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Original Communications.

OPERATIVE TREATMENT OF THE PROSTATE.*

BY JAMES BELL, M.D., MONTREAL.

Since Mr. McGill in 1888 introduced the operation of removing a part or the whole of the prostate, a rapid and rational evolution has taken place in the technique of the operation, until to-day we are told by eminent surgeons that the operative treatment of the prostate is as safe and satisfactory as the operative treatment of the vermiform appendix. I cannot, from my own personal experience, subscribe to this statement, but even the most sceptical or the most conservative surgeon cannot deny that the operative treatment of the prostate is now upon a firm basis, and little difficulty is experienced in deciding upon the advisability of, or the necessity for, operation in typical cases, nor even in the choice of operation when once it has been decided upon. The ideal operation of to-day is the complete removal of the prostate with the least possible injury to adjacent parts—bladder-wall, ejaculatory ducts and rectum. The older palliative operations, temporary or permanent bladder drainage or repeated aspirations and orchidectomy and vasectomy, which it was hoped at one time would obviate the necessity for more radical operations, have passed into history. So have many less rational procedures, notably those based upon the idea of galvanic or electric action.

There remains, therefore, for discussion to-day practically only the radical operation of complete prostatectomy and the palliative operations of partial prostatectomy, removal of pro-

*Read at meeting of Canadian Medical Association, Montreal, 1907.

jecting middle lobe, etc., and the incision of the bladder-neck, the best and most favorably known method of doing which at the present time is the Bottini operation, or some of its modifications. (I do not consider here emergent or preliminary operations.) And here let me say that just as in operative treatment of the vermiform appendix, operative experience in dealing with the prostate has disposed of several cherished illusions.

Surgeons of wide experience in operations upon the prostate have found that the much talked of and easily explained middle lobe, projecting into the bladder and obstructing the outflow of urine, rarely exists except as a comparatively unimportant part of a general enlargement of the prostate; that the depressed "bas fond" and prominent inter-ureteral bar are results of prostatic enlargement, and that the real primary disturbing factor is the collar-like overgrowth of prostatic tissue compressing and distorting the first part of the urethra and interfering with muscular functions. In many cases this is all that is to be found, but in some the growth projects backwards into the bladder-cavity, resembling, to the eye, the projection of the cervix uteri into the vagina, and the so-called middle lobe may project posteriorly beyond the general and main projecting mass. This is the mechanical condition that the surgeon has to consider.

It is therefore quite clear that the ideal operation is the one which will remove this prostatic mass. One or more incisions through this collar, as by the Bottini instrument, will relieve the obstruction for a time. So will the partial removal; but only complete removal of the over-growth will permanently remove the whole difficulty.

In my own opinion, therefore, these palliative operations are only to be considered in special cases in which for some reason a radical operation is thought to be not feasible or not desirable, as in the case of very old or very feeble men, or those who are the subjects of some definite organic disease, especially some disease of the kidneys.

Incidentally I may say here—although it is not part of my present subject—that operative experience has also shown that cancer of the prostate is much more common than was formerly thought. For instance, in the last ten years I have operated upon nine cases which proved to be carcinoma. These were cases in which definite diagnosis could not be made prior to operation, although in most of them the condition was suspected.

Choice of Operation.—Two definite and distinct plans of operation are generally employed, and a third which is a combination of these two has its merits. I mean, of course, suprapubic prostatectomy, perineal prostatectomy, and an operation in which both incisions are made, combining the methods of suprapubic prostatectomy and perineal prostatectomy. Each of these operations has its advantages, and perhaps time will show that each has also its specific indications. The suprapubic incision has the advantage of giving a more satisfactory examination of the bladder in which sacculi, papillomata, and ulceration of the mucous membrane may be more readily and clearly made out. The disadvantages are up-hill drainage and slow healing, and therefore prolonged convalescence. I have often added in suprapubic operations perineal incision as a last step in the operation in order to facilitate drainage and irrigation. The perineal operation has the advantage of dependent drainage, rapid healing and shortened convalescence, but does not give such facilities for bladder exploration.

