he will deserve well of his country and humanity.

LACTOPHENIN. — Lactophenin is phenacetin: in the group, acetyl is replaced by the group lactyl. It is a white, fine crystalline powder, with an agreeable bitter taste, soluble in 330 parts of water. Dose: 0·6 gramme, three times a day. The maximal dose is one gramme three times daily. It acts as an analgesic in neuralgia, and in full doses as a hypnotic. It gradually reduces temperature, which remains low for a long time. In typhus fever it calms the excitement, stops delirium and produces sleep; and in typhoid is credited with cutting short the fever.—*Les Nouveaux Remedes.*

THE CATHOLIC CHURCH AND OBSTETRICAL SCIENCE.

By JOHN HUND, M.D.

The importance of the question touched upon in an article on page 147, in the *Medical Record* of February 2nd, 1895, entitled "The Catholic Church and Obstetrical Science," shall be my apology for the following criticism:

In said article you have endeavoured to prove that the principles of the Rt. Rev. Bishop of Augsburg, Germany, as elicited in his recent pastoral letter, in which he says, *verbatim*, "that it is a sin and morally reprehensible for a physician to induce artificial abortion, no matter how imperatively the safety of the mother demands it," are not in unison with the Catholic Church.

As authority for your assertion that this (the Bishop's teaching) is not the authoritative teaching of Rome you refer to an anonymous writer (whom, however, the editor endorses as "inspired") in the *Munchener medizinische Wochenschrift* of December 25th, 1894.

For a preliminary remark I may be allowed to say that, from a prospective standpoint of view, it appears that you have chosen decidedly the weaker side of the case at issue. Here we have on one side a well-known, clear-minded, truthful, very distinguished and learned prelate, a lawful member of the hierarchy, an authorized judge, teacher, and promulgator of Christian morals. On the other side we have the negative statement of an anonymous writer, whose source of inspiration is not clear, that it is not the "true science," the climax of which is fœticide.

Let us now try the case unprejudiced, unbiased, fair, and impartial. I have the honor of presenting to you the Rt. Rev. Bishop of Augsburg, who says, according to your own quotation, "that the induction of artificial labor, the child being alive, is under no circumstances allowable;" in other words, persists in that the faithful shall obey the sixth commandment, "Thou shalt not kill"; to which there is no exception, and whereby the end can never sanctify the means. That this is and must be the teaching of Rome is self-evident, and consequently binding upon all the faithful who recognize the authority of the Catholic Church; but to clear the Bishop beyond a reasonable doubt we will now give evidence which the most sceptical must accept that the Bishop is no heretic, but in his full right, and that his teaching is also the teaching of Rome.

As far as Dr. Wirthmüller is concerned, I am unable to trace his authority, but would be thankful for information and quotations regarding him. In his place I put, first, A. Köning, an author who is in this country universally accepted. He says plainly that the induction of premature labor is homicide, even at a stage when the fœtus has not yet life. He refers to the dogma Immaculatæ Conceptionis B. M. V., of which we take the following extract: "*Nunquam licet directi procurare abortum*" (It is never allowed to produce directly an abortion). See A. Köning's "Theologia Moralis," Vol. I., No. 474. To save space I

refer only to the theological works of S. Alphons Liguiri, L. IV., No. 394, and Lacroix, L. III., p. 1, No. 823, upon whose teachings Köning has based his assertions and decision as they are authorized by Rome. We have also consulted Lehmkuhl, and find in his works nothing contradictory to the teaching of the above-named authors, the Bishop of Augsburg, or Rome.

We find in his book the decision of the Council of Baltimore, which is *that it is not allowed*, that it is "a sin and morally reprehensible" "to induce artificial abortion, no matter how imperatively the safety of the mother demands it" (Lehmkuhl, Part I., No. 848).

On the following page Lehmkuhl cites the letter of the assembled bishops in Baltimore to the Holy Congregation of the Inquisition, in which they ask if it was right to teach that it was allowed, under certain conditions, to produce abortion, to which the prompt answer came: "*Tuto doceri non posse*" (It cannot be taught at all), R., signed Cardinal Monaco, Secretary of Congr. Inquisition. We think we have given sufficient proof, or at least the keys to proof, that the Rt. Rev. Bishop of Augsburg is in the right and the anonymous "inspired" writer wrong.

Now a few remarks upon your own statements and your logic. You recall a judgment of cardinals in Rome which was given in favor of craniotomy or any operation directly tending to destroy the life of fœtus in utero, *i.e.*, "Rome did not condemn this operation if performed under the authority of approved medical teaching and in the interests of the mother." Mr. Editor, I fear your memory does not serve you well, and I advise you to look up the case. I am sure you will not find a decision from Rome where the destruction of the fœtus under any pretence is sanctioned. You will find, perhaps, that means which save the life of the mother directly, and may cause the death of the child indirectly, are, under certain conditions, allowed. Whatever those means may be, they must have the double effect of saving the mother and not necessarily and directly killing the child. This is the teaching of Rome to the extremest extent. A premature delivery not necessitating the death of the child may, under certain conditions, be allowed. Craniotomy never!

