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# The Canadian Practitioner and Review.

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## Original Communications.

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### PREGNANCY AND LABOR COMPLICATED BY TUMORS.\*

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BY ALBERT A. MACDONALD, M.D., TORONTO.

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Of the new growths which complicate pregnancy and labor, I will refer chiefly to ovarian tumors and to fibroids of the uterus. These are the ones most commonly met with in this country. I will leave out of the question, or at least merely mention, tumors of the bony pelvis which are rarely found here, though common enough in the older countries, where on account of faulty breeding and bad hygienic conditions, bone diseases and malformations form a large factor in the consideration of obstruction to labor.

Fibroid tumors of the uterus may be situated in the body or neck of the organ. In the latter situation they are rare, but when they do occur they have a remarkable effect both upon the progress of gestation and of labor. Even though a fibroid in the neck of the uterus be small it exerts a baneful influence by retarding the normal changes in the cervix as labor advances, and by setting up an irritation which is apt to produce contractions of the uterus and eventuate in an abortion.

In one such case where the tumor was very small, abortion took place at about the third month in two or three successive pregnancies. Finally the patient, who seemed otherwise in perfect health, consented to my removing the tumor, after which on again becoming pregnant she carried the child past

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\* Read before the Simcoe Medical Association at Barrie.

the time which had always given her trouble before, but unfortunately lost it as the result of an accident at about the sixth month.

When a tumor of the cervix remains undiscovered until the onset of labor it causes trouble by preventing the cervix from expanding properly, or it may even prevent the head from entering the os. A fibroid in such a position is easily dealt with. A short and broad duck-bill speculum is used to expose the cervix, which is drawn down by blunt, double tenacula. The mucous membrane over the tumor is incised; the tumor may then be grasped with volsella, the mucous membrane peeled off from its surface, when the tumor may be separated from the cervical tissue, either by the fingers or by suitable scoops, and removed. The bleeding may not be troublesome, but if it shows any tendency to become excessive, it may be controlled by pressure made either directly by a plug, by compression forceps, or by the advancing head.

Fibroids in the body of the uterus give rise to much more difficulty. If the tumor is not large and is situated high up, it may not cause much trouble and may even not be suspected until after delivery, but even in such cases which are the mildest, there is always increased danger from hemorrhage.

If situated low down it is likely to obstruct delivery, though it gives rise to trouble in proportion to the degree of fixation. If it is subperitoneal and pedunculated it will give rise to no danger and will only annoy by its mechanical, obstructive effect. Obviously it will not cause bleeding.

An interstitial fibroid will not only give rise to difficulty by its mechanical, obstructive effect, but also by preventing the proper uterine contraction so necessary both for the expulsion of the child and for the separation of the placenta as well as the closure of the vessels, for if the placental attachment be on the surface of the tumor the vessels are not closed by the contraction of the uterus, but can only be closed by thrombosis.

Afterwards, during the puerperium, the tumor is a source of danger, producing an unnecessary flow of blood in that direction, increasing the bleeding from the endometrium and retarding the natural involution of the uterus—or even by its lower grade of vitality favoring necrotic changes and septic infection.

A submucous fibroid, if of fairly large size, may give rise to other conditions. By its presence it may irritate the uterus, causing contractions which in their turn may cause hemorrhage (accidental) or sloughing of the tumor itself, and in that way it may bring about infection.

After delivery of a child the tumor might easily at first glance be mistaken for the head of a second child. Dragging

on the tumor has been known to cause inversion. Such a case would be easy to treat by reducing the inversion at once and stopping the bleeding by the ordinary means used for *post-partum* hemorrhage. Whilst speaking of this I might be excused for reminding you of one or two most useful considerations. A normal-sized uterus, after the placenta has been delivered, will hold a piece of sterilized gauze one yard wide and five yards long. It is well to carry a roll of such prepared gauze. If the uterus requires a tampon for the purpose of stopping bleeding it is required at once and of large enough size to exert pressure. Amongst other things I have found whiskey an excellent thing for injecting into the uterus to stop the bleeding. It may be used either pure or diluted with an equal quantity of water.

Treatment of cases of obstruction requires all our energy, skill and tact. When finding the patient already in labor it is my plan to wait, if possible, until the os uteri is dilated, or at least dilatable; then with the patient in the lithotomy position, disinfected, and under complete anesthesia, make a thorough manual (not digital) exploration. If it is possible to push the tumor up above the brim I do so, and then apply the forceps, and deliver. Such a procedure is not always very easy, for just when you have the tumor up and the head coming down, one is often doomed to disappointment by finding the tumor slip down in the way again. Success is favored in this as in many other obstetrical operations by complete anesthesia, and it is better to try this plan with care before resorting to podalic version, for though version may be easy enough, its accomplishment does not complete the delivery, for even though the body of the child may be made to pass the obstruction the head is apt to be so pressed upon by the tumor that it will be impossible to deliver it without perforation and reduction of its bulk, which in the after-coming head is no easy matter. Such a case came under my notice quite recently, when a confrere was called to attend a primiparous woman. He had no opportunity of examining before the commencement of the labor, and when he did make an examination he found that a tumor was in the way of the head. As it seemed semi-elastic he hoped to be able to push it up sufficiently high to allow the passage of the head, and, indeed, did succeed to such an extent that he was able to apply the forceps, but the head would not pass the obstruction. Under complete chloroform anesthesia I also tried, and it seemed as if the case was one where success should crown our efforts, but the head was hard and unyielding and the tumor would come down with the head. The situation was difficult, the place was not fit for an operation, it was midnight and the way to the hospital was rough, and I thought that the child

being dead I could turn and deliver. The turning and delivery of the body was easily accomplished, but the tumor offered more resistance after the turning than before. We perforated the skull, reduced its size, and delivered after considerable difficulty.

We knew that our plan of treatment was open to criticism, and that immediate operative procedure with a view of removing the tumor would in the majority of such cases be preferable, but labor had advanced too far for that, so we did what we considered the next best thing, and I am glad to say that though difficult it was successful. The woman made a good though slow recovery without any undue symptoms, though there was some sloughing from the surface of the tumor and also inaction of the sphincters for a time. As soon as she has sufficiently recovered from the effect of her pregnancy and labor, we will remove the tumor and the possibility of a recurrence of the difficulty.

If we are successful in doing a myomectomy, she may at a subsequent period bear a child which would suit her better than if we had done a "Porro."

My experience leads me more and more to the conclusion that it is our duty to impress upon our patients the necessity of a thorough examination and treatment before or even during pregnancy, so that if any obstruction exists it may be discovered and dealt with at a time which offers the best advantage to the patient, and which is least likely to bring disrepute upon the physician. I can recall to mind many cases where, like the one just mentioned, an abnormal condition existed which could have been rectified before the commencement of labor precipitated everything and made it impossible to obtain ideal results. There is a tendency to take too much for granted, and because many cases come out all right in the end our patients are apt to trust to luck and take chances rather than have the trouble of submitting to a careful examination and preparation for an event which is of more moment and fraught with more danger than any other which takes place in an ordinary way in the life of a woman. So let us do our full duty early and tell our patients to be examined and prepared.

Though the operation of hystero-myomectomy varies "all the way from one of the simplest to one of the most difficult complicated procedures in gynecology," we have here to consider only those complications due to pregnancy.

When pregnancy exists with a myoma we must consider whether the life of the woman would be endangered by allowing the pregnancy to continue to full term, and whether a living child can be born at term. If the tumor is small and in the upper part of the uterus the pregnancy may be allowed to

continue to term; if the tumor is in the neck of the uterus and of sufficient size to impede the progress of the head, it must be removed as already stated. Even when the tumor is in the body of the uterus the child should have some consideration, for if labor has commenced and ordinary means fail, a "Porro operation" may save both child and mother, or if the child is dead it may be removed by craniotomy.

Ovarian tumors, if large, give distress during pregnancy and by their bulk delay labor and diminish the effect of the pains; they, however, are not an element of great danger. It is the smaller ovarian tumors that give rise to trouble; for being likely to be overlooked during pregnancy, they may slip down and impede the delivery unless the tumor is so situated that its equator lies above the equator of the head of the child. It is thought that the pulling of the uterus on the ovarian ligament may have some effect in raising the tumor up when the labor commences.

If the head of the child is driven down upon the tumor the force of expulsion may have the effect of rupturing the sac of the tumor when its size would be sufficiently reduced to allow of delivery. Such ruptures occurring spontaneously usually take place into the peritoneal cavity, and normal fluid from an ovarian cyst is well tolerated by the peritoneum. It is only when some degenerative change has taken place in the fluid that it is hurtful.

With regard to the treatment of these cases: First of all, if the tumor is recognized before the onset of labor it should be removed by operation, and under favorable conditions whenever assistance of those skilled in such operations can be secured, an operation should be undertaken even if labor has commenced, for the danger of such an operation quickly done is not as much as it would be if the case were let alone to run the risk of such accidents as might occur during the labor.

What are the dangers that may be encountered during labor? Apart from obstruction there is the danger of a twisted pedicle producing strangulation and necrosis, or even a pedicle may be torn, in which case severe bleeding takes place. The production of an abortion has been advocated, but what good can result from such a procedure. Whilst it is true that it relieves the woman of the difficulty of carrying a child to term and of encountering the dangers of an obstructed delivery, it does not cure her of her trouble, and she may again become pregnant and have the same conditions present themselves.

I do not think that with the present methods the danger of doing an ovariectomy during pregnancy is much greater than at any other time. It is true that the operation may bring on an abortion, but even if it does the woman is at least cured of her

diseased condition, and if she should again become pregnant she would not have the tumor to trouble her. In the last case of the kind which we had at Bellevue Hospital there were absolutely no symptoms following the operation which one might not observe in any case. There was no sign of a discharge which one commonly observes after an ordinary ovarian operation. The patient went on to full term and had her child without any unusual trouble. Baby and mother are now well.

## Selected Articles.

### TREATMENT OF GONORRHEA IN THE FEMALE.\*

BY A. RAVOGLI, M.D., CINCINNATI, O.

The object of the treatment is to remove promptly and often the secretion from the mucous membranes and destroy the gonococci in the locality. The first aim is obtained by repeated and prolonged irrigations with antiseptic solutions; the second, by applications of remedies capable of causing a superficial necrosis of the epithelium, thereby reaching the gonococci which enter into the epithelial cells and find their way to the subepithelium layers of the mucous membrane. In regard to the first method, irrigations are made with solutions of bichloride of mercury, 1 to 5,000, or with permanganate of potassium, 1 to 5,000. These irrigations are easily applied to the external genitalia, to the vagina, and to the vaginal portion of the cervix. With an ordinary fountain-syringe the woman can herself take the douches with one of these solutions twice a day. These will remove the mucopurulent secretion, will diminish the inflammation, but of course will not help the urethra nor the condition of the uterus. Every two or three days I insert a bivalve speculum, and with a solution of permanganate of potassium, 1 to 5,000, thoroughly irrigate the vagina; then with small tampons of cotton the secretion from the cervix is carefully removed. When abundant discharge is flowing from the cervical canal I insert a Talley or Haynes douche-tube in the cervix as far as the internal os, and with a mild stream of the same solution the cervical canal is washed. When symptoms of urethritis are present the urethra is also irrigated with the same permanganate solution. This is also done by means of a short recurrent catheter. I do not find it useful to fill up the female bladder as in the male by the Janet method. The sphincter of the bladder in the female offers a great resistance to the passage of the fluid, and a forced injection into the urethra is accompanied by pain. The fluid is carried into the bladder only with difficulty. For this reason I prefer to introduce a recurrent catheter any time I have to irrigate a female urethra and the bladder. Under ordinary circumstances I seldom make use of irrigation to the cavity of the uterus unless the discharge is very profuse. Ordinarily I use instillations with a 1 per cent. solution of protargol.

The most effective antigonorrhœal remedies so far known are

\* Abstract of paper which appeared in *Medical News*, November 5th, 1899.

ichthyol and the silver preparations. Ichthyol has a beneficial action, especially in cases of acute gonorrhœa in the female, and in my clinics every case of acute vaginitis and vulvitis easily yields to a few applications of tampons dipped in a preparation of ichthyol and glycerin, equal parts. In the subacute and chronic cases, however, the silver preparations are much more desirable. Nitrate of silver in substance, in a thin, flexible rod, so much used in the past years to cauterize the cervical canal, has been nearly discarded in ordinary cases. I reserve this cauterization for cases in which granulations are to be destroyed. In the same way I use strong solutions of the same salt only when the cervix shows excoriations with granulations. Protargol I have found so far to be the best antigonorrhœal remedy, and since the time I introduced it in my clinic I have many times spared the patient a curettement of the uterus. Protargol has been used in from 1 to 3 per cent. solution as a urethral injection in cases of urethritis, as an injection into the ducts of the Bartholinian glands when affected, and especially in endocervicitis and endometritis. One of the instruments already referred to, the Talley or the Haynes double tube, has been introduced very gently into the cavity of the womb, care being taken to fill the tube with the fluid before introduction, otherwise some air is carried into the cavity. The instrument being in place, the fluid is pushed out of the syringe very slowly, drop by drop. I leave the catheter in for a short time so as to give the fluid a chance to flow back. Without this precaution, if some of the fluid remains in the body of the uterus, the woman may suffer from cramps and uterine colic. After removing the catheter a tampon is introduced to maintain the fluid in contact with the cervix.

The instillation of protargol into the uterus causes only a sense of heat in the hypogastrium, which lasts about half an hour. From this treatment the results have been exceedingly gratifying. Five to ten applications have been sufficient to bring the womb to its normal condition. Protargol in the beginning increases the discharge, which gradually diminishes, and is reduced to a thin crystalline mucus. As soon as the gonococci have disappeared from the secretion, the instillations with protargol are discontinued, and the woman uses douches of a mild solution of permanganate of potassium or of bicloride of sodium.