The actual dissection for removal of the prostate is, perhaps, taking all cases as they come, as easy in one as the other.

The perineal operation with the retractors of Young, Ferguson and Sym, is becoming a favorite operation on this side of the Atlantic.

The combined operation recommended by Nicol and Alexander is specially adapted to some cases in which the prostate is not easily enucleated by either of the foregoing methods alone.

Results.—The immediate danger following prostatectomy is practically insignificant. Hemorrhage alone need be mentioned, but is very rarely serious or even very troublesome. There is, nevertheless, considerable mortality from more remote causes. Statistics are probably more than usually fallacious when quoted in this connection, but it is generally conceded, I believe, that the mortality following prostatectomy and directly attributable to it is at least 5 per cent.

In spite of the most careful asepsis at and after the operation, a certain number of patients become toxic, with subnormal temperature, anorexia and delirium, and die, post-mortem examination showing no adequate organic lesion. This condition is apparently the equivalent of urethral fever. In other cases ascending inflammation causes death through kidney infection. In still other cases septic thrombosis is the cause of death.

Functional Results.—Unfortunately we are very much in

the dark as to the remote functional results of prostatectomy. The published results generally refer to the condition of the patient as he leaves the surgeon's hands. Fistula and incontinence are untoward results which not unfrequently occur, and sometimes retention of urine if the removal has not been sufficiently radical; residual urine requiring catheterization is perhaps more common than we know of. Owing to the advanced age of these patients, the mortality rate from general causes is high, and the average duration of life is short.

Loss of sexual function is a common result which has not received much attention. It is pretty generally conceded, however, that it is almost impossible to remove the whole prostate without wounding the urethra, and it is pretty certain that in most cases the ejaculatory ducts cannot fail to be injured. The perineal operation, as performed by Dr. Young, of Baltimore, is probably less likely to injure the ejaculatory ducts than most of the others.

In conclusion, I would repeat that when operation is indicated, complete prostatectomy is to be preferred if the conditions admit of it; that each of the methods enumerated has its own special sphere of usefulness, and that when the patient's condition—of age and health—does not seem favorable for a complete operation partial prostatectomy or bladder-neck incision will often give excellent results.

THE DEFENSIVE ACTION OF PRODUCTS OF METABOLISM WITH SPECIAL REFERENCE TO GLYCOCOLL

By Graham Chambers, B.A., M.B., Toronto.

Among the products of metabolism of the animal body there are substances which, in addition to their role in nutrition, act as a means of defence against certain poisons of exogenous or endogenous origin. These defensive agents may be said to act in a chemical manner, as they combine chemically with the poisons forming salts, esters, etc., the toxicities of which are less, as a rule, than the free poison. The conjugated poison is excreted usually in the urine. For instance, in acid poisoning (acidosis) ammonia, in place of being converted to urea, tends to neutralize the acids forming ammonium salts, which are excreted in the urine. Thus the amount of ammonia in the urine may be taken as a rough index of the acidosis. Again, in poisoning by phenol, part of the phenol appears in the urine as phenol sulphate, a compound of little toxicity. For the time being the inorganic sulphate may disappear from the urine, the phenol sulphate being formed at its expense. The total sulphate is not increased. In other words, there is no increase in the production of sulphuric acid in carbolic acid poisoning. The amount of sulphate present is dependent on protein metabolism. It would appear as if nature had so arranged that the sulphate of normal metabolism can act as far as it goes as a chemical antidote to poisoning by carbolic acid. I may add that tissue sulphate is also a defensive agent of greater or less potency, against poisoning by many other aromatic compounds such as naphthol, naphthalene, thymol, indoxyl, skatoxyl and pyrogallol.

Glycocoll and glycuronic acid are other products of metabolism which combine chemically in the tissues of the living body with a number of poisons. Reasoning from analogy, one should expect the conjugated to be less toxic than the free poisons. Tentatively I shall assume this as true in order that I may construct a table illustrating the defensive action of these substances as well as of ammonia, and of sulphates.

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* Read at meeting of Canadian Medical Association, Montreal, 1907.