Your logical as well as conservative opinion, "If it is wrong to take one life to save another, it cannot be lawful to suffer two lives to be destroyed when one might have been saved," I let stand at its face value.

Just one more question: Who saves or destroys when in case of craniotomy both mother and child die? I think statistics have shown that in craniotomy thirty-five per cent. of the mothers have died, in addition to one hundred children killed, while in cases of Cæsarean section there was only a death-rate of forty-eight per cent. in all. Compare this, and you have a saving of eighty-seven lives. Of course you have here against the lives of one hundred children the deaths of thirteen mothers. Whether or not these thirteen mothers, if saved, are worth more than the one hundred children is a question of wide range. It seems, however, against the law of nature to destroy proper metamorphosis in its

fruit, selfish and brutal in its very nature indeed. It is surely not the teaching of Rome! Herewith we have, I think, finished our case.—*Medical Record.*

ICHTHYOL IN SEVERE INFLAMMATORY CONDITIONS OF THE SKIN.*

By GEO. F. MADDOCK, M.D., Brooklyn, N.Y.

In this paper are reported the results of the use of ichthyol in some severe inflammatory conditions of the skin, including several cases of erysipelas.

Case 1. Rebecca G. Cellulitis: January 14th. Upper lip and nose very much swollen, skin red, tense and cellular tissue boggy to the touch. Impetiginous crust on lip: all very painful and of one week's duration. Ung. ichthyol 5 per cent. January 17th very much improved, and on January 21st discharged cured.

Case 2. Margaret M. Cellulitis due to ears being pierced. Entire ear involved. Cured in one week by application of 5 per cent. ichthyol ointment.

Case 3. George L. Erysipelas: January 31st. Duration four days. Gives history of constitutional symptoms of chill, fever, etc. Located on nose and adjacent portions of left cheek from the lower border of the eye to angle of mouth, also upper lip. The invaded territory is œdematous, hard and nodular; its surface studded with vesicles, pustules and blebs, the mucous membrane of the mouth swollen and red. Ung. ichthyol 15 per cent.—lanolin base. February 2nd, left cheek improved; very little pain and mucous membrane in better condition; the disease has spread on right cheek towards ear, due to carelessness in applying ointment. The right cheek is brawny and nodular and covered with sero-bullæ; constitutional symptoms much improved. Ointment continued and Tr. Cinchon. Co.—as a placebo. February 4th, condition on right side has extended and involved ear, which is red and painful. The left side is well and there are no constitutional symptoms. Ung. ich. 20 per cent. February 11th, much better. February 14th, discharged cured; duration of treatment two weeks.

Case 4. Josephine G. Frost-bite about toes. February 1st: On the soles of the feet and around the toes are patches of purplish erythema of variable size and irregular form, and which disappear on firm pressure. These patches are exquisitely tender and much infiltrated; on the toes and some of the patches there is considerable peeling. The patches are increasing in size and becoming more painful. Ung. ich. 8 per cent. February 3rd, improving. February 12th, cured.

Case 5. John M. Ecthyma and erysipelas. November 15th, the buttocks are covered with very large lesions of ecthyma, discrete and surrounded by a broad areola. Over the outer side of left thigh and extending down anteriorly is a broad reddened and swollen patch of skin, hot and brawny to the feel. Ung. ich. 10 per cent. Nov. 17th, there is a great improvement, infiltra-

* Read before the Brooklyn Dermatological and Genito-Urinary Society, November 9th, 1894.

tion markedly less, a small patch still remains over the trochanter. Ecthymatous lesions no longer pustular and the surrounding infiltration lessened. Ung ich. 15 per cent. November 26th, ecthyma on buttocks gone:—Three days ago had a similar attack located on arm, the entire surface between shoulder and elbow being involved, with lesions of various shapes and bright red in color, hot, elevated and of a brawny feel. Ung. ich. 14 per cent. continued, and on November 28th was discharged cured.

Case 6. Charles B. October 4th, the condition consists of a circumscribed collection of pus located on forehead, of the size of a walnut, very painful, surrounded by an areola of purplish red color extending an inch on each side. Of two weeks' duration. Ung. ich. 12 per cent. October 9th, about gone, no pain, no swelling, slight redness.

Case 7. Louis W. Finger very much swollen, most marked about the nail where the skin was hot and tense, no indication of pus having formed. Duration four days. Pain intense and throbbing, having deprived patient of sleep during the past two nights. A 15 per cent. ointment of ich. in lanolin was applied. The pain subsided in four to six hours and on the following day much of the heat and redness had abated. The ointment was continued for two days longer, when the finger resumed its normal condition.

Case 8. John B. A balanitis complicating an acute urethritis. October 9th, prepuce very much swollen and œdematous, skin tense, hot and red, patches of pearly appearance with purplish spots scattered about, and which are very painful. A plaster to cover entire prepuce and glands was made of a 20 per cent. ointment of ichthyol and in four days the parts had returned to a normal condition.