So far I cannot agree with Calmann on the superiority of formalin in this treatment, and I find that protargol is safer and more effective in subacute and chronic cases of gonorrhœal endometritis. During treatment it is of great importance to watch the menstrual periods. While the woman improves, her menses return to the normal condition, and the accompanying

pains gradually disappear, yet after the menstruation some mucous secretion passes from the uterus. This secretion must be carefully examined for the gonococci. If gonorrhœal germs still remain in the glands or in the folds of the mucous membrane of the uterus, with the presence of the blood, with the menstrual hyperemia, it seems that they take on more vitality, and are to be found again in the mucus. For this reason, before discharging a patient as cured, it is best to wait until her menstrual period occurs, and then to examine the secretion.

I must add a few remarks on the curettement of the uterus in chronic gonorrhœal endometritis, which has been resorted to as the only and last treatment. This operation should not be performed in cases in which the inflammatory process is still active. It increases the inflammation, and often is the cause of the spreading of the gonorrhœal process to the tubes and ovaries. In chronic cases for several years I have found curettement to be the only remedy for chronic gonorrhœal endometritis. From my hospital records I find that in 1895 I curetted in 14 cases, in 1896 in 30 cases, and in 1897 in 50 cases. After I began to use the treatment of instillation of protargol in 1898, I curetted in 6 cases, and in 1899 to the present month, only in 2 cases. This shows clearly the beneficial effect of this treatment, and I am gratified to state that in our ward in the last two years no complications have arisen in connection with the tubes, the ovaries or the peritoneum. During the treatment one must not forget the general condition of the woman. Constipation is often present, and for this I advise her to take half a glass of a mild purgative mineral water, with preference for apenta, which corresponds very well to the indication. At the same time the hypohemic condition must be altered by the administration of a mild ferruginous preparation.

Before concluding I must remind you that gonorrhœa sometimes complicates pregnancy and the puerperium. Acute gonorrhœa affecting the endometrium of the pregnant uterus is the cause of abortion. In chronic cases, however, pregnancy progresses without any trouble. In these cases the woman will irrigate the vagina with a mild solution of permanganate at a pleasant temperature, but the cervix and uterus cannot be treated directly with injections or with cauterizing agents, as they would without doubt cause miscarriage. At the same time rest should be recommended in order to spare the womb shocks, which might result dangerously. After childbirth chronic gonorrhœa of the cervix may spread to the endometrium and cause subacute endometritis, which is accompanied by severe pain, and a copious discharge of seropurulent secretion, which, mixed with the lochia, may give an idea of a septic condition.

Differentiation, however, is easily made between gonorrheal endometritis and septic endometritis by the temperature curve which in gonorrhea is mild or absent and in the septic endometritis is very high and by the odor of the lochia which in the gonorrheal condition have no offensive smell, but which in septic endometritis have a nauseous, unbearable odor. It is unnecessary to say that a woman must be kept in bed in a state of absolute rest. Morphin must be administered to relieve the pain. Hot applications to the hypogastrium have a beneficial effect. Warm irrigations with antiseptic solutions to wash out the vagina and remove the secretions should be carried out. Stronger applications are reserved until after the puerperal period is over.

Gonorrhea is not difficult to cure when every affected organ is treated. The trouble is in the possibility of reinfection. For this reason one should recommend, especially to a married couple, when both have suffered from gonorrhea, the use of a condom for a long time, until both are completely cured.

## PNEUMONIA FROM A PUBLIC HEALTH STAND-POINT.

BY ARTHUR NEWSHOLME, M.D., F.R.C.P.

President of the Incorporated Society of Medical Officers of Health.

In estimating the importance of a disease from the standpoint of public health, several considerations are involved. Assuming that the disease in question is, in part at least, preventable, the first consideration is the proportional share of the national death-toll which it causes; and the next is the age or ages at which this mortality chiefly occurs. If, for instance, death from pneumonia simply meant that this was one of the modes (and, as we know, a comparatively painless mode) of dying of senile decay, its presence in our national vital statistics might be regarded with some degree of complacency. We next naturally inquire whether pneumonia is on the increase or not; and in connection with each of these inquiries, we have to consider what degree of trustworthiness attaches to the official statistics.

*Proportion of National Mortality caused by Pneumonia.*—The death-rate from pneumonia in England and Wales was 1,340 per million males in the population, and 917 per million females, in the year 1897. A study of the annual reports of the Registrar-General shows that between 1878 and 1889, both years inclusive, the greatest variation in the annual death-rate among males was between 1,319 in 1887 and 1,089 in 1881; and among females, between 989 in 1887 and 740 in 1881. In the year 1890 a sudden change occurred, the death-rate from pneumonia in that year becoming 1,731 among males, and 1,798 in the next year, since when it has fallen to 1,277 in 1894 and 1,340 in 1897, but has remained persistently higher than before the year 1890. A similar change has occurred among females, the death-rate in this sex increasing to 1,094 in 1890 and to 1,165 in 1891, declining again to 917 per million in 1897. It scarcely needs to be said that this sudden increase, followed by a continued smaller increase of mortality from pneumonia, is associated with, and almost certainly caused by, the widespread prevalence of influenza, which since the latter part of 1889 has remained endemic in this country, with occasional epidemic exacerbations. This illustrates one of the main difficulties in forming valid conclusions as to the death-rate from pneumonia. How much of it is due to pneumonia as a primary disease, and in how many instances is the pneumonia a complication of influenza which has not been mentioned in the death-certificate, of unrecognised enteric fever, or of phthisis, or some other disease? The answer to this question must necessarily be con-

jectural. As regards influenza, the most important source of error, it may be asserted that no error can arise in the figures which we have quoted for 1878-1889 inclusive, as influenza had not then re-invaded this country.

If we take the two decades 1871-80 and 1881-90, we find that in the former period one out of every twenty-one, and in the latter period, one out of every eighteen deaths from all causes, was registered as due to pneumonia. The somewhat higher proportion in the second decade may be partially due to influenzal pneumonia in 1890. The actual death-rates in the two decades were 1,004 and 1,066 per million persons living, so that the difference is not caused simply by lowering of the death-rate under other headings, in which pneumonia did not share.

*Age-incidence of Pneumonia.*—The following table (Supplement to the 55th Annual Report of the Receiver-General, Part I., p. cxiii.) shows the relative age-incidence of the death-rate from pneumonia, comparing 1861-70 with 1881-90.

ANNUAL DEATH-RATE FROM PNEUMONIA PER MILLION PERSONS LIVING AT ALL AGES, AND AT ELEVEN GROUPS OF AGES.

Periods.	All ages	0-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75 and upwards.
1861-70	1,089	5,345	271	103	157	218	302	447	627	1,035	1,574	2,062
1881-90	1,066	3,658	299	119	201	301	494	833	1,157	1,762	2,596	3,187

Thus, taking the figures as they stand, it is clear that the heaviest rate of mortality from pneumonia falls in the earliest, the next heaviest mortality in the latest years of life. The tremendous excess in early life is still more strikingly shown when the death-rates in the first five years of life are separately given. Thus (*loc. cit.*, p. xxxiii.):

DEATH-RATES PER MILLION LIVING AT EACH YEAR OF AGE UNDER FIVE.

Periods.	YEARS OF AGE.					Total under 5 years.
	Under 1.	1-	2-	3-	4-	
1861-70	12,658	7,779	2,889	1,421	818	5,345
1881-90	7,892	5,922	2,224	1,201	782	3,668

Thus in the earlier decade, approximately 13 out of every 1,000 infants, and in the more recent decade, 8 out of every 1,000 infants died of pneumonia, the death-rate from this cause

falling very rapidly after the second year of life. It is clear from the above figures that, although pneumonia is a very heavy cause of mortality after the age of fifty-five years, it is not simply a mode of death for the old, for it cuts off an enormous number in the first years of life, being only slightly surpassed in this respect by bronchitis, and probably by no other except diarrheal diseases (including cholera). The following table, from the same source, illustrates the relative share of mortality from pneumonia and certain other diseases in the first year of life.

DEATH-RATE PER MILLION LIVING UNDER ONE YEAR OF AGE.

Cause of Death.	PERIOD.	
	1861-70.	1881-90.
Diarrheal diseases.....	19,645	16,044
Bronchitis.....	12,426	21,436
Pneumonia.....	12,558	7,892
Whooping-cough.....	7,255	7,085
Measles.....	2,737	3,365
Scarlet fever.....	2,026	671
"Fever".....	820	95
Diphtheria.....	581	282

In interpreting the above table, it must be remembered that whenever certificates are received returning pneumonia as a secondary cause of death (*eg.*, *primary*, whooping-cough; *secondary*, pneumonia), the death would be classified under the former heading. Before discussing the varying degree of alteration in the death-rate from pneumonia at every age-period, it will be convenient to consider the sex-incidence.

*Sex-incidence of Pneumonia.*—We have already seen that the death-rate from pneumonia, at all ages, in 1897, was 1,340 per million among males and 917 among females. In the following table the proportion between the male and female death-rates from pneumonia, at different age-periods, is shown. To bring out with clearness the ratio between the two, the death-rate from pneumonia among males at each period is given as one hundred, the female death-rate being stated in relation to this number :

FEMALE MORTALITY FROM PNEUMONIA IN 1861-70 AND IN 1881-90.

(Male death-rate at each age-period = 100.)

Period.	All ages	0-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75 and upwards
1861-70	74	80	98	106	87	62	59	48	43	51	66	79
1881-90	69	83	98	101	71	60	56	49	40	53	64	76

The above table gives only proportions, not actual death-rates. No comparison between death-rates in 1861-70 and in 1881-90 can be based upon it. It will be observed that in both decades the female death-rate from pneumonia is higher at the age-period 10-15 than the male. At all other ages the male is considerably higher than the female death-rate. At the age-group 5-10, the death-rate in the two sexes is nearly equal, but at ages under 5 there is a difference between the two sexes of about 20 per cent., and at ages over 20 there is a difference varying from about 60 to 20 per cent. It will be noted, furthermore, that the disproportion is, on the whole, fairly well maintained in each age-period in the two separate decades. At age-periods in which the difference is great or small in 1861-70 it remains so in 1881-90. The only exception to this rule is in the age-period 15-20.

*Question of Transference between Pneumonia and Phthisis and Bronchitis.*—I am not prepared with an explanation of the discrepancy at this particular age-period (15-20), any more than I can explain the exceptional excess of female over male mortality from pneumonia at the next preceding age-period, 10-15. Does it represent a real change in the age-incidence of this disease, or a transference to some other disease, *e.g.*, phthisis or bronchitis? Some light may be thrown on this point by a comparison with these two diseases. This can best be made by taking the death-rate at each age-period from each of these three diseases in 1861-70, and contrasting it with that for 1881-90, the former being stated as one hundred. This is done in the following table :

PROPORTIONAL DEATH-RATE FROM EACH DISEASE IN 1881-90, AMONG PERSONS AT THE FOLLOWING AGE-PERIODS.

(The death-rate in the corresponding age-period, in 1861-70, being stated as 100.)

	All ages	0-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75 and upwards
Pneumonia	99	59	110	116	129	138	164	186	185	175	166	155
Bronchitis.	122	158	111	80	69	65	69	86	98	104	109	123
Phthisis...	70	56	64	63	59	59	68	78	82	82	85	97

The preceding table shows that the death-rate from pneumonia at all ages has declined to the extent of 1 per cent. between 1861-70 and 1881-90. This decline, however, is confined to the first quinquennium of life, the decline of registered mortality at this point amounting to 31 per cent. At all other ages there has been an increase of registered mortality, varying from 10 per cent. at ages 5-10 to 86 per cent. at ages 35-45. Compare this with the experience as to bronchitis. The total

increase at all ages is 22 per cent., and this is chiefly caused by an increase under 5 years of age of 58 per cent. These figures naturally suggest a transfer between the two diseases; and it is not unlikely that a certain proportion of the decline of 44 per cent. in phthisis under 5 years of age is similarly due to transfer to bronchitis. At all ages 10-55, increase in pneumonia has corresponded with decline of bronchitis. At the same ages there has been a marked decline of phthisis, which, unlike the decline in bronchitis, is continued in some measure to the end of life. Almost certainly the largest share of the decline of phthisis is real, only a small portion of the registered decline being caused by transference to pneumonia. It is doubtful if the same statement can be made for bronchitis.

*Pneumonia or Pneumoniae.*—We have hitherto written as if in pneumonia we had to deal with a single disease. There are, however, at least two separate forms of pneumonia, croupous pneumonia and broncho-pneumonia. These are classified together in the official statistics of the Registrar-General; and in view of the perfect certification of deaths by a large number of medical practitioners, separation of the two is not practicable at present: consequently the statistics already given must be considered as relating to a mixture of at least two forms of pneumonia in an unknown proportion. Croupous pneumonia is usually a primary disease. Broncho-pneumonia is commonly secondary to bronchitis (a rachitic constitution frequently underlying this; and it is not surprising that, as has been suggested on the preceding page, much transference between bronchitis and pneumonia must have occurred. In the rest of this paper croupous pneumonia, which is undoubtedly a specific febrile disease, will so far as practicable be alone discussed; though, owing to the difficulty as to statistics mentioned above, in speaking of the influence of season and climate, one is obliged to make deductions from combined statistics for pneumonia and broncho-pneumonia. Were hospital statistics for each month of the year available, this sort of confusion might be avoided.

*Influence of Season and Weather.*—Hirsch from elaborate statistics arrives at the conclusion that the largest number of cases fall in the months from February to May, February being the maximum month for Philadelphia and for Bombay; March for Munich and for Paris; April for Frankfort, Berlin, and Vienna; and May for Stockholm and Copenhagen. The smallest number of cases is from July to September. Taking the average of the above and a number of places, Hirsch found that 34.7 per cent. of the cases were attacked in spring (March-May), 29.0 per cent. in winter (December-February), 18.3 per cent. in autumn (September-November), and 18.0 per cent. in summer (June-August). The London deaths from pneumonia rise to a

maximum in December, while the maximum for deaths from bronchitis is in January, the minimum for both being in August. It is, therefore, chiefly a cold-weather disease, and statistics are scarcely required to prove the well-known fact that the mortality from it is greatly increased during a spell of cold weather. This by no means disproves its specific febrile character. The depressing effect of cold may be regarded as simply lowering the resisting power of the system, and thus laying it open to the attack of the pathogenic micro-organism or micro-organisms of this disease.