DEFENSIVE AGENT	POISON	CONJUGATED POISON
Ammonia	Acid	Ammounium Salt.
Sulphate	Phenol	Phenol Sulphate.
	Indoxyl	Indoxyl "
	Skatoxyl	Skatoxyl "
Glycocoll	Benozic Acid	Hippuric Acid
	Salicylic "	Salicyluric "
	Cholic "	Glycocholic "
Glycuronic Acid	Phenol	Phenol Glycuronic Acid
	Naphthol	Naphthol " "
	Naphthalene	" " "
	Camphor	Camphor " "
	Chloral Hydrate	Trichlorethyl " "

In the table only a few of the poisons with which these defensive agents combine are given, and no notice is made of many other products of metabolism, such as alkaline carbonates, hydrogen sulphide, urea, bile acids, nuclein and proteins, which probably perform similar functions.

The number of substances in the animal body which appear to be able to act as a means of defence against poisons is so large that I am almost tempted to propound the doctrine that every substance of the body has a double functional role, namely, tissue-constituent and defensive agent, and that nature has endowed the animal economy to the extent that there is a limited means of defence against all the poisons which may enter the body with food-stuffs.

Glycocoll as a Defensive Agent.

Glycocoll or glycine, the simplest of the amino acids into which the various proteins can be decomposed, takes a very important part in the animal economy. First it is an important building stone of many proteins, in some of which, for instance, gelatine and elastin, it is present in large proportions. Secondly, it combines with cholic acid, a product of metabolism, forming glycocholic acid, a constituent of bile, and forms similar combinations—hippuric acid and salicyluric acid—with benzoic acid and salicylic acid respectively. The formation of these three conjugated acids may be illustrated by the following equations:

Benzoic acid + glycocoll = hippuric acid + water
Salicylic " + " = salicyluric " + "
Cholic " + " = glycocholic " + "

These chemical changes are so similar in these three chemical reactions that one should expect like variation in pharmacological action in changing from free to conjugated acid. To be more explicit, if glycocoll, by combining chemically with benzoic acid, render the latter less active, then one should expect glycocoll combining with salicylic or with cholic acid to produce a similar pharmacological change. I have instituted some researches in support of this theory.

Glycocoll as the Defensive Agent Against Poisoning by Benzoic Acid.

If benzoic acid is administered in small quantities it is excreted in the urine as hippuric acid. The latter compound is quite soluble and almost inert. The increase in solubility aids excretion. Again, in young herbivorous animals fed on milk, very little hippuric acid appears in the urine, as is the case in man. However, as soon as they begin to feed on grass then hippuric acid is excreted in considerable amount. We may ask ourselves the question, why does this change take place? The answer is, no doubt, that the animal is unable to completely oxidize many of the stable aromatic compounds present in grass. It is, however, capable by oxidizing side drains, etc., of converting them into benzoic acid which are picked up by the glycocoll and excreted as hippuric acid. The toxic effect of the benzoic acid is thereby, to a great extent, neutralized. Glycocoll should, therefore, be considered a defensive agent, and the excretion of hippuric acid in large quantities by herbivors as an obligate condition.

Glycocoll as a Defensive Agent Against Poisoning by Salicylic Acid.

When salicylic acid is given internally to an animal it combines at least in part with glycocoll, forming salicyluric acid, a compound analagous in composition to hippuric acid. Now as hippuric acid is almost inert, one should expect salicyluric acid to be at least less active than salicylic acid. If this be true, the formation of salicyluric acid would have an important bearing on the pharmacological action of salicylic acid. Again, as glycocoll is such an important cleavage product of certain foodstuffs, such as gelatine, one might expect the feeding of gelatine or the administration of pure glycocoll by the mouth or subcutaneously to increase the formation of salicyluric acid. These considerations suggested to me that

it would be well to obtain some experimental data on the production of glycocoll of the animal body and on its defensive action against poisoning by salicylic acid. The research is a very extensive one, and I regret that my investigations are in some essentials incomplete.