Case 9. George K. Frost-bite. May 4th, entire foot about the toes inflamed and swollen, purplish in color and very tender. Ung. ich. strength 5 per cent. soon relieved of all symptoms, and in five days sent word he would come no more as he was cured.

Case 10. Lizzie C. September 23rd, circumscribed patches of erysipelas over face on cheeks and forehead. These patches are hot, brawny and red, and sharply defined. Temp. 101°, pulse 120, and complains of feeling badly "all over." Ung. ich. 15 per cent. was used and on September 25th all symptoms were better, no constitutional symptoms nor any pain and only slight redness. On September 30th was reported by brother as being well.

Case 11. Mary S. May 25th. A severe case of cellular inflammation due to an ingrowing nail, involving the great toe and extending along the inner side of the foot was treated with a 5 per cent. ointment of ichthyol. The toe is enlarged one half in size, reddish purple in color and very painful. She returned on June 6th, saying she had used the ointment faithfully and was well.

Case 12. James W. Facial erysipelas. February 4th, began yesterday morning with pain and a cold sweat, no sleep all last night. Intense pain in the head. The disease involves nearly entire face. It began at the side of the nose and then spread to cheeks and forehead, and presents all the typical appearances. Ung. ich.

40 per cent. was used, and on February 10th sends word he is well and will come no more.

Case 13. Fred. F. Carbuncle. April 4th, over left scapula is a large carbuncle with three openings. He gives history of four days' duration, but it is probably longer. Dressed with ung. ich. 25 per cent. April 8th, the carbuncle has enlarged enormously and has about a dozen openings, from which a thick green pus protrudes. The patient was advised to enter some hospital for treatment, and on April 18th returned from St. Catharines cured. From this time, April 18th to May 16th, he had a succession of carbuncles (five, I think), all of which were operated on, and upon which ichthyol had no effect whatever.

There are many more such histories I might recite, in all of which good results were obtained in from three to seven days. In reviewing the results obtained by the use of ichthyol in the cases, the conclusion can be reached that the inflammatory condition of the skin was considerably modified by the drug.

The rapid amelioration of pain in Case 8 is worthy of note, as is also the quick subsidence of the inflammatory condition in all the cases. Where the formation of pus had already occurred, especially when of virulent character, as in Case 13, ichthyol appeared to exert no influence for good, but it was in instances of superficial ulceration attended with marked surrounding inflammation that good and quick results were obtained.

Its power as an antiseptic seemed limited against the milder pyogenic organisms. Its greatest influence seemed to be shown in those cases attended by inflammation alone or in the stage preceding pus formation where its application appeared to act as an antiphlogistic.

Its influence in the cases of erysipelas was most happy, the pain and local condition rapidly subsiding. No internal treatment was used in any case excepting Case 3, where Tr. Cinch. Co. was given as a placebo.

The usual form of application was an ointment and the rule was deduced, that the greater the grade of inflammation the greater the percentage of ichthyol demanded.

DIPHTHERIA ANTITOXINE.

Formula of DR. ROUX; made in New York at the Pasteur Institute.

DIRECTIONS.

The Serum.—It is obtained, according to the method of Dr. Roux, from the blood taken from horses, which have been made immune by being injected with the toxine of diphtheria for at least three months. It is transparent, yellow or reddish in color and is undiluted. It is supplied in bottles containing 25 c.c. each, a quantity sufficient for an ordinary case of diphtheria at its incipient stage, and in bottles containing 7 c.c., which is sufficient to protect at least three adults and five children exposed to infection. The immunizing power of the serum exceeds the proportion of 1 to 50,000, the standard thus far achieved by Roux and others; this signifies that 1 ccm. (15m.) of antitoxic serum will immunize a body weighing up to 50 kilo., or 110 pounds. Owing to the precautions

observed in obtaining the blood, preparing the serum, and introducing it into sterilized vials in which are placed small pieces of camphor, to prevent deterioration, the serum can be preserved for several weeks in a cool and dark place, as in the ice chest.

The Dose.—In ordinary cases a dose of 15 c.c. is injected when the disease is suspected and before the diagnosis is absolute, and after a period of twelve hours the remaining 10 c.c. are injected. Adults require larger doses. In serious cases the quantity should be larger; 25 c.c. at first, 25 c.c. more within twenty-four hours, and even 100 c.c. can be injected within a few days, the serum being wholly innocuous. The injections are given subcutaneously, preferably in the lateral part of the abdomen, after the site of injection has been carefully washed with a four per cent. solution of carbolic acid, or a one per cent. solution of lysol. The injections are almost painless, and massage is unnecessary, as the swelling caused by the fluid disappears quickly. In a family in which a case of diphtheria occurs, it is recommended to immunize the other members, especially the children, with a small quantity of serum.