Wet soils have been considered to be favorable to pneumonia; but Hirsch has given elaborate statistics showing that epidemics of this disease "have been prevalent equally in dry weather and in wet, and on low and damp soil as well as on elevated and dry ground."

*Influence of Race.*—It appears clear that natives of the tropics, and particularly negroes, are peculiarly subject to pneumonia, not only when they live in colder climates, but also in the countries of their birth. Of the former fact there are abundant statistics in the United States. The following are taken from Dr. Billings's Census Report, 1890. At ages 0-5, the colored population had in Washington, D.C., a death-rate from pneumonia which was 252 per cent. in excess of that of the white population at the same age. At ages 15-45 the excess of colored over white mortality from pneumonia was 180 per cent., and at ages over 45 the excess was 63 per cent.

*Influence of Occupation.*—The decennial supplement to the Registrar-General's Report (part ii., p. cxlv. *et seq.*) enables us to form some conception of the relative prevalence of pneumonia in different occupations in the years of 1890-92. Thus, the total mortality among all males in England and Wales aged 25-65 years being represented by the figure 1,000, that from pneumonia is 107. Among clergymen the comparative mortality figure for pneumonia is only 45, among lawyers 55, while in teachers it is as low as 43, and in farmers only 36, in fishermen 53, and in grocers 56. Doctors are represented by the comparative figure of 93, musicians by 92, innkeepers 158, carmen 184, hotel servants 197, dock laborers 220, employees in iron and steel manufactures 248, and coal-heavers 249. In the higher figures, the effects of dust and of alcoholism are probably combined.

*Epidemics of Pneumonia.*—For particulars of a large number of epidemics of what appears to be true croupous pneumonia, the reader must be referred to Hirsch's "Handbook of Geographical and Historical Pathology" (*New Syd. Soc.*, vol. iii. p. 125 *et seq.*). Only a few can be briefly mentioned here. In the eighteenth century many such epidemics are described, par-

ticularly in Italy, Switzerland, and France, these epidemics being both widespread and very fatal. In some instances a description of the anatomical conditions found *post mortem* renders recognition fairly certain. Thus, Morgagni speaks of "*pulmones compacti, ut in hepate est, substantiam habebant,*" and Pirri found "*i polmoni degenerati in una sostanza epatica per la sua durezza.*" In the latter half of this century pneumonia assumed pandemic proportions, being particularly virulent in France; and the frequent autopsies which were made always appear to have revealed the characteristic lesions of pneumonia.

Huxham described the epidemic prevalence of a severe form of pneumonia at Plymouth in the spring and winter of 1740 and 1746; and a similar outbreak occurred in Fife in the winter of 1736 (*Edin. Med. Essays and Observ.*, v. p. 35).

In the United States outbreaks were described in the eighteenth century, and similar outbreaks in the early part of the present century were followed by a "pandemic of pneumonia, which extended during the years from 1812-1825 over a great part of the continent of North America, from Canada to the Gulf of Mexico, although, as in France the century before, its epidemic character did not come out except in winter and spring for all the years that it lasted." (Hirsch.)

Of more recent epidemics we can only name three. In the spring of 1875 several villages in North Devon were described by Wynter Blyth as suffering from infectious pneumonia. These cases will be mentioned again shortly. The particulars of two other outbreaks at Middlesbrough in 1888, and at Scotter (Lincolnshire) in 1890, are contained in the Annual Reports of the Medical Officer to the Local Government Board for 1888 and 1890.

Dr. Ballard, who investigated the outbreak at Middlesbrough, found that pneumonia was epidemically prevalent from January 20th to July 14th, 1888, a period of twenty-four weeks. Out of probably about 1,000 cases, 369 were fatal. Among 1,633 known cases in the entire district 21.1 per cent. were fatal, the chief fatality falling on persons over 15 years of age. The above number of deaths were from four to six-fold the usual mortality from "pneumonia" in corresponding periods of other years. The prevailing disease showed a strong tendency to occur in groups of cases, the attacks in each group following one another in such a way as to suggest infection. It appeared clear, when the cases were considered in detail, that "local conditions of drain filth" favored the extension of the disease, and there were grounds for suspecting that certain articles of food became contaminated with the *materies morbi*. Certain bacilli found by Dr. Klein in the air-passages of Middlesbrough patients, on subculture, were found to be patho-

genic on rodents, producing a pneumonia identical with that of the pneumonia of patients in the above epidemic. He also gives an interesting account of atmospheric spread of infection among the rodents in the laboratory in which his experiments were made. In the Scotter outbreak, out of 32 known cases, 22 deaths occurred, a fatality of 69 per cent. The question arises in this instance, whether the primary disease may not have been influenza, though there was no evidence of any such association.

*Infectious Pneumonia.*—The occurrence of epidemics, and even pandemics, of pneumonia suggests the infectious character of the form of pneumonia capable of this widespread prevalence. Although it is possible that the spread "may have been nothing more than a continuous succession of infections from one and the same exterior source," the history of many localized outbreaks favors the idea of a more direct infectivity. The following cases are given by Wynter Blyth (*Manual of Public Health*, p. 415). A farmer at Bow, Devon, suffered from pneumonia; his niece nursed him; she soon became affected with the same disease, and going home, infected her husband.

A Dalton farmer failed with pneumonia on April 16th, 1875, and died on the 18th. The servant girl who nursed him failed with the same disease a week after the above patient's death. She went, whilst ill, to her married sister's home, who also contracted the same malady.

A clergyman was attended by a nurse for acute pneumonia; in about seven days she contracted the same disease. The clergyman's sister, who then took the place of the nurse, was in her turn seized with pneumonia. A brother of the clergyman next came to help, and he in his turn was also laid up with the same disease. The above cases, although exceptional, appear to point strongly to direct personal infection. Netter ("Contagion de la Pneumonie, *Archiv. Gén. de Méd.*, 1888, 7<sup>e</sup> série, t. xxi., p. 530) has collected a number of scattered observations bearing on the same point. It would appear that in certain cases of pneumonia infection may be conveyed in fomites. The following case (from *Lyon Méd.*, April 28th, 1889) illustrates this point. A shopkeeper's child was convalescing from pneumonia. About the same time (10th December) the servant boy began with pneumonia. He was taken to the hospital, a second boy taking his place, wearing the same clothes and sleeping in the same bed as his predecessor. Two days later he failed with pneumonia. A third boy was engaged, on 18th December; he slept for two nights with the second boy, and thirty hours later failed with pneumonia.

All the accounts of epidemic pneumonia agree in associating its occurrence with conditions of overcrowding and especially

with defective conditions of house sanitation involving privy or drain effluvia. An outbreak of infectious pneumonia occurred at the convict prison of Frankfort, Kentucky, in which the cells occupied by the convicts were full of filth of every kind, and the air extremely tainted. (Hirsch.) Pneumonia was epidemic in three ships of the English Mediterranean fleet in 1860-61. The subsequent inquiry showed that there had been excessive crowding in the sleeping quarters of the crew on the lower deck; that these were damp and ill-ventilated, and that there was a collection of black stinking water in the bilges. These instances could easily be multiplied. It will be remembered that a similar association between extremely insanitary conditions and epidemic cerebro-spinal meningitis is nearly always found.

*Relation between Pneumonia and Epidemic Pneumonia.*—Is the difference between sporadic and epidemic croupous pneumonia a specific difference, or are we to regard the two as due to a single contagium, which under certain ill-recognised conditions becomes more virulent and infective than it is usually seen to be? The question is analogous to that which is raised by the suggestive relationship between such diseases as

Catarrhal jaundice and acute yellow atrophy of the liver;  
Epidemic diarrhoea and cholera; and  
Febrile catarrh and influenza:

and we cannot attempt to answer it here.—*The Practitioner* (English), January, 1900.

## Society Report.

### LONDON MEDICAL SOCIETY.

The following officers were elected for 1900 at the meeting held in December: President, J. D. Balfour; Vice-President, H. T. H. Williams; Secretary, W. M. English; Cor. Secretary, H. A. Stevenson; Treasurer, W. J. Weeks.

The retiring President, Dr. Ferguson, gave a *résumé* of the work done during the past year, the most prosperous year in the history of the society.

Dr. Saunders read a paper on "Hypnotic Suggestion in Medicine."

Dr. H. A. Stevenson exhibited a uterus, containing a large fibroid, with a dermoid cyst of each ovary the size of a large orange, from a patient of Dr. Meek's. The patient made a good recovery.

## Editorials.

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### MONTHLY REPORT FROM THE BOARD OF HEALTH.

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We have received from Dr. Bryce, Secretary to the Provincial Board of Health, an advance copy of a report, which shows the number of deaths which occurred from all causes (including contagious diseases) during the months of October, November and December, respectively, of 1899, and also the deaths from contagious diseases during the same months of 1898. We notice, in the first place, that the mortality from consumption alone was greater than that from all the other contagious diseases combined—the deaths from tuberculosis numbering 497, while those from scarlatina, diphtheria, measles, whooping cough and typhoid fever combined are 346. This fact is startling in a way, but is far from new. So far as we know, it is about as old as the world. During recent years the matter has been discussed in all its aspects, and strenuous efforts are now being made, both to cure the disease and stop its spread. All this, of course, everybody knows, as there has been “so much talk about it” during the last few years. Comparatively speaking, there has been altogether too much talk and too little work in the way of taking steps to care for the consumptive poor. A certain amount of work has been done, however, in various ways. We have our sanatoria and health resorts, which have been greatly improved recently in a sanitary way. We endeavor to isolate our patients to some extent, and destroy sputa and other excreta. But, after all, as far as the great mass of poor consumptives are concerned, we simply fold our hands and let them die. Some one who reads the newspapers may think this statement is scarcely fair. Well, let us see! How much improvement will 1899 show over 1898 in the matter of mortality rates? None. There were fifty-seven more deaths from consumption in the three months of 1899 than in the corresponding months of 1898, the figures being 497 deaths in 1899, and 440 in 1898. As to other diseases, it

is interesting to note that there was a substantial decrease in the mortality rate of diphtheria in 1899, the number of deaths being 116 as against 149 for the same period in 1898. The report as to typhoid fever is not so satisfactory, as 1899 shows an increase in the mortality rate, *i.e.*, 156 deaths in 1899 as against 125 in 1898. We may say, in the same connection, that there was more typhoid fever in Toronto during the fall of 1899 than for many years before.

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### INFLUENZA.

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We learn from the medical journals of Great Britain that influenza has been very prevalent in the United Kingdom during the winter. The *Medical Press and Circular* says that the dreaded disease has not only disappointed all hopes of its disappearance, but has returned with greater vehemence than ever. It also expresses the opinion that more persons were attacked than in any previous epidemic, although, happily, the mortality has been comparatively low.

Although influenza is, to a certain extent, prevalent in Canada, we believe we have suffered less than in former epidemics. We had hoped that the profession as well as the public had learned important lessons from our experience in the past, but it would seem that they have still much to learn in England. In the article referred to we find the following: "Christmas all over the United Kingdom was more or less blighted by the advent of this unwelcome visitor, and in many cases both guests and hosts rose from bed to keep their dinner engagements."

Probably our worst epidemic of influenza in Canada was that of 1889-90. We have endeavored to profit by the experience gained at that time. We then learned the truth of the statement made by the *Press* when it says: "The average individual is absolutely safe if he stay warm abed, but if he go about his condition is at once shifted from security to danger." Realizing this fact, which has been so frequently demonstrated during the last ten years, we endeavor to prevent our influenza patients from leaving their beds to go to Christmas dinners. We generally succeed, too. A certain term—heart failure—

has of late become very common in this country, and it wields a world of power. Just whisper it to the rebellious patient who doesn't want to stay abed, and he pulls his blankets over his ears, and doesn't whimper again for hours.

[We have learned since this article was written that the epidemic in Great Britain grew more serious during January, and the mortality was greatly increased.]

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### THE MEDICAL COUNCIL OF CANADA.

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We have received from Dr. Roddick a draft of the proposed Act to incorporate the Medical Council of Canada. Dr. Roddick has so frequently explained his scheme during the last two or three years, and has taken counsel with so many representative physicians in various parts of the Dominion, that the details as now presented are scarcely new. Every effort has been made by those interested in the matter to formulate a broad and fair Act which will do justice to all parties and all sections of our Dominion.

In the first place it is well to consider the subject from an Imperial point of view. Never in the history of the British Empire has the Imperial aspect of events appealed to Her Majesty's loyal subjects to such an extent as it does now. We are proud of our empire, of which we feel more than ever that we are an integral portion. We are anxious in the near future to see the enactment of legislation which will allow a registered medical practitioner of Canada to practise his profession in any part of our empire. That will, of course, include the very important legislation which will allow our licentiates to practise in any part of Canada.

So far as we know, all are agreed as to the general principles of the proposed Act. It is, of course, of paramount importance that the different provinces should be satisfied that they are not to be deprived of any important rights which they now possess. One of Dr. Roddick's chief aims has been to consult with the representatives of all the provinces. We learned, partly through the admirable discussion at the last meeting of the Canadian Association in Toronto, that he has been highly successful in this respect. We are glad, however, to be in a position

to say that he did not rest on his oars after that meeting, but since then has done much valuable work with a view of making his proposed Act acceptable to all parties.

Beyond the points referred to there is not much to consider excepting certain matters of detail. It was feared by some that the universities of Ontario might be placed at some disadvantage as compared with other universities in Canada—as, for instance, McGill. We have looked into this matter with considerable care, and have found that all of our universities will be placed on an equal footing. We believe that under such circumstances the Ontario universities will be able to hold their own. Some persons object to the clause which allows only such medical practitioners as have been registered for a full term of ten years in their respective provinces to be registered. We may say that British Columbia and the North-West Provinces decidedly object to any change in the clause. So also do many practitioners of Eastern Ontario. The graduates of Ontario should not forget the fact (which is duly appreciated by the physicians of various parts of Canada) that the standard in Quebec has been in some respects very low. Many think that on that account those cheap graduates should not be placed on a par with those who have passed under the high standard that has prevailed in Ontario.