For convenience of description, I shall give my observations and considerations under the following headings:

(*a*) The pharmacological action of salicyluric acid.

(*b*) The origin of glycocoll of salicyluric acid.

(*c*) Subcutaneous injections of glycocoll as an antidote to poisoning by salicylic acid.

(*d*) The maximum production of salicyluric acid in man.

(*a*) The Pharmacological Action of Salicyluric Acid.

The salicyluric acid used in the experiments was isolated from urine of patients taking salicylic acid. It is a crystalline colorless, solid, slightly soluble in water, quite soluble in alcohol and chloroform, and almost insoluble in benzol. With a solution of ferric chloride it gives a violet color.

In studying the pharmacology of salicyluric acid, I first repeated some experiments of Stockman. He found that four grains given hypodermically to a rabbit produced no apparent effect, whereas in rabbits of the same size 1.5 to 2 gram of salicylic acid proved fatal. He also found that salicyluric acid was much less active than salicylic acid in preventing the growth of yeast.

My experiments gave similar results. I found that 4.5 grams of salicyluric acid, neutralized with caustic soda given subcutaneously, did not produce death in the case of a rabbit weighing 2 kilograms. I also found that salicyluric acid was much less active than salicylic acid in preventing the growth of colon bacilli.

These experiments show that salicyluric acid is much less active than salicylic acid.

(b) The Origin of the Glycocoll of Salicyluric Acid.

In investigating the origin of glycocoll of salicyluric acid one must take into consideration every possible source. If glycocoll is present in food (exogenous) one must determine the part the ingesta play in the process. If present in blood or is a product of the metabolism of proteins (endogenous), then it must be ascertained whether the glycocoll of salicyluric acid is wholly or in part derived from this source. The in-

quiry brings up for consideration the subject of protein metabolism.

When protein foodstuffs are ingested, they are broken up by the proteolytic ferments of the stomach and intestine into amino acids, such as glycocoll, alanin, leucin, tyrosin, etc., which are rapidly absorbed from the chyle. Each protein has its own particular cleavage products, both as regards kind and mass. A particular amino acid may be present in large proportion in one protein and absent in another. For example, glycocoll, which forms 16.5 per cent. of gelatine, is absent in casein, and tyrosin absent in gelatine forms 4.5 of casein. These facts may be readily seen from the following tabulation of cleavage products of proteins:

CLEAVAGE PRODUCTS OF PROTEINS.

	GELATINE	CASEIN	FIBRIN	SERUM-ALBUMIN	SERUM-GLOBULIN
Glycocoll.....	16.5	.0	3	....	3.5
Alanin	.8	.9	3.6	2.7	2.2
Aminovalerianic Acid.....	1	1	1	present	....
Leucin	2.1	10.5	15	20	18.7
Aspartic Acid..	.56	1.2	2	3.1	2.5
Glutaminic " ..	.88	11	8	7.7	8.5
Phenylalanin...	.4	3.2	2	3.1	3.8
Tyrosin	.0	4.5	3.5	2.1	2.5
Troptophane ...	.0	1.5	present	present	....
Prolin.....	5.1	3.1	"	1	2.7
Oxyprolin.....	3	.25	....	....	....
Serin.....	present	.23	....	.6	....
Lysin.....	2.7	5.8	4	....	....
Arginin	.4	4.8	....	....	....
Histidin	7.6	2.6	....	....	....
Cystin.....	.0	.06	....	2.3	.7

The fact that gelatine contains 16.5 per cent. of glycocoll and casein none, suggested to me the experiment of determining the influence of protein foodstuffs on the formation of salicyluric acid in patients taking salicylic acid. In the first series of experiments, the patients of average weight, three in number, ill with rheumatism, were taking 60 grains of salicylic a day. From the twenty-hours' urine of each patient I separated the salicylic acid and salicyluric acid, first while the patient was on a milk diet, and secondly on a milk, with calf's foot jelly and broths.