The Syringe.—The instrument made according to our directions has a capacity of 25 c.c. It can be thoroughly disinfected by washing it and the needle carefully in the following manner: *Before the injection*, first with a four per cent. solution of carbolic acid, or a one per cent. solution of lysol, and then two or three times with cool water previously sterilized by ebullition. *After the injection* the syringe must be washed at first with sterilized water in order to prevent the coagulation of the serum by the contact with the disinfectant which has to be used again.

The Patient.—Although the serum is the essential agent in the treatment of diphtheria, the throat and the nares should be frequently irrigated with a sterilized solution of boracic acid. No local reaction follows the injection of antitoxine; general reaction frequently appears within twenty-four hours, sometimes accompanied by erythema, and in a few instances by urticaria, which may appear several days after. The temperature rises only one or two degrees, and the pulse in children may attain 120 and 130. These phenomena are more apparent in patients who have been treated preventively with the antitoxine. The reaction rarely lasts more than twenty-four hours. A period of twenty-four hours generally elapses before a favorable result follows the injection, but in mild cases the improvement may appear within twelve hours, and in serious cases it may be delayed for thirty-six hours. It must be understood that if in the last-mentioned class the treatment be postponed too long, instead of improving, the patient may not be benefited. In twenty-four hours after the injection the false membranes lose their grey appearance and become white. This discoloration is a good indication. Shortly after this change the false membranes become detached, a simple irrigation causes them to be expelled, and generally they do not reappear.

In diphtheria of the larynx and of the trachea it is expedient to watch for the modification of the respiration

caused by the sudden detachment of the false membranes, as they may cause obstruction of the air-passages, and intubation or tracheotomy may be necessary.

In those cases of croup in which operative treatment has been resorted to, the general and local improvement following the exhibition of the serum is rapid.

If engaged, the glands undergo a simultaneous improvement; instead of forming one solid mass they become distinct, and the œdema which surrounds them disappears.

The albuminuria, so prevalent in diphtheria, is prevented or much less marked when the treatment is adopted promptly.

The persistence of this symptom is a manifestation of the general systemic intoxication by the products of the bacillus diphtheriæ and is an indication for the continuance of the injections with the object of preventing further complications.—*New York Biological and Vaccinal Institute.*

THE PRINCIPAL ELEMENT IN THE TREATMENT OF FRACTURES.

In no class of surgical treatment under aseptic and antiseptic handling have results been more uniform and constant than in the treatment of compound fractures. The principles of asepticism have marked the past decade with a series of broadening triumphs and have almost entirely changed the face of treatment not only of compound fractures but in many instances of simple fractures as well. Now almost constant success results where failures were frequent. The influence, however, of medical teachers and text-books, or, in brief, what is called "authority," tends in the direction of unreasoning conservatism, and some of the present rules, as enunciated, constitute the worst kind of practice and the application of the poorest sense. Cases should be studied according to the conditions presented. It is far from being either good sense or good practice to leave all simple fractures in their condition of simple fractures. Where marked deformity exists, or where fragments cannot be brought in apposition, the first indication of treatment (that is, to bring the bones in apposition) cannot be met and still treat them as simple fractures. We have seen simple fractures—at the joints particularly, the ankle and elbow joints—ruined because authority does not sanction their being made compound and the true condition determined.

The history of the case should always be a guiding point. Thus, a man jumped from a third-story window, fracturing the shaft of the tibia longitudinally some three or four inches, the astragalus separating the fragments more than three inches at the joint. The joint was ruined just as effectually as if the fracture had been compound. The only treatment was to make this fracture compound, and then study the conditions which presented themselves. The parts after due treatment were brought into position, and a comparatively good joint results. We have seen dislocations of the astragalus both anteriorly and laterally, where a compound

injury had to be made to accomplish reduction; and in two instances we have seen good results follow. We maintain that there is no part of the human economy which can be rendered any more perfectly aseptic than a joint. This conclusion comes from experience. We have introduced into joints liquid campho-phenique, not lightly applied but filling the joint, so as to be sure that every part of it was rendered aseptic, and almost invariably have had good results. Corrosive sublimate has never acted well in our hands when applied to the marrow of bone or cartilaginous surfaces. Knee joints, elbow and ankle joints have responded to this treatment so well as to make us confident. It has not been merely a coincidence.

We do not believe it to be good sense to leave a simple multiple fracture with malposition when, with antiseptics at command, we can cut down and replace the fragment without danger. Simple fractures should be treated according to conditions, and indications point at times to their conversion into compound injuries, as treatment then becomes more efficient.

Again, regarding the treatment of the external wound in compound fractures, we believe that where sight can be used it should be. There are few wounds which we can trust. What is the sense of theorizing about a condition when one can see it? If antiseptic agents are efficient, why need there be fear to enlarge the external wound in compound fractures so that one can see just the condition as it exists? By these means we can determine the extent of damage to muscles, nerves and vessels, the real positions of parts and the intrusion of tendons and muscles between broken ends of bones. A free incision can but give the best information and is the only competent way to indicate the best plan of treatment.