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### SURGERY IN CONNECTION WITH THE CANADIAN CONTINGENTS.

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We regret that the Government of Canada should have refused to accept the services of Dr. Fred. Grasett, of Toronto, who volunteered to go as a surgeon to the second contingent for South Africa. Why? Too old, we are told. We understand he really is over 35. And yet he is a boy as compared with some of the eminent British surgeons who have been sent with very high salaries. Perhaps there are other reasons than the one mentioned concealed within the mysteries of red-tapeism; but, with our present lights, the refusal of Dr. Grasett's services seems very extraordinary. There is a general feeling in the profession that the Government has not been particularly fortunate in choosing surgeons for the

different contingents, and there was a strong desire on the part of many that a surgeon of experience, standing and reputation should be selected to go with the second contingent. There is no man in Canada who would "fill the bill" better than Dr. Grasett. His splendid training under Lister; his long experience as a surgeon and a teacher of surgery; his well-known ability, skill, energy and enthusiasm; his standing and reputation in Canada—all combined made him pre-eminently fitted for the position of active and consulting surgeon to the Canadian contingents. The Government may yet want surgeons like Dr. Grasett, and may not find it the easiest thing in the world to get them.

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### DAWSON CITY.

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In letters received from Dawson City, a number of interesting facts have been gleaned regarding the health of the people living there.

In the fall of 1897 there was considerable typhoid fever and typho-malarial fever and the death-rate was above the average. During the summer of 1898 a number of people emigrated into the district. No precautions were taken by them, and as a consequence a number of cases of acute dysentery followed. Later typhoid fever came in its wake. During the winter season this died out. In the spring of 1899 a system of private and public sanitation effected a marked improvement. There was then a mild outbreak of dysentery and a decrease in the number of cases of typhoid fever.

In the district there is a fever resembling what is called "mountain" fever elsewhere. There are no fatal cases of this affection found. There is a slight amount of what appears to be true malarial fever. This occurs at intervals during the summer. Its presence seems to aggravate an attack of typhoid. The mortality of the cases of typhoid seems to have been about 5 per cent. of all the cases. Many of those who have died have had constitutions undermined by scurvy and exposure.

Pneumonia is a disease that is very infrequently met with when we take into consideration the constant exposure and privation necessarily accompanying such a life.

Scurvy is dying out and should soon become rare. Diphtheria, measles, small-pox, and scarlet fever have not as yet visited the district.

The climate is, on the whole, most salubrious. The cold, though severe, appears to create an almost perfect condition of health. It has been considered, by one who should be an authority, that the risks to health and life in the district are not any greater than they are in any other portion of Canada.

From another source we learn that there is less sickness in Dawson City in proportion to the population than in any other part of the eastern portion of Canada.

The country seems, so far, to be very free from syphilis. In Dawson City a bi-monthly examination of all prostitutes is insisted upon by the authorities, a regulation that might well be introduced into "good" Toronto.

J. F. W. R.

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### ANTI-OPIUM CAMPAIGN.

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We have just received one of the series of anti-opium tracts written by Hampden C. du Bose, D.D., president of the Anti-Opium League in China. In it are many startling assertions.

We are amazed at the prevalence of the opium habit. Opium, like alcohol, has its uses and abuses, and the question is not, shall we prevent the manufacture of them, but rather how shall we control the sale? Opium and alcohol are two of the sheet anchors of the doctor in combating the tides of ill health and disease, but it is awful to think that such a heaven-sent drug as the former from such a lovely flower should be such a curse.

Of the one hundred adult males in China one-tenth are addicted to the habit of opium smoking. An erroneous impression seems to have crept into medical circles that opium smoking is not detrimental to health. Upon careful inquiry it will be found that the opium smoker has no flesh, no strength, and no money. In one portion of China it is stated that every one smokes opium and that even little boys chew the cast away pods of the poppy.

The use of the drug is making ravages in the agricultural districts, and now a large number smoke where the habit, a few years ago, was almost unknown. In every little hamlet one or

two opium-smoking dens are found. The amount smoked by individuals has been largely increased. One of long experience states that the average daily consumption has increased three-fold<sup>1</sup> within the last forty years, and apparently it is to go on increasing. The opium habit seems to rivet itself on the victim in a very short space of time, and the habit clings for life.

A few years ago, says the essayist, friends met at tea shops and sipped the national beverage; now the invitation is to the opium den. In days gone by business was transacted in the tea shops; business affairs are now settled in the opium dens. At that time a cup of tea was offered in the reception hall; now it is an opium pipe. The servant lies opposite his master and fills his pipe; the son stands beside his father's divan and imbibes the fumes and, alas, the craving as well.

When the craving comes the opium smoker must have his pipe; he is utterly helpless without it and cannot think or work. There are a few opium palaces at the ports and large cities, which are handsomely furnished with richly cushioned couches of rosewood and marble, and to these the wealthy resort; but the wealthy are few in number, not more than one in ten thousand. For the rest, a heavy curtain in front to prevent the ingress of air, for a slight breeze drives away the volatilized drug, is the sign of a den. The room is dark and filled with sickening fumes, and around the walls, on beds covered with a strip of matting, lie the wretched victims of this awful habit.

Not only is the opium habit itself injurious, but in a country that yields but a bare existence to its teeming population, a large cultivation of the poppy means starvation. The price of food-stuffs is increased. If, then, the money intended for the purchase of rice goes for opium, what is to fill the mouths? Each of the two million opium-consuming slaves uses from fifteen to one hundred and fifty dollars worth, or even more, per annum. What an immense sum it aggregates, and much of this money is paid out by the men who earn from three to five dollars per month. There are opium consumers who can afford to use opium; there are opium smokers who are barely able to purchase the necessaries of life; and there are opium smokers who are in abject poverty. When the father consumes three-fourths of his gains in opium, the children have insufficient clothing in winter and they are in rags. The mother toils all day at

embroidery to gain a mouthful of food to hush the cries of her hungry children. There are hundreds of thousands of these cases. The opium smoker pawns his goods, disposes of his furniture and sells his house.

The class by whom the drug can be used for some time without deleterious effect is that class of people past the middle age, in easy circumstances, having vigorous constitutions, being supplied with good food and comfortable surroundings. But this is a class which is only a small percentage of the whole.

A clergyman states that from his place in the pulpit he can point out the opium smokers. He notices the glazed eyes, the contracted pupils, pale cheeks, sunken chests, stooped shoulders, swarthy complexion, stained thumb, emaciated form, the spiritless expression, and the haggard appearance.

A premature death is the lot of the opium smoker. His expectation of life is only about 80 per cent. of what it should be. In other words, the man who should reach sixty dies at forty-eight.

The increase in the number of suicides has been largely due to the use of opium. Constipation produced by the drug is remarked. It not infrequently happens that the bowels are only evacuated once a week. In some patients evacuations do not take place oftener than once in ten days or twice in a month; and one case is recorded in which forty days passed without an evacuation of the bowels.

It appears that within recent years the women are beginning to use the drug. Imagine the opium-smoking mother wandering about the house during the night, deathly pallor on the cheeks, the hands unwashed, clothing filthy, the house in disorder, the husband wretched, the children street arabs, and the family sunk to the lowest level of humanity. We know enough of the fearful effect of the use of the drug among Canadian women to understand that it must be even worse in China where there is less restraint and less to uphold the victim.

In China it is found, as it is in this country, that opium produces the king of liars. For a right royal liar one must hunt among the opium smokers, and he need not hunt far.

It is to be hoped that during this twentieth century something will be done to mitigate the evils of the opium traffic.

J. F. W. R.

## Personals.

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### NEW YEAR'S HONORS FOR BRITISH PHYSICIANS.

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Dr. T. Lauder Brunton, Physician to St. Bartholomew's Hospital, Lecturer on Pharmacology and Therapeutics, has received the honor of knighthood.

Mr. H. F. Lovell, Surgeon-General of Trinidad and Tobago, is now Sir Henry Francis Lovell, C.M.G.

The Honorable John Alexander Cockburn, the Agent-General for South Australia, has been made K.C.M.G.

Dr. Patrick Manson, Medical Adviser to the Colonial Office; Dr. John Pringle, of Jamaica; Dr. Wordsworth Poole, of British Central Africa; and Dr. Archibald Donald MacKinnon, of Uganda, have each been made C.M.G.

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Dr. H. S. Roberts (Trin. '96) is medical officer to the garrison, Kimberley, South Africa.

Dr. Leonard Vaux has been appointed surgeon to "D" Battery in the Canadian contingent.

Dr. Geo. Field, of Cobourg, also goes with second contingent.

Dr. Ernest Hall, who practised for a few months in Toronto, has returned to Victoria, B.C.

Mr. Jordan, a final Toronto student, is a corporal in "C" company of the first contingent.

Dr. A. H. Garratt, of Toronto, has removed from Bay Street to the corner of College and Teraulay Streets.

Dr. C. D. Parfitt (Trin. '94), who has been in Baltimore for some years, has commenced practice in Toronto.

Dr. P. G. Goldsmith, of Belleville, has returned to his home after spending some months in London, England.

Dr. J. Crawford (Tor. '94), now practising in the Western States, spent his Christmas holidays with relatives in Toronto.

Surgeon-General George Sterling Ryerson left Toronto for South Africa, January 11th. He went as the representative of the Red Cross Society, in which he has for years taken a deep interest, and will inquire carefully into the necessities of our volunteers in the war.

Dr. McNulty, who was a resident surgeon in St. Michael's Hospital, Toronto, for nearly two years, has commenced practice in Peterboro'.

Dr. T. G. Devitt (Trin. '96), resident house surgeon, Toronto General Hospital, 1896-7, is now practising in Grand Forks, North Dakota.

Dr. J. Milton Cotton, of Simcoe Street, Toronto, left February 1st for New York, where he will "walk" the hospitals for a couple of weeks.

Dr. R. M. Mitchell (Trin. '92), after practising for some years in Dundalk, has gone to the North-West Territories, and settled in Weyburn, Assiniboia.

Dr. James L. Turnbull, whose return from Europe after an absence of a year we announced in our last issue, has commenced practice in Goderich.

Dr. E. H. Stafford, First Assistant Asylum for Insane, Toronto, has gone to Bermuda to recuperate. He has not been in good health for some time.

Surgeon-Captain Osborne (Hamilton), who went to South Africa with the first Canadian contingent, was placed in charge of the field hospital south of Belmont, January 7th.

Dr. J. N. E. Brown, formerly of Toronto, was married on New Year's Day at Dawson, in the Yukon Territory, to Alice Freeman, well known to Toronto people as "Faith Fenton," special correspondent to the *Toronto Globe*.

Drs. George McDonagh and Charley Murray sailed from New York for England, February 3rd. Dr. McDonagh and his brother, Mr. Jack, will remain for a time in London, and will then go to Italy where they remain a few weeks. Dr. Murray will spend some time in Limerick, Ireland, after leaving London.

Dr. Thomas H. Whitelaw (Tor. '94) spent a few days in Toronto early in the year. His many friends were glad to see him, although many of them did not for a time fully realize the importance of his visit. On Saturday, January 6th, he was married to Miss Mary Laidlaw, 419 Ontario Street, Toronto. Congratulations!

Dr. Garnet Holmes (Tor. '98) reached Toronto on his return from England, February 3rd. He was abroad about two years, and spent most of his time in London and Vienna, studying diseases of the eye, ear, nose and throat. He will go home to Chatham, where he will remain until he decides as to his location. He will probably practise either in Chatham or Toronto.

Dr. Montizambert, Director of Quarantine Service, left Ottawa for Halifax, January 7th, to look after matters in connection with the embarkation of the second Canadian contingent for South Africa.

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### BIRTH.

On January 6th, the wife of Dr. R. J. Dwyer, Toronto, of a daughter.

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## Obituary.

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### GEORGE HENRY CORBETT, M.D.

Dr. G. H. Corbett, the oldest physician, and one of the most highly respected citizens of Orillia, died suddenly, January 31st, 1906. He was returning from a visit to the Indian reservation at Rama, and became faint while driving. He was taken by friends to the office of a brother practitioner, where he died in a few minutes. He graduated M.D., Queen's University, 1856, and shortly after commenced practice in Orillia. He was generally recognized as an able physician, and, in addition, was greatly beloved by his intimate friends.

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### JOHN REGINALD SHANNON, M.B.

We sincerely regret to record the death of Dr. John R. Shannon, of Goderich, after a comparatively short illness, from typhoid fever. He received his medical education in the Toronto School of Medicine, and graduated M.B., University of Toronto, in 1887. He commenced practice in Goderich soon after graduating, and very rapidly came to the front. He was generally recognized as an excellent, successful physician, and had a large and lucrative practice. Outside of his professional work he took a great interest in educational and municipal matters. He was a member of the Collegiate Institute Board, and was for two years mayor of the town. His widow and two children survive.

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We announce with deep regret the death of the only child of Dr. Bertram Spencer, of Toronto, a daughter aged 4, which occurred January 26th.

# Progress of Medical Science.

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## MEDICINE.

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IN CHARGE OF W. H. B. AIKINS, J. FERGUSON, T. McMAHON, H. J. HAMILTON,  
AND INGERSOLL OLMSTED.

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### Urinary Toxicity in Children, especially in those suffering from Acute Appendicitis.

Lannelongue and Gaillard have found, by their researches, that in children in good health the toxicity of the urine is less than that of adults. In the latter it varies from 40 to 80 c.c., while in the former it averages 102 c.c. The urine of children suffering from acute appendicitis is much more toxic, being about three times greater than in a subject in good health and of the same age.