The analysis showed that almost all the salicyluric acid was excreted as salicyluric acid. The relative proportions of salicylic acid to salicyluric acid were approximately:

Case I.	Dietary,	milk	1.25
	"	milk and jelly ..	1.38
Case II.	"	milk	1.30
	"	milk and jelly ..	1.23
Case III.	"	milk	1.28
	"	milk and jelly ..	1.21

In no case was there more than one-tenth of a gram of uncombined salicylic acid found.

It will be observed that in cases II. and III. the proportion of free acid is greater with milk and jelly than with milk alone.

These experiments show that with the exhibition of 60 grains of salicylic acid a day, the salicylic acid is excreted almost wholly as salicyluric acid, and that the ingestion of foods rich in glycocoll does not increase the proportion of salicyluric acid. This has an important bearing on the selection of the dietary in acute rheumatism.

The question may be asked, what becomes of the glycocoll of the foodstuffs in excess of that required for the upbuilding of the serum proteins. In answer to this I may mention important facts bearing on this subject of metabolism:

1. Lang found that the pulp of intestine, liver and various other organs had the power to desaminate amino acids, especially glycocoll and leucine; and Walter Jones proved the existence of ferments, guanase and adenase, which liberate ammonia from respectively guanin and adenin.

2. Nencki and Zaleski found that the amount of ammonia in the portal blood is during digestion much greater than that in the systemic blood.

These observations afford an explanation of what becomes of the excess of any amino acid above that required for protein building. According to this hypothesis the intestinal mucosa uses as much of the amino acids as required for the synthesis of the proteins of the blood serum, and decomposes the remainder into ammonia and fatty acid. The ammonia is converted by the liver into urea and the fatty acids are oxidized or used to build sugar or higher fatty acids.

If the glycocoll of salicyluric acid is not derived from food we must look for a source during intermediary and final

metabolism. This leads us into a very difficult field of study, *i.e.*, the study of protein metabolism. In this connection I shall only mention observations which have a bearing on the origin of glycocoll and the formation of salicyluric acid.

1. Howell found amino acids in small quantities both in the blood and lymph.

2. Jacoby and others have shown that every tissue possesses the power of self-digestion, *i.e.*, proteolytic ferments are present in every cell of the body. In this digestion amino acids, glycocoll, alanin, leucin, tyrosin, etc., are formed.

3. Schultze and Winterstein have isolated from growing seedlings glycocoll, leucin, tyrosin and many other amino acids.

4. Parker and Lusk have shown that hippuric acid is formed in a starving rabbit taking benzoic acid, *i.e.*, there is an endogenous source of glycocoll.

5. Salomon showed that hippuric acid was formed in the liver, muscle and kidney of a rabbit.

6. Schmideburg and Bunge showed that in a day benzoic acid and glycocoll were synthesized to hippuric acid in the kidney.

These observations show that glycocoll is found during cellular metabolism, and they suggest that salicyluric acid may be formed in muscle, liver, kidney and other tissues of the body.

The most important point to determine is whether it is formed in the kidney. If it is altogether formed in the kidney then the union of salicylic acid and glycocoll just at their exit from the blood serum should have very little influence on the pharmacological action of salicylic acid. On the other hand, if its formation takes place in an earlier stage of metabolism, then one should expect the potency of the action of salicyluric acid formed. One should also expect that glycocoll given subcutaneously or intravenously to increase the proportion of salicyluric acid and thereby diminish the action of salicylic acid. This last proposition appears to be supported by experiments described in the following division.

(*c*) Subcutaneous Injections of Glycocoll as an Antidote to Poisoning by Salicylic Acid.

The lethal dose of salicylic acid, given subcutaneously, was determined to be not more than 2 grams for rabbits weighing less than 2 kilograms. Then 3 grams of salicylic acid neutralized by caustic soda and 3 grams of glycocoll, both dissolved

in water, were given subcutaneously to a rabbit weighing 1.35 kilograms. This was followed by one gram dose, subcutaneously, at 2, 4, 6 and 21 hours. The rabbit recovered.

This experiment was twice repeated, recovery taking place in each case.

These experiments show that glycocoll given hypodermically is an antidote to poisoning by salicylic acid.