Again, we believe that every external wound and cavity associated with a compound fracture should be made aseptic. We make no exception. Jacobson recommends a one in thirty solution of carbolic acid injected in the recesses. We use the pure campho-phenique, as its oleaginous character readily enables it to cover every part, and we have at times converted compound injuries into simple.

The dread of enlarging external wounds in compound fractures comes from the history of a septic past. There should never be any dread. Always treat every part of wound and surface, without and within, by using a good antiseptic and germicide; then the parts may be brought in apposition and kept so. The use or necessity of drainage in these cases is thoroughly determined by the condition of the parts as seen.

Finally, we do not believe that amputation is ever justified in compound fracture where vascular supply exists. When this fails all else fails. The burrowing of pus, if judiciously handled, can at all times be corrected; and if there be any truth in the microbe theory of disease, it certainly has been proven in the treatment of compound fractures. If we have competent remedies to combat the pus microbes, certain it is that we ought to put faith in these remedies. Fractures must be treated according

to the condition found, whether simple or compound. The fixed canons of surgery cannot meet all conditions. —*Ed., in The Railway Surgeon.*

PSYCHOSES OF THE CLIMACTERIC PERIOD.

Prof. P. J. Kowalewski, of Clarkow, in a recently published paper, "Menstruation-szustand und die Menstruations Psychosen," says that during the climacterium insanity may appear in two forms: in the one, the course of the disease is periodical, and the attacks accompany the menstrual periods, or occur at the time when these periods are expected but do not appear; in the other, the psychosis has no direct connection with the menstruation, but seems intimately related to all the symptoms of the climacteric. The mental symptoms of these psychoses vary greatly. They may be characteristic of anxietas, melancholia, mania, amentia, or parnonia, etc. Although these symptoms are not especially characteristic, the influence of the climacteric may be easily recognized. Thus the anxietas precordialis occurs in more or less regular attacks, corresponding to the time of the expected menstruation. The same may be said of the periodical exacerbations of hysterical and epileptic attacks. It is often found that at such times sudden changes in mood and character may develop without such symptoms being characteristic of either melancholia or mania. The melancholia of the climacteric period is especially met with in married women leading an unhappy domestic life, and is often accompanied by attempts at suicide. Sometimes the melancholia is of a hypochondriacal type; at other times it is associated with delusions of a religious character, persecutory ideas, or erotic hallucinations. Mania is a rather uncommon form of insanity during the climacteric, and is generally characterized by hallucinations, sexual excitement, violence, phantastic ideas and obscene behavior. It is usually met with in widows, old maids of not very high morals, and, generally speaking, in persons with unsatisfied sexual cravings, or in such who have committed excesses in venery. Amentia does not often occur during this period in the maniacal form; more often in connection with the menstruation in the form of a periodical psychosis or as an uninterrupted attack, with exacerbation corresponding to the menstrual periods. It is often accompanied by an extreme erotism. Particularly characteristic of the climacteric period is paranoia, occurring mostly in old maids with a psycopathic predisposition. The morbid ideas of such persons are concentrated about men, who make love to them on every occasion. They finally accuse their persecutors of having made criminal assaults upon them. The patients believe that a certain man, who is often unknown to them, or may even be living in some other town, maintains marital relations with them. From being persecuted, the patients finally become persecutors, who torment their victims with letters, or even go so far as to make an open scandal of it. In some cases a perversion of the sexual instinct may show itself by persons of their own sex having an attraction for

them. These persecutory ideas as regards the men, in which hypnotism, spiritualism, the telephone, etc., figure extensively, together with the sexual delusions and nymphonomaniacal symptoms are so often met with in the climacteric period that this form may be considered the climacteric insanity *par excellence.* — *St. Petersburger medicinische Wochenschrift.*

NEW AND SPEEDY METHOD OF DILATING A RIGID OS IN PARTURITION.—At a meeting of the Obstetrical Society of London, Dr. Farrar (Gainsborough) gave the details of two cases in which he had used a 10 per cent. solution of cocaine as an application to the rigid os. In one case he had applied the cocaine after endeavoring vainly to relax the cervix by means of chloral, bromide of potassium and morphia, and the most persistent attempts at digital and mechanical dilatation, with and without chloroform. He decided upon incising the os, and used the cocaine to this end. After five minutes he introduced the finger as a guide to the scissors, and, to his surprise, found the os widely dilated. In the second case, a primipara, forty-eight years of age, he used every effort, as before, to produce relaxation, and waited three days before making the application of cocaine, which was immediately successful. In four minutes the os had yielded. He considered the dilatation to be due to the cocaine in both cases. Dr. Armand Routh said that Dr. Dibbs, of Shankin, had recommended cocaine as relieving the pains of the first stage of labor, and that Mr. Head Moore advised cocaine and boric acid pessaries in cases of rigid os. He himself had found it useful. The president, Dr. G. E. Herman, said that two cases were rather a slender foundation upon which to base a conclusion, but if Dr. Farrar's results were confirmed by further experience, he would have made a valuable addition to our obstetric resources.—*The Lancet.*