In general the toxicity seems to result from the association of the various abnormal and normal elements, which, excreted in greater quantities, give to the urine a greater density, a deeper coloration and a greater weight of extractive matters than normal. As far as color is concerned, its intensity, at least in children, varies in direct proportion to its toxicity. In this respect the different colors of urine in subjects suffering from acute appendicitis can be classified as golden-yellow, amber-yellow and amber; the normal color in children in good health being pale yellow. To each of these varieties of urine corresponds a toxicity which increases as the coloration becomes deeper.

H. S.

### A Case of General Arsenical Melanopathy.

Lereboullet and Enriquez presented at the June session of the Société Médicale des Hôpitaux a patient suffering from general melanopathy, due to prolonged arsenical treatment. He was a man forty-seven years old, apparently immune from tuberculosis, who in October, 1897, was placed under arsenical treatment for an eczema of the feet and hands, with which he was affected for the first time. The eczema was accompanied by a slight asthenia and by progressive emaciation. From that time, for one year and a half, the patient took 16 drops of Fowler's Solution per day. Six months after the beginning of this treatment there appeared a pigmentation of the skin which rapidly became general. At the same time there was noticed conjunctivitis with lachrymation and dryness of the throat. Subsequently the melanopathy became intensified, without

being accompanied by marked asthenia, gastro-intestinal disturbances or lumbar pains. At the beginning of June, 1899, it had invaded the whole body, but did not present a uniform tint. On the pigmented base were many brighter spots, of the size of a pea, giving to the skin a mottled aspect. These spots were seen on the trunk and abdomen. The pigmentation of the face was uniform and not so deep; on the forearms and legs it was deeper; on the hands and feet but little; the genital organs, and especially the skin of the scrotum, seemed less pigmented than the surrounding skin. There was a small pigmented spot on the lower lip. While the emaciation in two years was considerable, the freshness of the complexion was not diminished.

The suspension of the treatment caused the melanopathy to disappear, as well as the conjunctivitis and the dryness of the throat.

Mathieu has also recorded a case of arsenical melanopathy.

H. S.

#### **A Case of Hemorrhagic Laryngitis with Abdominal Typhoid Fever.**

The patient was admitted to the hospital for acute laryngitis which, it was thought, was due to influenza. On the vocal cord on the right side was seen a small ulcer. In the second week typhoid was diagnosed (positive Widal reaction). In the third week the margins of the vocal cords were covered with blood clots, hemorrhagic laryngitis. In the expectoration there was a spoonful of blood per day. The hemorrhage ceased after the application of tannic acid powder. Cure after five weeks. Blumenau obtained pure cultures of Eberth's bacilli from the surface of the ulcer. He does not admit the existence of hemorrhagic laryngitis as an independent form of disease, but regards it as a modification of acute laryngitis.—Translated from *Giornale Internazionale delle Scienze Mediche* by Harley Smith.

#### **Chronic Gastric Catarrh.**

Dr. Boardman. Reed, in *Internat. Med. Mag.* for November, discusses the above subject under the headings of dietetic, mechanical and medicinal.

*Dietetic.*—All foods of an irritating character, as well as fermentable ones, must be avoided. In the more asthenic forms a small amount of the milder condiments and a little of the sour wines may be well borne and do good, but they must be used very carefully. No rigid rules can be laid down. The patient's ability to digest certain foods must be studied empirically. All forms of cane sugar, fresh yeast bread, rolls

beer, malt generally disagree, as they are so prone to fermentation. Vinegar, cabbage, green corn, beans, shell fish, fried things, and coarse, tough articles of food that cannot be thoroughly masticated are unsuited to these cases. A fair amount of proper exercise, as horseback, bicycle, gymnastic movements, etc., are of the utmost value. Pure outdoor air, well ventilated bed-rooms, and judicious bathing and sponging should receive due attention.

*Mechanical.*—Lavage is one of the most important of all the curative measures. It should be done once a day—some say even twice a day, when there is much mucus and fermentation. Plain, warm, sterilized water does well. Drinking a pint or more of warm water, followed by vigorous action of the diaphragm and abdominal muscles, helps to wash the mucous surface. After this is done and the stomach well washed out with salt and water, it may be further washed out with resorcin or alum, half a teaspoonful to the quart, or nitrate of silver, gr. x. to the quart. This should be followed by a solution of common salt. When lavage cannot be practised, drinking warm water in large quantities before meals will often do much good. Careful and skilled massage of the abdomen is very useful. Rowing is one of the best means of obtaining abdominal movements.

*Medicinal.*—Laxatives are often needed. It is necessary that the bowels be kept regular. Hydrochloric acid and pepsin are good adjuvants to treatment, and they may be required in large doses. Nitrate of silver, gr.  $\frac{1}{4}$  with gr. x. of bismuth, sometimes does good. For the nausea and fermentation the following mixture has done good:

Rx	Bismuth subnit. ....	ʒi.
	Glycerit. acid corbol. ....	ʒss.
	Sp. chloroform,	
	Tr. card. co. ....	āā ʒ iss.
	Aq. menth. pip. ....	ad ʒ iii.

M. Sig. ʒi in lime water every two hours till relieved.

### Migraine and Epilepsy.

Dr. W. G. Spiller, in *Am. Jour. Med. Science* for January, concludes an able review of the relations between migraine and epilepsy in the following summary: Some attacks of migraine are associated with nausea and vomiting. This is the simple form of migraine which usually continues unchanged throughout life. In some other cases there are ocular symptoms, such as amaurosis, hemianopsia, scintillation. These are the ophthalmic type of migraine. There may be paralysis of some of

the ocular muscles giving rise to ophthalmoplegia. These ophthalmic forms of migraine are related to epilepsy. These attacks may precede by many years the occurrence of convulsions. There are cases of undoubted epilepsy which appear in one or more of the disturbances seen in migraine. There are good reasons for regarding some of these cases as sensory epilepsy, the convulsions commencing at a later period.

### Functional Heart Murmurs.

Dr. Arthur Foxwell, *Birmingham Med. Rev.* for December, argues strongly in favor of the view that the functional heart murmurs are due to dilatation and not to the condition or quality of the blood. His attention is directed mainly to the murmur found in the pulmonary area. He shows very clearly that the cause of this murmur is a dilated state of the conus arteriosus. This dilatation of the conus carries the origin of the pulmonary artery higher than its normal situation. This again shortens the artery and leads to a relaxed state of its walls. From this again arises dilatation of the vessel. The blood, passing from the dilated conus through the valvular opening into the shortened, dilated and curved pulmonary artery, produces fluid veins and eddies, which all authorities now admit to be the cause of murmurs. When the person stands, gravitation lowers the position of the heart; this straightens out the conus and artery, and reduces the dilatation. In this way the murmur is greatly reduced or abolished by the erect position. When the conus becomes dilated, it also presses against the chest walls, and this is a further factor in the production of the murmur as the conus becomes flattened by this pressure, and fluid veins and blood eddies result. Dr. Foxwell's paper is a valuable contribution to this part of our knowledge of heart affections; and is a worthy Bradshaw lecture and worthy of the Royal College of Physicians.

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## PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF J. CAVEN, H. B. ANDERSON AND J. AMYOT.

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### The Seat and the Development of Primary Pulmonary Tuberculosis.

Birch-Hirschfeld (*Deutsches Archiv für klinische Medicin*, Band lxiv.) presents an important contribution to the pathology of pulmonary tuberculosis. After a brief *résumé* of the historic development of the subject, he postulates his opinion regarding the primary development of the disease in the sentence, "Pul-

monary tuberculosis in its first stage is, as a rule, a mucous membrane tuberculosis located in a medium-sized apical bronchus." In proof of this theorem many data are brought forth. The anatomy of the bronchial tree is first discussed, as the thought suggested itself that the preference of the tuberculous infection of the bronchi of the apices might be based upon anatomic grounds. Birch-Hirschfeld succeeded in making some very beautiful bronchial casts, and adopts a new scheme of classifying the bronchi, which it is not necessary to reproduce here. The primary lesions are found especially in the branches of the third to the fifth order.

### **The Pathogenesis of Primary Bronchial Tuberculosis.**

Two points are to be considered: First, the disposition of the apices to primary tuberculosis; second, the perforation of the tuberculous lesion into the bronchial lumen. Regarding the seat of latent bronchial tuberculosis, Birch-Hirschfeld found that in thirty-four cases the right upper lobe was involved twenty-four times, the tuberculous focus being situated twenty-two times in the apical bronchus and only twice in the lower part of the upper lobe. Of twenty-one lesions situated high up in the lobe, twelve affected the apex itself, ten were situated from five to seven centimetres below the apex proper. It is noteworthy that both the apical and the sub-apical nodules seemed to prefer the posterior half of the lobe. It appears from this that the bronchial tree in the posterior part of the lung apex constitutes a favorable soil for the disposition of inhaled tubercle bacilli. In fifteen cases the left upper lobe was affected, all the areas being situated in the territory of the apical bronchus. It is scarcely proper from these small figures to draw any conclusion as to whether the left or the right lobe is the more often affected. Applying this to tuberculosis, we may conclude that it is not the increased deposition of bacilli in the apices, but more likely conditions favoring their remaining there that are chiefly concerned. The retention of tubercle bacilli in these parts is connected with mechanical conditions of respiration, especially with deficient expiratory movement, as it is the expiration which is principally concerned in the removal of foreign bodies from the air-passages.

For tuberculosis to develop in the lung it is not only necessary that the infectious material shall lodge in the bronchi that are favorably placed, but also that it shall multiply. The conditions for this are probably produced by pathologic processes that most readily occur in those bronchi in which ventilation by the respiratory movements is deficient. In the apical bronchi, secretions are easily retained and probably serve as culture media for the bacilli. The inflammation produced by

the bacilli is like that seen in other mucous membranes, and consists primarily, in the development of subepithelial tubercles which enlarge and break down and in time extend to the peribronchial tissues. The liquefaction of the caseous masses leads to the formation of small bronchiectatic cavities. The experimental investigations concerning the ways in which surface infection is produced have not yielded definite results. It is probable that slight erosions of the mucosa with imperfect regeneration of the epithelium favor the entrance of the bacilli. That the tuberculous infection demands a previous disease, in other words, that it is a secondary process, as is held by Hansemann, cannot be maintained. The intact bronchi do not offer, to be sure, a favorable seat for the entrance of tubercle bacilli; but whatever the predisposing causes are, they are merely accessory factors, and are constituted chiefly by mechanical conditions. In those rare cases in which primary bronchial tuberculosis is found in the larger branches, special factors are probably at work. The favorable termination of incipient bronchial tuberculosis is usually brought about by the obliteration of the bronchus above the lesion, with condensation, calcification, and fibroid change in the infected area beyond. The cause of the liquefaction of the tuberculous focus is not definitely established. Mechanical injuries and mixed infection may play a part. Everything should be done to prevent the liquefaction. Our efforts, however, can only be successful if the diagnosis of the disease is made early enough. The demonstration of the existence of a non-liquefied primary bronchial focus is not possible by means of sputum examination. A physical exploration may also fail. Whether the Röntgen ray will aid us, it is as yet too early to say.—*Univ. Med. Magazine.*

### The Bacteriology of the Accessory Sinuses of the Nose in Diphtheria and Scarlet Fever.

R. M. Pearce (*Journal of the Boston Society of the Medical Sciences*, March, 1899) says, with the exception of Wolff, who in 1895 published the results of his examinations of the accessory sinuses of the nose in diphtheria, little attention has been paid to inflammatory conditions of these cavities as the result of the acute infectious diseases of children.

This is probably due to the small number of *post-mortem* examinations in this class of cases, and also to the difficulty of reaching the cavities. They can only be reached by sawing through the base of the skull (after removing the brain) and forcibly separating its two halves.

Pearce has carried out this method in fifty cases of diphtheria and scarlet fever examined *post mortem* at the Boston City Hospital.

Thirty-nine of these were cases of diphtheria only, four were cases of scarlet fever only, and in the others the two diseases were coincident.

Of the entire 50 cases, inflammatory changes were found in 33. As would be expected, the antrum of Highmore was more frequently affected, the condition being bilateral in 23 and unilateral in 7. The sphenoidal sinuses were involved in 6 cases and the ethmoidal sinuses in 2. In most cases the exudate was purulent or seropurulent, but in a few was merely mucoid in character. The cases were almost exclusively among children, and the sinus disease was not suspected during life.

Bacteriological examinations were made in all cases. The diphtheria bacillus occurred in most cases, generally associated with the streptococcus pyogenes, the diplococcus lanceolatus, or the staphylococci.

Suppuration of the middle ear was very common in these cases, being present on both sides in twelve cases, and on one side only in six. The bacteriological examination of the ear yielded results very similar to those obtained in the examination of the sinuses.

The writer believes an infection of the antrum of Highmore, with diphtheria bacillus, to be the explanation of the persistence of the bacillus in cultures from the nose after all membrane has disappeared. The antrum drains slowly, and if once infected with diphtheria bacilli, cultures from the nose would be positive until drainage had ceased or the bacilli had died out.

That these acute processes may lead to chronic sinus disease the writer considers very probable.—*Amer. Jour. of Med. Science*, September, 1899.

### Notes on Some Experiments on the Cure of Anthrax.

The following are some brief notes (J. McGarvie Smith and J. A. Gunn, Sydney) summarising experiments on the cure of anthrax by means of serum from immune sheep, proving its curative properties to be greater (as far as we know) than has heretofore been accredited to it by other observers. Our experience proves that sheep can be cured eight hours after the injection of a dose of virulent anthrax sufficient under ordinary circumstances to kill the animal within thirty hours.

It follows that if one of the most susceptible animals to this disease can be so successfully treated, then we have every reason to believe that such treatment, if freely used in cases of anthrax in man, would be equally successful when used around the seat of infection in *wound anthrax* (the most common form here), while in some cases of *general anthrax* or in *woolsorters'* disease the injection of excessive quantities would materially increase the chances of recovery of the patient. But as man is

naturally more immune than sheep and as in a large majority of the cases of wound anthrax the disease remains localized for a considerable period relatively speaking, it may be found that a moderate dose injected around the seat of infection would be sufficient, but should a larger dose be required it could undoubtedly be used with impunity.

We will not occupy your space by detailing our work on this disease, work undertaken in the hope of finding a cure more certain and safe than what we must consider, notwithstanding the successes achieved by its means, the crude and unsatisfactory process of the use of an animal product such as serum; we still hope at no distant date to be able to produce in our laboratories a pure and perfect material for the cure of anthrax in man, that will bear the same relationship to the use of serum that our protective vaccine for anthrax bears to the present methods of inoculation for pleuro-pneumonia or tick fever in cattle.

Our experiments as far as they have gone seem to indicate:

1. That the injection within eight hours of infection of an adequate dose of serum of an immune sheep, that is, one that has been vaccinated against anthrax and the immunity of which has been subsequently proven by its perfect resistance to the injection of the virulent germ, is capable of effecting a cure for anthrax in sheep.

2. That the minimum doses requisite for sheep are 40 c.c. if used four hours after the injection of the one-tenth of a c.c. of a cultivation of virulent anthrax, 150 c.c. if used six hours afterwards, and 250 c.c. if used eight hours afterwards.

3. That if the initial dose is too small, after injections are of little value unless used frequently and in excessive quantities.

4. That as the injection of large quantities of the serum appears to have no ill effect on the animal, the doses quoted above might with advantage be largely increased.

We append notes of three experiments selected from the field tests carried out at our Borambola laboratory.

*Experiments No. 1.*—Ewe treated with virulent anthrax 5 p.m., 3rd June, 1899. Injected 40 c.c. of immune serum 4 hours afterwards. Temperatures: 103° at 4 hours, 105·4° at 18 hours, 105·6° at 46 hours, 104° at 58 hours, and 103° at 82 hours, normal afterwards. The sheep was subsequently kept under observation for 15 days and remained perfectly healthy.

Ewe inoculated with virulent anthrax 5 p.m., 3rd June, 1899. Injected 20 c.c. of immune serum 4 hours after, and subsequently injected 50 c.c. more at 42 hours. This sheep, as shown by the temperature scale, was brought by this treatment back to normal, but died of anthrax on the 12th day after inocula-

tion, showing that the initial dose was not sufficient nor the subsequent doses numerous and large enough. Temperatures:  $103^{\circ}$  at 4 hours,  $105.2^{\circ}$  at 18 hours,  $107^{\circ}$  at 46 hours,  $105^{\circ}$  at 58 hours, and  $103^{\circ}$  at 82 hours. Died on the 12th day.

*Experiments No. 2.*—Ewe inoculated 8 a.m., 17th June, 1899, with virulent anthrax. Injected 40 c.c. of immune serum 4 hours and 10 minutes after. Temperatures:  $103^{\circ}$  at 4 hours,  $104^{\circ}$  at 24 hours,  $104^{\circ}$  at 48 hours,  $104^{\circ}$  at 52 hours, and  $104^{\circ}$  at 72 hours; normal and healthy after this.

Ewe inoculated with virulent anthrax 8 a.m., 17th June, 1899. Injected 20 c.c. immune serum 4 hours after, 20 c.c. more at 23 hours, 20 more at 29 hours, 20 more at 33 hours, 20 more at 48 hours, 20 at 52 hours, 50 at 57 hours, and 50 at 78 hours, in all 220 c.c. This sheep showed the development of the fever more than once, but, though the initial dose was small, repeated subsequent doses effected a complete cure. Temperatures:  $103^{\circ}$  at 4 hours,  $105^{\circ}$  at 24 hours,  $105^{\circ}$  at 36 hours,  $104^{\circ}$  at 48 hours,  $105.6^{\circ}$  at 52 hours,  $104^{\circ}$  at 72 hours, afterwards normal.

Ewe inoculated with virulent anthrax 8 a.m., 17th June, 1899. Injected 40 c.c. immune serum 8 hours after, then 40 more at 23 hours, 40 at 33 hours, 40 at 48 hours, 40 at 53 hours, 50 at 58 hours, and 50 at 81 hours. This sheep died at 92 hours, showing that with the anthrax having a start of 8 hours in a sheep the initial and subsequent doses were not sufficiently large. Temperatures:  $103^{\circ}$  at 4 hours,  $106^{\circ}$  at 24 hours,  $105^{\circ}$  at 36 hours,  $105.6^{\circ}$  at 52 hours,  $104^{\circ}$  at 72 hours,  $106.4^{\circ}$  at 80 hours. Dead at 92 hours.

At the same time similar results were shown by another sheep treated with immune serum at 8 hours, and also in 2 treated at 12 hours. In all these the doses used were insufficient to cure.

*Experiments No. 3.*—Ewe treated with virulent anthrax 3 p.m., 22nd June, 1899. Injected 100 c.c. of immune serum 6 hours after, then 100 c.c. at 48 hours, 100 c.c. at 72 hours, and 50 c.c. at 89 hours, effecting complete recovery after strong development of anthrax fever. Temperatures:  $103^{\circ}$  at 4 hours,  $104^{\circ}$  at 24 hours,  $107^{\circ}$  at 72 hours,  $106^{\circ}$  at 89 hours, and  $104^{\circ}$  at 110 hours, afterwards normal.

Ewe inoculated with virulent anthrax 3 p.m., 22nd June, 1899. Injected 100 c.c. immune serum six hours after, then 100 c.c. at 48 hours, 50 c.c. at 72 hours, and 20 c.c. at 89 hours. This sheep developed marked fever, but recovered easily and well. Temperatures:  $130^{\circ}$  at 4 hours,  $104.6^{\circ}$  at 24 hours,  $105.6^{\circ}$  at 48 hours,  $104.6^{\circ}$  at 72 hours,  $103^{\circ}$  at 89 hours, afterwards normal.

Ewe inoculated with virulent anthrax 3 p.m., 22nd June,

1899. Injected 250 c.c. immune serum 8 hours after. This sheep received only the initial dose, and, though fever developed, this proved sufficient to effect a recovery. Temperatures: 103° at 4 hours, 104° at 24 hours, 105·6° at 48 hours, 104·6° at 72 hours, 103° at 89 hours, afterwards normal.

Another sheep in this experiment also received 250 c.c. 8 hours after inoculation with virulent anthrax, but succumbed, thus showing that the difference in individual constitutions came into account and the necessity for a larger dose to ensure a cure.

These notes exhibit some of the most striking of our results, and have been confirmed by the general course of numerous other tests. In all cases control sheep were inoculated with the virulent germs at the same time as the test sheep and succumbed at the usual period after infection.—*The Australasian Medical Gazette*.

### The Blood in Hysteria and Neuroses.

Luxenburg (*Centralblatt f. Inn. Med.*, 1899, No. 21) reports a series of examinations in forty cases. The examinations included counts of the corpuscles and estimations of hemoglobin, fibrin, water, and total solids. The results showed: 1. That in contradiction to the usual view, and notwithstanding the anemic appearance so frequent in patients with functional neuroses, there was in these no hydremia. 2. The red blood-corpuscles were often considerably increased, considered by the author to be the result of vasomotor disturbance at the time of the examination. 3. The leucocytes were often subnormal. 4. The fibrin often showed marked changes.—*Amer. Jour. of Med. Science*, November, 1899.

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## THERAPEUTICS.

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IN CHARGE OF GRAHAM CHAMBERS AND J. T. FOTHERINGHAM.

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### Constipation in Bottle-fed Infants.

In constipated bottle-fed infants the fat should be increased to at least 4 per cent., regular habits taught and a small quantity of orange-juice or stewed prunes administered daily. The suppository of soap or gluten or waxed paper inserted into the rectum at the same hour every day is very effective in promoting regularity of the bowels. Massage, both general and local, is often of the greatest service. Drugs should be avoided as much as possible. Cod-liver oil and the sweet preparations of malt are often of value.—Editorial, *Pediatrics*, November 15th, 1899.

**Resorcin in Eczema.**

The beneficial influence of resorcin is most markedly apparent in eczemas, especially eczema seborrheicum; when resorcin is combined with alcohol, in the proportion of 2 drachms to 4 fluidounces, respectively, and applied thoroughly to the scalp by means of a dropper, the cure of this troublesome scalp affection will be thorough and satisfactory.—C. H. Powell, in *Merck's Archives*, November, 1899.

**Paraform for Warts.**

Mense (*Derm. Centralblatt*, No. 7, 1899) states that paraform (paraform-aldehyd, triformal) is an excellent caustic for warts. He prescribes:

Paraform..... 3 parts  
Collodion..... 27 "

Sig: To be applied thrice daily.—*Med. Rev. of Rev.*

**Poisoning by the Disulphones.**

Horatio C. Wood, jun., of Philadelphia, has a very useful article on this subject in *Merck's Archives* for November, 1899, one on which the profession at large, from lack of opportunities of observation, is not yet properly informed. It is found that of the disulphones only those containing ethyl radials have power as hypnotics, and that this power is in direct proportion to the number of ethyl radials, sulphonal having two, trional three, and tetronal, for some reason as yet practically unused, four. We are all familiar with the greater rapidity of action of trional than of sulphonal. Poisoning by these drugs is either acute or chronic. The latter is much the more dangerous because more insidious, and because usually hopeless before it is recognized. Acute poisoning, on the other hand, unless due to a hopeless but previously unknown idiosyncrasy, is usually easily overcome by free elimination and stimulation, the poison being a depressant one like the coal-tar antipyretics. Our own experience with trional and sulphonal is that idiosyncrasy to these drugs is much commoner than to any other class in ordinary use. Remarkable instances are given of both great susceptibility and of the reverse. Thus in one case 30 grains of sulphonal caused the death of an adult female after forty hours of sleep from which she could not be aroused, while in another case a boy of fifteen years took more than three ounces of sulphonal and after five days and nights of sleep awoke but little the worse.

In chronic poisoning, the main danger arises as already stated from the insidiousness of the symptoms, which are often attributed to the disorder, usually neurasthenia with insomnia, for which

the drug is given. This insidiousness makes it, as Dr. Wood points out, peculiarly ill-advised for a physician to allow a patient to go on repeating his prescription without supervision, not from the risk of habit-formation, as in other hypnotics, but for fear of chronic poisoning. Prophylaxis during the use of sulphonal is very important, the main point being absolute cessation for at least a week, with free clearing out of the bowels, in which, from the insolubility of the drug, unsuspected stores of it may be lying, especially if constipation, as is the rule, is a feature in the case. For this work, if absolutely necessary, small doses of morphine, with hyoscine, or chloral, may take its place.

During the course of the neurasthenia, the early symptoms of poisoning, such as nausea, general weakness, and alternations of constipation with a light watery diarrhea, are very apt to attract no attention, till as Dr. Wood says, "the patient assumes, with the suddenness of a thunder-clap the aspect of a dying woman."

As to chronic cases, later symptoms are paresis of varying grades, sometimes rather general, but usually confined to small groups of muscles; often ataxia, sometimes very marked, of both legs and arms. The digestive system shows more advanced signs of disorder, vomiting, colicky epigastric pain, and very obstinate constipation. And the most certain sign is the red urine, after which, though it may be the first sign noticed, recovery is rare. Of twenty reported cases of sulphonal poisoning, only three recovered, and of nine trional cases three died. The "port-wine urine" owes its color to the presence of hematorporphyrin, "probably a derivative of hematin of high acidity," and is later on albuminous.

Such cases must be promptly treated by, first, the withdrawal of the drug; second, free purgation, better with sodium sulphate; third, Müller's treatment with alkalies, suggested to him by the high acidity of the urine. His chief reliance was placed upon sod. bicarb., but the potash salts are known to alkalinize the urine more quickly, and any other antacid, as magnesium carbonate, may be used. An essential, too, is the use of large quantities of water, by enteroclysis, interstitial injections, and by the stomach.

J. T. F.

### Urotropin.

From experience and observations on the therapeutic action and effect of urotropin in diseases of the genito-urinary tract, the essential points may be summarized, in brief, as follows:

1. A urinary sterilizer, antiseptic, and acidifier—prompt and reliable in action—moderate in dose, which, if adhered to, render it both non-toxic and non-irritating to all parts of the animal economy.

2. In virtue of its peculiar affinity for the urine, into which it passes unchanged, and where it parts with formaldehyde. it is apparent that its action in genito-urinary lesions is likely to be complete and certain.

3. Its decisive and lasting effect, and especially its comparative singleness of action—which latter is a most desirable property—should give it a place in the list of medicinal specifics.

4. From the observations reported thus far, urotropin has appeared to be most frequently indicated in chronic diseases, where it has produced exceptionally good results.

5. In personal experience the diuretic action of the drug was not marked enough to render it deserving of claim to such a virtue.—J. M. Thompson, in *Boston Med. and Surg. Journal*, November 16th, 1899.

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## OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD,  
H. C. SCADDING AND K. C. McILWRAITH.

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### “The Uterus Again.”

Under this caption Fish (*Annals of Gynec. and Pediatrics*, March, 1899) gives his reason why the uterus should not be sacrificed, if possible to retain it. He would leave the uterus: 1. Because it is an important sexual organ in its natural site, and consequently not in the way of any other pelvic organ. 2. Because it preserves the vaginal vault, and, when *in suspensio*, maintains the contour and natural length of the vagina. 3. Because it precludes the possibility of vaginal hernia, prevents prolapsus vaginae, and delays atrophy of the vagina. 4. Because it minimizes nervous shock and depressing mental manifestations. 5. Because it maintains the pelvic diaphragm and the anatomical geography of the pelvic contents. 6. Because in the event of successful ovarian transplantation it might be reinstated as an organ of procreation.—*Internat. Med. Mag.*

### The Value of Posture in the Treatment of Occipito Posterior.

Green (*Boston Med. and Surg. Jour.*, Vol. CXL., No. 21) states that in the early practice he was struck with the posture assumed during the first stage by many dispensary patients of kneeling by the bedside with the body forward over the bed and resting on the arms. This position brings the anterior wall of the uterus lowermost, and in an unengaged occipito-posterior position the back of the fetus must, by force of gravity, rotate on its long axis and become dependent. He has frequently

confirmed this change in position of the fetus upon this posture being employed. If the head is pocketed in the inlet, he advocates at first the knee-chest posture, followed by the kneeling position. If the head has passed the brim, rotation is greatly favored by the latero-prone posture, the patient lying on the side toward which the occiput should rotate. The kneeling posture has the advantage of being a comfortable one for the patient, and the latero-prone position is also easily taken during the second stage.—*Internat. Med. Mag.*

### Omphalotripsy.

Porak (*La Revue Med.*, May 31st, 1899) reports that he has reduced infantile mortality from ten to three per cent. since he has adopted forcipressure in the treatment of the cord instead of the ligature. Umbilical infection is far more prevalent than is generally understood. He uses a wide crushing forceps which flattens out the cord to the skin level. The result is a rapid desiccation.—*Internat. Med. Mag.*

### Diet during Pregnancy as a Preventive of Dystocia, and for Determination of Sex.

Schenk, of Vienna, and Prochownick, of Hamburg (Préle, *Internat. Med. Mag.*, July, 1899), have designed systems of diet to be used during pregnancy, one for the object of controlling sex, the other to control size of fetus at term. Schenk is widely known, while Prochownick is almost unheard of. The systems while used for different ends are alike in using highly nitrogenous food.