METHYL-BLUE AND EPITHELIOMA.—Dr. Darier, in a communication to the Academy of Medicine of Paris, reports the success of Dr. Mosetig, of Vienna, with the methyl-blue treatment of cancers, though M. Dentu has not with methyl-blue obtained cures. The author relates a series of cancerous tumors of the face cured rapidly by the daily application of a 20 per cent. solution of the drug. He considers the drug to have a specific action on cancer. A daily touching of the sore with the solution will effect a cure; but the good result will be more quickly produced by cauterizing the carcinoma with chromic acid or the galvano-cautery. For deep-seated carcinoma he recommends the solution to be hypodermically injected. Tumors whose surface is broken should be covered by a healthy skin-flap on or about the fifteenth or twentieth day after treatment commenced. Dr. Darier presented to the Academy a patient who had had epithelioma of the left eye, and was then quite free of the disease, its site being marked by a cicatrix. This was the ninth case the doctor had thus treated, and with success in all.—*Les Nouveaux Remedes.*

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PROPHYLAXIS IN TUBERCULOSIS.

We commend the reading of Professor Verneuil's great paper on emigration from town and country and *vice versa,* on the prophylaxis and treatment of tuberculosis, to the thoughtful consideration of our readers both in town and country. It may serve to strengthen opinions regarding the etiology and propagation of this disease which many of them have already formed, and, in some cases at least, it may render them more earnest in the advocacy of their opinions when their advice is sought by persons who wish to take the best means possible to conquer a disease already in possession of the outworks, or, more important still, to prevent the foe from effecting a lodgment in the interior of the citadel of life.

As Professor Verneuil says, "there are cities and cities," and it may be that our Canadian cities do not merit the blame which he attaches to the larger cities of France. Still many houses in our cities are not disinfected, though they have been inhabited by tuberculous patients, and a family, fresh from the country, may perhaps rent such a house, and some weakly member of that family may acquire the tuberculosis by breathing the germ-laden, impure air of such a dwelling. Our newer cities are not quite so malodorous as the older cities of Europe; but they will serve in many respects to point a moral for the sanitarian, as, for instance, when we see the steam rising from a sewer on King Street, Toronto, right under the noses of the people riding in the tramcars. The recollections of some of the older inhabitants and some of their descendants also will go back to many thousands of privy pits, giving forth odors in thickly-inhabited neighborhoods during summer as well as winter, mingled with much household rubbish and other evidences of crude organic matter which calls loudly for a cremator. It is also true, on the other side of the question, that filth is not confined to cities, and the manure pit is often unpleasantly close to the breakfast table in a country house. There may also be an effectual contiguity between the privy pit and the domestic water-supply. Barring these and some other drawbacks there can be no reasonable doubt that emigration to, and a continued residence in, rural abodes would serve to prolong

the lives of persons who have already contracted tuberculosis, and would prevent the acquisition of the disease by those who through heredity or acquired delicacy of constitution are prone to catch it.

It is regrettable that in Ontario we have not any stations in which a considerable elevation above sea level can be brought into service in helping the tuberculous patient. Neither can we offer such patients the advantage of a seaside residence. Our lakeshore climate bears no analogy to the climate of the seashore. Thermal stations we have none, so that our resources up to the present appear to be confined to pharmaceutical preparations and hygienic measures, and residence in dry, healthful country-places of fair altitude and free from dampness. Necessity, however, is the mother of invention, and it is quite possible to contrive means even in this severe climate of ours to make tuberculous patients comfortable in country homes where they will have the best treatment that can be devised for their disease, and where, at the same time, they will not be a menace to the health of others.

But the purpose of the paper will no doubt be well served if physicians in the country will lay the matter to heart, and will use their influence to dissuade many predisposed persons or weaklings from abandoning the healthful life of the country for the more expensive, less healthful life of the city, where, in addition to a possible loss of health, they have to contend with the moral loss of self-respect, which comes from a struggle with poverty and a poor prospect of a career of profit or usefulness.

CORONERS.

We append two extracts from the *Evening Star*, which are directly in line with what we have been advocating in this journal. We referred to some of the occurrences in connection with the competition for inquests in our January number, and we are pleased to see that the daily press are taking it up; at the same time we regret it, because most of the criticism which falls upon physicians is the result of their own negligence. The impression the reading public form of the character and standing of physicians is not improved by such agitations in the daily press. If the profession would stand loyally by one another, and not endeavor to correct abuses themselves, if professional opinion were sufficient to keep men from overstepping the bounds of decency and ethics, it would not expose a profession, which is always considered, and almost always deserves, the highest reputation for probity and fine feeling, to corrections in the public press. The medical profession has always looked upon the other professions as inferior to itself in point of professional spirit and in point of broad humanity and self-sacrifice, and it does seem a travesty that laws should have to be enacted to compel some of its members to observe the canons of ordinary decency.

"MAKE IT LAW.