Schenk's diet is used in the early months, Prochownick's in the late months of pregnancy. Prochownick's object is a practical one, to avoid premature induction of labor in narrow pelvis. The idea was by modifying the nutrition of the fetus, labor might go to term, the decrease in weight bringing the pelvis and fetal diameters into something near normal relations. It is not intended as a starvation diet. No food is denied that is essential, but the diet keeps off an excess of weight of liquids and fats in the fetus, present, as a rule, but not absolutely necessary.

Premature induction of labor is generally condemned on account of great mortality to the child. If then P.'s diet solves the problem in a large proportion of cases it should be popularized.

There have been forty-seven cases reported treated by the method (not a mother or child was lost).

P.'s first attempt was a V-para. The previous four deliveries ended in perforation, version, artificial premature delivery

(twice). Every child died. At the fifth pregnancy he commenced the diet about seven weeks after term. The diet was as follows:

Morning. Small cup of coffee and 6 draclums of Zwieback.

Noon. Any kind of meat, eggs, fish with very little sauce, green vegetables with fat added, salad, cheese.

Evening. As above with the addition of 1½ ounces bread and as much butter as desired.

To be entirely avoided: Water, soups, potatoes, cereals, sugar, beer.

Fluids per day limited to 12 to 15 ounces red or Moselle wine.

Confinement September 20th, 1897. Breech presentation; easy labor; child female; weight 5 pounds; length 50½ cm.; lean; bones firm, skull bones hard, yet freely movable. No lanugo hair, but long hair on head. Panniculus adiposus everywhere slightly developed, although the osseous system had not suffered. Head circumference 32.8 cm., long diameter 10 cm., transverse 8.2 cm., large fontanelle, breadth of shoulders 11.4 cm. Child lived and thrived on bottle, no rickets.

Two other cases are described, with like favorable results. In these cases the amount of amniotic fluid was small. He emphasized the fact of the extraordinary capacity of the skull-bones for moulding.

P. feels that while he has had so little material the result has been so satisfactory, that he is satisfied he has discovered a valuable means of avoiding premature artificial delivery. P.'s diet, is of course, a hardship in the way of self-denial of appetite, especially liquids, so that if patient can be in an institution where the physician can control the diet more certain results can be assured.—*St. Paul Med. Jour.*

### Ovarian Pregnancy.

Mlle. Van Tussenbroeck (*Gaz. Hebdom. de Méd.*, October 19th, p. 1008). A woman aged 35, after four normal pregnancies fainted two weeks after a period. She was pulseless, and the abdomen was distended and painful. Ruptured ectopic gestation was diagnosed. The abdomen was opened by Professor Kouwer, and found full of blood and clots. The uterus was slightly enlarged, the appendages on the left side and the right tube were normal, the right ovary presented a tumor as large as a filbert. The right ovary and tube were removed. Shreds of decidua were expelled after the operation.

The surface of the ovarian tumor was smooth, with the exception of a perforation through which reddish fringes appeared. Sections showed it to consist of an ovisac containing an embryo 12 mm. in length. The tube was unaffected, and

the fimbria inserted, quite apart from the affected Graefian follicle, the walls of which were absolutely similar to those of a corpus luteum. The fetal tissues were identical with those in a uterine pregnancy.—*The Med. Review.*

#### **Hydatid Mole in a Virgin: Membranous Dysmenorrhea.**

Rock (*Bull. de la Soc. Belge de Gyn. et d'Obst.*) relates the case of a child aged 12½, well cared for, and living under conditions which rendered her virginity above suspicion. Two months after her twelfth birthday the first period occurred. Clots were passed without pain. At the second period there was pain, and a clot was passed. This clot was covered with a white membrane, forming a perfect cast of the uterus. On microscopical examination the cast proved to be endometrium, with uterine glands and ciliated epithelium. Thus already the child suffered from membranous dysmenorrhea. The phenomenon was repeated at the third period. The fourth was extremely painful. There was slight show for three days, then a typical hydatid mole was expelled. Its base measured over ¾ in. It was made up of vesicles arranged like rows of beads; each vesicle was full of a transparent serosity, its wall was composed of loose fibro-cellular tissue with many veins. The vesicles varied in size, the smallest were of the dimensions of a pin's head, the largest as big as a pea. The next period, and all that have succeeded, have been normal; the child has been watched ever since the expulsion of the mole four years ago.

The writer suspects some relation between the membranous dysmenorrhea and the mole. A piece of the diseased endometrium or menstrual decidua may have remained behind and undergone a pseudo-placental change. Jacobs has already asserted that the hydatidiform mole may develop independently of gestation, and Bock's case, in his opinion, proves that theory. Keiffer suspects that there may be more than one variety of hydatidiform mole.—*The Med. Review.*

#### **A Case of Annular Separation of the Cervix during Labor.**

Julius Sachs (*Philadelphia Med. Jour.*, January 14th, 1899) was called to see a primipara in labor. Forceps had been applied three times, under chloroform, but the head could not be extracted. He considered the head impacted in the pelvis. Before applying the forceps the writer wished to make a thorough digital examination. On introducing the fingers into the vagina, a lump of soft tissue was felt, which proved to be the amputated cervix, two inches wide, and twelve inches in circumference, hanging to the uterus by about half an inch of tissue. This point of attachment was severed with but slight loss of blood. Forceps were then applied and a living child extracted. An

adherent placenta was removed, the uterus washed out with a hot bichloride solution (1 to 5000) and the vagina packed with iodoform gauze. To avoid infection the bladder was emptied by the catheter until the ninth day, and the patient was out of bed the next day. As the attending physician was a careful and experienced electrician, it is probable that the action was due to the pressure of the occiput against the symphysis on the one hand, and to the pulling down of the head by the forceps on the other.—*Univ. Med. Mag.*

### The Therapeutics of Salipyrin in Gynecology.

Beuttner (*Centralblatt für Gynäkologie*, No. 37, 1899) reports the results of his experiments on rabbits and frogs to determine the therapeutic influence of salipyrin. He also considers the experience of other authors with this drug and its indications.

Salipyrin, he believes, is indicated as follows:

1. In menorrhagia (with or without disease of the adnexa).
2. In metrorrhagia (with or without disease of the adnexa), when not due to carcinomatous processes, large tumors, labor, or abortion.
3. In climacteric hemorrhages.
4. In hemorrhage after labor and abortion (endometritis post-abortion).
5. In threatened abortion.
6. In dysmenorrhea.
7. In uterine disturbances, which are neuralgic or appear periodically; also in all menstrual disturbances, when no organic disease of the uterus is present.
8. In premenstrual and menstrual psychological depression.—*Univ. Med. Mag.*

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## PEDIATRICS.

IN CHARGE OF ALLEN BAINES, W. J. GREIG, AND W. B. THISTLE.

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### The Treatment of Diphtheria.

A valuable report on this extremely important subject by J. Jefferis Turner, M.D. (Lond.), of Brisbane, Australia, appears in the *Brit. Med. Jour.* of December 30th, 1899. Dr. Turner reports a marvellous improvement since the adoption of antitoxin treatment, believing that in this instance clinical experience is in complete accord with laboratory results. While the use of antitoxin is very general in Australia, yet there are many who do not seem to have recognized its value. The writer expresses astonishment that this should exist to so great an extent among the profession in England. The reduction in

the mortality in London is almost confined to the hospitals, because but few cases in private practice receive antitoxin.

In Australia the contrary is the case, but Dr. Turner believes that much better results could be obtained if in severe or in late cases a much larger dose were administered. In mild and early cases a small dose of 600 or 1,000 units may suffice, but in advanced or desperate cases many practitioners are satisfied to give 1,000 or 1,500 units instead of 4,000, 6,000 or even 8,000 units.

The records of the Brisbane Children's Hospital have been very carefully kept for the last ten years, so that comparison of results can be fairly instituted. During the latter portion of the antitoxin period larger doses have been injected with improvement as a result. Severe cases receive 4,000 units. Still later this dose has been increased to 6,000, 8,000 and even 14,000.

The following records attest the claims put forward by the writer: Pre-antitoxin period in Brisbane Hospital—Total, 303 cases; 128 deaths, 42 per cent. Antitoxin period: Small doses—total, 40 cases; 10 deaths, 25 per cent.; Large doses—total, 277 cases; 30 death, 10.8 per cent.

### **Tumor of Pons with Crossed Paralysis.**

A case of tumor of the pons was presented at the meeting of the New York Academy of Medicine by Dr. Henry Koplick. A brief report of the case appears in the Society Proceedings in the *Arch. of Pediatrics* for January, 1900. The patient, a boy of five years, had always a somewhat ataxic gait. Headache began about two months ago, and coincidentally the headache became more severe.

Examination showed complete right facial paralysis, with abducens paralysis and complete hemiplegia and exaggeration of reflexes on the left side. Within the past two weeks paresis has also made its appearance on the right side with increase of reflexes. The mental state is not quite normal. Family history was free from syphilis and tuberculosis.

Because of the unusual size of the boy for his age, it was thought that the growth might possibly press upon the pineal gland.

### **A Case of Bell's Paralysis accompanied by Herpes Zoster.**

At the Philadelphia Pediatric Society meeting, October 20th, 1899, Dr. Palsi exhibited a case of facial paralysis with herpes zoster. The patient, a boy of ten, about three weeks before had complained of pain in and about the right ear and right side of the face. Three days after an herpetic eruption appeared along the branches of the facial nerve, back of the ear, over the cheek, and especially marked along the lower part of the face. At the same time the right side of the face was

puffy and drooped, the mouth was drawn to the left and he could not close the left eye. Later the eruption had almost disappeared, but the right side of the face is still paralyzed. The mouth is drawn to the left and he can neither close the right eye nor wrinkle the brow over the eye.

The feature of interest in the case is the association of herpes zoster along with inflammation in a purely motor nerve. While it is true that zoster usually is found with sensory or mixed nerves, yet recently a number of cases have been reported of zoster with motor neuritis.

It would seem probable that in many cases sensory fibres are transmitted through the seventh nerve.

Dr. John K. Mitchell, in the discussion, instanced a case of tic douloureux in which the second division of the fifth nerve was completely removed, and yet sensation was preserved in the area of distribution to the face immediately after the operation. This seemed to show incorporation of sensory fibres with the facial as extremely probable. Dr. Eshner pointed out as further evidence of sensory fibres in the seventh nerve the frequency with which patients with Bell's paralysis complain of numbness and show impairment of sensibility. Dr. Schromberg thought the sensory fibres had little to do with the condition; it is a question of involvement of the trophic fibres in the nerve trunk.—*Arch. of Pediatrics*, June, 1900.

### **Meningitis.**

An exceedingly able paper on this subject appears in the *Brit. Med. Jour.* of November 15th, 1899, by James Barr, M.D., of Liverpool. The writer, on a former occasion, published a report of thirteen cases of meningitis with but one death. Since then he has had 26 additional cases with 10 deaths. Three died within 24 hours of admission, one within 48 hours, two within 72 hours, one within 96 hours. Three of the deaths were from tuberculous meningitis and one from cerebro-spinal fever. The average age of the patients was fifteen years.

After discussing varieties of the disease and etiology generally, and entering exhaustively into the consideration of symptoms, the writer concludes his paper with a lengthy and thoughtful chapter on treatment. A record of 39 cases of meningitis with a mortality of 11 certainly should lend weight to Dr. Barr's views on treatment. Apart from surgical procedures the author believes the following methods of treatment are applicable to tuberculous and all forms of simple meningitis, even including cerebro-spinal fever. There is no disease in which antipyretic treatment needs to be more efficiently carried out. The method he prefers is the cap of Leiter's tubing with running cold water. This not only lowers the general temperature of the body but also moderates the circulation within

the cranium. If the cap is not sufficient he applies cold compresses to the abdomen. Cold applied to the splanchnic area raises the general blood pressure, but this has a beneficial effect on the cerebral circulation by heightening the velocity without necessarily augmenting the transudation from the vessels. The author has no faith in the new antipyretic drugs. In simple and even in tuberculous meningitis he prescribes almost as a routine treatment internal antiseptics, preferring salicylic acid, salol or benzo-naphthol. The bowels should be kept open throughout the disease, and of all agents calomel is given the first place for this purpose, followed by enemata. Hiccough is best relieved by hypodermic injections of morphia.