"The bill introduced in the Legislature yesterday, by Mr. German, regarding coroners and their duties, is one which commends itself to everyone who has any acquaintance with existing facts.

"The cost and trouble and utter absurdity of holding inquests on every person who dies in jails, houses of industry or Government charitable institutions has been pointed out by the *Star*.

"Mr. German's bill would have the County Crown Attorney decide when an inquest is necessary. This would be a sufficient safeguard, and would do away with the present clumsy and expensive method."

"REFORM BADLY NEEDED.

"The rivalry alleged to exist between two coroners for the privilege of holding an inquest on the body of the victim of Saturday morning's fire, is regrettable under such sad circumstances, but it is a striking illustration of the inadequacy of the existing coroners' system. Unfortunately, the unseemly rivalry is not of recent occurrence. Newspaper men know how frequently it is found, but they could tell of cases where a coroner issued a warrant for inquest before ascertaining the circumstances of death, and it has been said that frequently warrants are kept signed that they may be issued by servants in the absence of the coroner, while there was recently an instance where a warrant was prepared before the victim's death, so anxious was the doctor to take charge of the inquest. The Government should not hesitate to place the system on a more satisfactory basis at once."

CONTEMPTIBLE BUSINESS METHODS.

We see by editorials and correspondence lately that an anonymous endeavor has been made to injure a well-known firm, which has always borne, and deservedly so, the highest reputation for scientific accuracy and pharmaceutical perfection in the manufacture of its preparations. The matter appears to us so manifestly absurd that we took the trouble to inquire as to the authority or basis for the imputation made against them. It was said that they were trying to obtain permission to use a low grade alcohol. Of course, there is no such thing on the market, but inquiry at the Excise Department brings out the fact that Canadian distillers were acting on the maturity clause, and to make pleasant combination among themselves, charge $1.17 per imperial gallon in bond. Germany is not supposed to be much behind Canada in the manufacture of chemicals, nor is it contended that the Germans have insufficient scientific knowledge in the manufacture of alcohol, yet German alcohol, admittedly of a similar standard to the Canadian, can be laid down in Montreal 28 cents per gallon. The contention of the firm was that if they were to manufacture for export to other British colonies they must have their alcohol at a reasonable price, and we are pleased to learn that there is a possibility of obtaining alcohol in Canada at prices approaching the cost of manufacture. One statement that appears must have been very amusing to the medical profession in general, and that was that Parke, Davis & Co. desired to import a low grade spirit for the manufacture of patent medicines. There is one thing the medical profession do know about this firm, and which has earned for the firm the heartiest thanks and co-operation of the profession, and that is, that they

do not manufacture patent medicines; on the contrary, their speciality has been clear and distinct formulæ. As far as the medical profession is concerned, there is no necessity for this article; as far as the distillers are concerned, the operation of Clark Wallace's Anti-Combine Bill would seem to be in need of a little exercise.

OUR MISTAKE.

In our January issue, speaking of antitoxine, we quoted a correction from the *British Medical Journal* which should have been credited to the *Lancet*.

Referring to antitoxine, one of the latest and acknowledged by many physicians to be the safest antipyretic, it is claimed for it that it is not so depressing as the other antipyretics now in use, that, in fact, its action upon the heart is stimulating rather than depressing. These views seem to be fully borne out by the clinical reports which have been furnished by many physicians in England and elsewhere. It is unfortunate that the name should be confounded with that of the new treatment for diphtheria, but there is no doubt that the proprietors of this synthetic antipyretic have the right to the name, as it was originated by them as descriptive of the properties of their product, and it is pleasing to note that a large amount of clinical experience bears out their representations, and, a cc of the clinical experience in connection with this drug, we have no hesitation in recommending physicians wishing a safe and reliable antipyretic to prescribe antitoxine.

Obituary.

DR. VERNON HALLIDAY.

The death of Dr. Vernon Halliday in the City of New York in November of last year caused widespread regret among his very large circle of both relatives and friends. The deceased was the son of Dr. Halliday, of Peterboro', Ont. He commenced his studies in McGill College, Montreal, in '88, and during his college course was most popular with his fellow-students and professors. He contracted diphtheria by attending a private patient in New York. He was first confined to bed in the Willard Parker Hospital, New York City, but succumbed very suddenly to heart failure when under the new antitoxine treatment.

DR. ALFRED LOOMIS.

In the death of Dr. Alfred Loomis, of New York City, last January, the profession lose not only a brother of very high standing, but a sincere friend. The doctor was indeed "a man amongst men," and reached the enviable position in the profession in that he could not attain a higher standing than the one he occupied up to the time of his decease. His death was due to pneumonia, and took place on the morning of Wednesday, January 3rd. He was born in the State of Vermont, and over forty years ago received his degree from the College of Physicians and Surgeons of that State. He first occupied the position of assistant physician on Ward's and Blackwell's

islands, and in 1855 he started the practice of medicine in New York City. He was physician to Bellevue and Mt. Sinai Hospitals, and was consulting physician to Charity Hospital on Blackwell's Island. He was President of the New York Academy of Medicine for some years, and also occupied the same position in the Medical Society of the State of New York. Amongst his principal works were: "Lessons on Fevers," "A Text-book of Practical Medicine," and his well-known book, "Lessons on Physical Diagnosis."