To relieve cerebral excitement, sleeplessness, delirium and general restlessness he has arrived at the conclusion that there is no drug to equal opium very freely administered. It is not a specific for meningitis or anything else, but to it more than anything else the author attributes his success. It puts the patient in the most favorable position for getting well, and renders his brain less susceptible or more resistant to the storm which is passing over it. The author's views on this question have gradually undergone a change. At first he used Dover's powder, salicylic acid, opium and calomel. Now he uses almost exclusively hypodermic injections of morphine. He asserts that it is most difficult to poison with opium a patient suffering from meningitis. There is more danger in using it sparingly rather than freely. In one of his most scientific cases, the patient, an adult, received hypodermically each day for a fortnight, six grains of morphine. As the patient began to improve the dose was lessened, but with a too rapid diminution came a relapse, which was cured by return to a larger dose. In the case of one patient who weighed only 28 pounds the quantity of morphine was increased gradually until 3 grains a day was reached. The only limit should be the quantity necessary to maintain the patient constantly under the influence of the drug. In the case of children over seven years,  $\frac{1}{2}$  of a grain of morphine is the initial dose, every four hours, quantity and frequency increased as desired. In children usually 2 grains a day is found sufficient: in adults 3, 4, 5, or 6 grains daily. If much vomiting, atropine may be combined, but if there is elevation of temperature it had better be left out. In the late stage, when there is evidence of ventricular effusion, atropine should be given rather freely. The earlier treatment is commenced the better. Absolute rest is of the utmost importance—a water-bed where possible; absolute quiet, even contact of bedclothes in handling. Avoidance of stimuli of all kinds. Apart from syphilitic cases the author sees no ground for the employment of iodide of potassium and mercury so frequently met with.

## Book Reviews.

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*Notes on the Modern Treatment of Fractures.* By JOHN B. ROBERTS, A.M., M.D., Professor of Surgery in the Philadelphia Polyclinic, Mütter Lecturer on Surgical Pathology of the College of Physicians of Philadelphia. 162 pages, 16mo, with 39 illustrations. New York: D. Appleton & Co. Toronto: Geo. N. Morang & Co. 1899. Price, \$1.50.

The book is compiled from a series of essays by the author, now collected and arranged, not as an exhaustive work on all the fractures, but containing a number of useful hints and *cautions*, and emphasizing certain points. The author seeks to shake off much of the old routine; he advocates cutting down—when necessary, and, as he insists, not otherwise—and combats the undue fear of converting a closed into an open fracture-wound, undue under our present aseptic and antiseptic technique (which we dislike to see spelled as by our American brethren, “technic,” when used as a noun). He thinks this fear prevails to a mischievous extent, especially in allowing cranial injuries to set up pathological changes in the endocranium both immediate and remote in their effects. He gives a lengthy “Syllabus of a Treatment of Fractures [and suspected fractures?] of the Cranium,” which space excludes, but which covers seventeen possible combinations. Advantages gained by cutting down on fractures (of various bones) where necessary he enumerates: 1, 2, 3. Exact line of separation may be seen, and accurate coaptation fitly made. 4. Pegs, nails, screws, bone suture or ferules may be applied—although he advocates the use of nails through the skin when necessary, the nails being removed when union has taken place. 5. Avoidance of pain by letting out clots and effusion; and 6, Lessening motion. 7. Avoidance of fat embolism by accurate apposition; and 8, of ankylosis from inaccurate adjustment. 9. Opportunity of seeing wounds of tendons, muscles and other soft structures. 10. More rapid union. 11. Avoidance of change of axis and consequent disability. 12, 13 deal with the cutting down in cases of refracture and old luxations, and we are sure most of us have met with cases where we have had to cut down after using a good deal of force, when we would have saved some bruising and straining if we had hesitated less about making an open wound. The author speaks of the advantage in treatment from division of the *tendo Achillis* in certain cases, and hints at similar measures with the *ilio-psoas*, *quadriceps extensor*, and *sterno-cleido-mastoid triceps*, though not speaking from experience in these. He devotes much space to Colles’s fracture and the avoidance of

deformity, and alludes to a common error of forgetting to preserve the concavity on the anterior lower end of the radius. He appeals to the ingenuity of the surgeon in modifying his splint to the needs of the individual case, as against rigid adherence to splints with great names. We see that the excellent device of the hoop-iron splint in fractures of the lumerus, which is associated with the name of our lamented friend and preceptor, the late Dr. W. T. Aikins, is not yet as widely known as it deserves to be, and as we hope it will be. We would be glad to refer to the author's notes on some other fractures, but space will not permit. This book is a useful, well-gotten-up contribution to surgical treatment.

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*Saunders' American Year-Book of Medicine and Surgery.*

In response to a wide-spread demand from the medical profession, the publisher of the "American Year-Book of Medicine and Surgery" has decided to issue that well-known work in two volumes, Vol. I. treating of general medicine, Vol. II. of general surgery. Each volume will be complete in itself, and the work will be sold either separately or in sets. Prices per volume: Cloth, \$3.00 net; half morocco, \$3.75 net.

The quantity of matter under review has become so immense that its inclusion in one volume would make a book of unwieldy proportions; but by thus dividing the matter, two volumes will be made of about six hundred pages each—an ideal size for convenience of handling and reference. Each volume will be complete in itself, will be paged separately, and will have its own index.

This division is made in such a way as to appeal to physicians from a class standpoint, one volume being distinctly medical, and the other distinctly surgical. The apportionment of subjects in each volume is as follows:

*Medical:* General Medicine, Pediatrics, Pathology, Nervous and Mental Diseases, Cutaneous Medicine, etc., *Materia Medica*, Physiology, Legal Medicine, Hygiene, Chemistry, etc. *Surgical:* General Surgery, Obstetrics, Gynecology, Orthopedic Surgery, Ophthalmology, Otology, Laryngology and Rhinology, Anatomy.

This arrangement has a two-fold advantage. To the physician who uses the entire book, it offers an increased amount of matter in the most convenient form for easy consultation, and without any increase in price; while the man who wants either the medical or the surgical section alone secures the complete consideration of his branch without the necessity of purchasing matter for which he has no use. W. B. Saunders, 925 Walnut Street, Philadelphia.

*Operative Surgery.* By JOSEPH D. BRYANT, M.D., Professor of the Principle, and Practice of Surgery, Operative and Electrical Surgery, University and Bellevue Hospital Medical College; Visiting Surgeon to Bellevue and St. Vincent's Hospitals; Consulting Surgeon to the Hospital for Ruptured and Crippled, Woman's Hospital, and Manhattan State Hospital for Insane, etc., etc. Volume I. General Principles, Anæsthetics, Antiseptics, Control of Hemorrhage, Treatment of Operative Wounds, Ligature of Arteries, Operations on Veins, Capillaries, Nervous System, Tendons, Ligaments, etc., etc. Seven hundred and forty-nine illustrations, 50 colored; 590 pages. New York: D. Appleton & Co.

It is about thirteen years since the previous issue of this admirable work was written. It is superfluous to say that the present edition therefore contains much that is new—in fact, excepting for operative technique, the surgery of ten years ago is obsolete. This volume is so admirably written that reading it is a pleasure, and the descriptions of operative detail so concise that to find fault would be next to impossible. The tenets of surgery should be thoroughly mastered before one can expect to do scientific surgery. They are so ably put forward in this work that for their elementary purpose alone the work should be carefully read by all aspiring surgeons. The early chapters are devoted to the general consideration of the operative procedure, the anesthetic to use, instruments in general, the control of hemorrhage, the preparation of ligatures, etc., all of these matters are carefully gone into. The chapter on Ligature of Arteries is beautifully illustrated and the vessels shown in colors with their anatomical relations in section. The chapter on Operations on the Nervous System is particularly complete. The latest advances in this branch of surgery are all elaborated. It is here that the author shows to the best advantage because of the lucid manner in which the technique is presented. We could go on all through this work and praise it, but suffice it to say that we thoroughly recommend it to all who practise surgery. The typography, illustrations and binding are all of the most excellent type, and the publishers have fully maintained their reputation.

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LEA'S SERIES OF POCKET TEXT-BOOKS.—The volumes of this series will hereafter be bound in red cloth, heavy bevelled edge boards, and also in flexible red leather with round corners and with margins trimmed to facilitate carrying in the pocket. The leather bound books will cost 50 cents more than the cloth bound.

## Selections.

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### Floating Kidney—Nephrorrhaphy.

Lucas-Championniere (*L'abeille medicale*, October 7th, 1899) says that up to comparatively recent times floating kidney was operated upon only by accident, through error of diagnosis. In removing the kidney entire, the patient was subjected to various unpleasant or serious consequences, so that nephrorrhaphy was substituted for nephrectomy.

However, floating kidney is not necessarily a surgical affection; there is both a medical and surgical floating kidney. Gleneard claims that the former is entirely distinct from and never passes into the latter. He gives very elaborate rules for making a diagnosis of this so-called medical type of the disease. The principal distinction between the medical and surgical kidney is that the former never leaves the hypochondrium, and is always in relation to the diaphragm. How does a kidney become displaced? While its attachments are numerous there are none of them very strong. The author does not believe that movable kidney is a part of general enteroptosis, because when the kidney is fixed by operation the other abdominal symptoms vanish. We know a number of predisposing causes, such as the right kidney, the female sex, child-bearing, rapid emaciation, etc., and we know that a fall is often an exciting cause. Many cases are doubtless hereditary.

With regard to symptoms, Tuffer gives pain, digestive disturbances and neurasthenia. The author does not attach much importance to the two latter as they often persist after operation. The pain, however, is a most important symptom, as it disappears after permanent, or even temporary, fixation of the kidney (as by a binder). Of renal symptoms proper, such as refer to the function of the kidney, there is seldom any evidence. Diagnostic procedures are, therefore, restricted to extremely careful palpation, possibly under chloroform.

Left to itself this condition leads up to a cachexia, or to marked dyspeptic disturbances. The indications for treatment are to replace the kidney. In the medical variety abdominal binders, etc., suffice for the attainment of this end. Many special varieties have been devised, some with compresses, etc. The relief is certain, but the retention apparatus is disagreeable to the patient.

In the surgical floating kidney nephrorrhaphy is indicated. The operation was first done in 1880 by attaching the kidney to the twelfth rib. Next, the operation was modified by resecting a portion of rib and even of the kidney itself, for the sake of better coaptation. The author denudes the kidney and

passes his thread through the parenchyma of the gland, using catgut for the purpose. The risk of destruction of a portion of the organ is great. The organ should be attached to its out, lower portion. The incision should be made beneath the twelfth rib. The operation is essentially simple, and in exposing the kidney it is readily recognized by its reddish color. If the kidney is covered by peritoneum the success of the operation need not be jeopardized. When the kidney is replaced it is transfixed by Reverdin's needle. Three double ligatures are passed through the organ. The kidney is then sutured to muscles or aponeuroses. When the outer wound is closed a drain is left *in situ*.

Difficulties may attend the operation. The kidney may be hard to find, and at times we may have considerable hemorrhage. The author has a record of twenty-six cases of nephrorrhaphy without a single failure. In summing up he regards nephrorrhaphy as a most excellent operation, one which effects a radical cure and is easy of performance. A small part of the organ which has been injured by the operation necessarily undergoes sclerosis.

#### **Discharge of Cerebro-spinal Fluid after Opening the Mastoid Process.**

Lucæ (*Berlin klin. Wochenschr.*, October 2nd, 1899) relates an entirely unique case in which a broad opening of the mastoid process for caries, with exposure of the dura, was attended by profuse discharge of the cerebro-spinal fluid which persisted for five weeks and then completely healed. The most singular feature of the case was the fact that no cerebral complications set in, although hourly expected. The pulse remained unaffected, and there was no rise of temperature nor vertigo. The discharge was so abundant that the dressings had to be changed twice daily for a period of nineteen days.

The patient was a boy seventeen years of age who had suffered six months earlier with right-sided otitis media, followed by a subdural abscess which had been evacuated after trepanation of the mastoid. The operation would have healed, but a purulent ear discharge had persisted.

#### **Diphtheria Poison as it Affects the Heart.**

After a series of experiments on animals Dr. Rolly (*Arch. für Path. und Pharmak.*) finds that the fall in blood pressure is due to paralysis of the vaso-motor centre, and to paralysis of the heart. The action of the heart is direct and independent of the nervous system in warm-blooded animals. There is a more or less distinct period of latency before paralysis occurs. Thus when the poison is injected directly, or when lethal blood

is transfused, the action upon the isolated normal heart of a rabbit takes place only after a latent period. If the heart is washed out with normal blood before the symptoms appear, or at the onset of toxic effect, the poisonous action asserts itself just the same. This leads to the opinion that the poison attacks the heart, and appears to be stored up in the heart muscle until its complete action is manifest.—*Medical Record.*

### **The Use of Saline Transfusion for Burns and Shock.**

It is not many years since the employment of ordinary saline solutions, hypodermically or intravenously, was first urged upon the general practitioner by those who had had experience in this line of treatment. Each year that has passed since these early recommendations has served to emphasize the great value of this therapeutic measure, and our columns have again and again contained reports of cases of infectious diseases, of cases of toxemia like puerperal eclampsia, uremia, and diabetic coma, in which excellent results have followed this method of treatment.

In the spring of 1898 the writer of this editorial also called attention to the results which had been obtained by Tommaseli in the treatment of severe burns by hypodermoclysis and intravenous injections. Tommaseli believed, from clinical observation and experiment, that a large part of the lethal influence of burns depended upon toxemia, and on putting his belief to the practical test he found that artificial saline injections saved life. So, too, in this country Bardeen, as a result of a histological study of the tissues of several children who had died from burns, came to the conclusion that toxemia was an important factor in causing death, and his results indorsed the proposition of Tommaseli in regard to this method of treatment. Even if the toxemic condition is not directly improved by saline injections into the subcutaneous tissues or veins, there is still another one in which this method of treatment may be of great good, in that surgical shock is nearly always present as a result of severe burns and scalds, and we have reasons, both theoretical and practical, for the belief that in shock a condition of profound relaxation of the blood-vessels exists, so that arterial pressure is very low and the vital centres are not properly supplied with blood.

While we know that intravenous injection does not necessarily raise blood-pressure, we also know that this method of treatment is capable of readjusting the circulation to such an extent that the evil manifestations of vasomotor paralysis are set aside. It seems to us, therefore, that in treating cases of severe burns or scalds, this method of procedure should not be ignored, but should be actively employed, since it can do no harm, and may do much good.—*Therapeutic Gazette.*