DR. GEORGE D. MORTON.

Dr. George D. Morton died in Toronto on February 17th last at the mature age of 73. He was an Irishman by birth, but came to Canada in 1848 at the age of 25. He first practised in Holland Landing, buying out the late Dr. Ardagh, who, at that time, was removing farther north. After practising for about nine years there, the deceased gentleman moved to Bradford, where he resided up till about fourteen years ago. The doctor not only had a very extensive practice, but was very fortunate in real estate and other speculations, amassing, up to the time of his death, a considerable fortune.

We record with sincere regret the death of Mr. Burroughs, partner in the well-known firm in London, Eng., of Burroughs, Welcome & Co. We venture to say that no more popular man lived in that great metropolis than the deceased, who was indeed "a man amongst men." He was an American by birth, a perfect gentleman, and a hustler in the real sense of the word. He left his native land, and ventured some years ago to settle in that great city of London when the manufacture of pharmaceutical preparations was at a very low ebb. For some time past, the firm of Burroughs, Welcome & Co., of London, has occupied the highest position to which they could attain as manufacturers of all the latest and most recent medicinal preparations. We tender our deep sympathy to both his family and partners in business.

CAUSE OF DEATH IN SKIN BURNS.—Kianicine (*International Medical Magazine*) has made some experiments to determine the presence of a ptomaine in the blood of animals affected with burns of large extent. In thirty-five experiments the ptomaines were found both in the blood and in the organs, while the blood of healthy animals, prepared in identically the same manner, did not contain this ptomaine. The method of Stas-Otto was employed in the same manner as is done by Brieger for preparing the peptotoxine. Extraction is accomplished at a temperature of 80° C. (176° F.), with alcohol, evaporation, and the digestion of the remainder with amyl alcohol. Next, evaporation to dryness, dissolving the product in water, and purification by means of the subacetate of lead, by the use of sulphuretted hydrogen; and, finally, a purification by means of ether. This poison develops only in animals burned or scalded, and is not a product of chemical manipulation. Some special reactions are given for it in the paper.

DENTAL MANIFESTATIONS OF GOUT.—Kirk (*Lancet*): The coexistence of certain form of suppurative gingivitis and gouty diathesis has long been known. Dr. Peirce, of Philadelphia, has shown that the calcareous deposits taken from the roots of teeth lost from pyorrhœa alveolaris contain, besides the usual calcium carbonate, considerable uric acid and urates of calcium and sodium. He concludes that the deposits upon the roots of such teeth are not salivary, but hemic in origin, and that pyorrhœa alveolaris is simply a local manifestation of gout. As further evidence of the correctness of these conclusions, the author has found that after thorough local treatment the gingivitis will disappear and have no tendency to return. He has found a marked acidity of the secretions of the mucous glands of the mouth in such cases, which brings about local decalcification of the enamel. He first used cream of tartar to correct this acidity. He afterward had a lithium tartrate prepared, which gave much more satisfactory results than any other alkali used. The promptness with which it acts is sometimes astonishing. After three doses of five grains each all symptoms sometimes subside.

MORPHINOMANIA IN THE MEDICAL PROFESSION.—Dr. Jules Rochard, in the *Union Medicale*, draws a gloomy picture of the increase of the morphine habit in France and elsewhere. The habit, he finds, becomes incurable at the end of six months of indulgence. The fair sex and the doctors are, in his opinion, the most deeply addicted to morphine. He draws an unpleasant comparison between the behavior of each kind of delinquent. Women, he says, delight in declaring how they indulge in this vice, and show ornamental hypodermic syringes to their friends. Dr. Notet states that a lady, having broken the needle of her syringe in a remote country village, wounded her skin with scissors and thrust the stump of the needle into the wound, injecting herself in this manner till a new syringe arrived from Paris. Men, Dr. Rochard declares, and especially medical men, the bulk of male morphine injectors, take the greatest pains to hide their vice. Hence the precise number cannot be estimated. He believes, however, that doctors and persons associated with them form nearly half the total of men addicted to morphine.—*Med. Rec.*

SUGAR IN THE TREATMENT OF UTERINE INERTIA DURING LABOR.—It remained for Mr. Bossi, of Genes (*Rev. Illust. Polytechnique Medicale*), to make practical application of a theory propounded by Drs. Paoletti and Mosso, that sugar taken internally might be found to exhibit as stimulating an effect upon the group of uterine muscles, as it has on voluntary muscles. Bossi administered a dose corresponding to an ounce of sugar in about eight ounces of water. A most excellent effect was observed after the first dose in all but one of the cases, the ecbolic action showing itself in from twenty to forty minutes, and nearly always lasting till the birth of the child. In the other case, a second dose had to be given. The contractions were always quite regular and free from any tetanic tendency.