(*d*) The Maximum Production of Salicyluric Acid in Man.

Parker and Lusk showed that when small doses of benzoic acid were given to a rabbit all the benzoic acid appeared in the urine as hippuric. They also showed that in rabbits there was a limit to the production of hippuric acid. We may ask ourselves the question, do similar conditions exist in man with regard to salicylic and salicyluric acids? In other words when small doses of salicylic acid are administered does all the salicylic acid appear in the urine as salicyluric acid? And is there a limit to the formation of salicyluric acid? In trying to solve this problem we may make use of the results of our analyses of urine of patients taking 60 grains of sodium salicylate a day. In these it was shown that most of the acid appeared in the urine as salicyluric acid. We should, therefore, judge that the maximum production of salicyluric acid would exist with the exhibition of sodium salicylate in doses somewhat less than 60 grains a day. Moreover, with doses above 60 grains of sodium salicylate a day one should expect to find the proportion of free salicylic increase. This was found to be the case in the following experiments:

Experiment 1.—The salicylic acid and salicyluric acid in twenty-four hours' urine of a healthy man taking 120 grains per diem and eating his ordinary diet were determined. The proportion of salicylic to salicyluric acid was 1 to 2.3.

Experiment 2.—The salicylic acid and salicyluric acid in twenty-four hours' urine of a man taking 100 grains a day were determined. The proportion of free to conjugated acid was approximately 1 to 3.5.

These experiments show that the proportion of free salicylic is much greater with 100 and with 120 grains than with 60 grains per diem. This is a very important observation in determining the pharmacological action of salicylic acid, because if salicyluric acid is not wholly formed in the kidney—which is probably not the case—then when the constitutional action of salicylic acid is required, as in the treatment of

acute rheumatism, it should be administered in very large doses. This, I believe, is in keeping with clinical experience. Furthermore, since the source of glycocoll is probably the metabolism of proteins, which is a limited process, the more rapidly the salicylic is administered the greater the amount of uncombined salicylic acid present in the blood. This suggests that in the treatment of acute rheumatism one should give large doses at short intervals, at least for a time.

Conclusions.

I. Salicyluric acid is an inactive substance.

II. The feeding of gelatine does not increase the proportion of salicyluric acid in urine. This has an important bearing on the theory that some amino acids are disseminated in the intestinal mucosa.

III. Glycocoll, given hypodermically, is an antidote to poisoning by salicylic acid.

IV. The maximum production of salicyluric acid in a man of average weight is obtained with the exhibition of somewhat less than 60 grains of salicylic acid a day. Beyond this amount the larger the dose of salicylic acid the more free salicylic acid in urine.

Glycocoll as a Defensive Agent Against Poisoning by Cholic Acid.

Cholic acid is present in both bile acids—glycocholic and taurocholic. In glycocholic it is combined with glycocoll, and in taurocholic with taurin. The union is, no doubt, similar to that of glycocoll with benzoic acid in hippuric acid, and of glycocoll with salicylic in salicyluric acid.

Glycocoll + cholic acid = glycocholic acid + water.
Taurin + " " = taurocholic " + "

In the light of the present paper the bile acids may therefore be looked upon as conjugated cholic acids, and following the general rule one should expect to find the conjugated less poisonous than the free.

I have attempted to obtain data on this subject in the following experiments:

Experiment 1.—Rabbit weighing 1.7 kilos was given subcutaneously 1 gram of cholic acid neutralized with caustic soda and dissolved in water. The rabbit recovered.

Experiment 2.—Rabbit weighing 1.7 kilos, was given subcutaneously 3 grams of cholic acid neutralized with caustic soda, and dissolved in water. The rabbit died. The urine contained a bile acid, and albumin.

Experiment 3.—Rabbit weighing 2.5 kilos, was given subcutaneously 2.5 grams cholic acid neutralized with caustic soda and dissolved in water. The rabbit died.

Experiment 4.—Rabbit weighing 2.1 kilos, was given subcutaneously 2.5 grams of glycocoll and 2.5 grams cholic acid neutralized with caustic soda and dissolved in water. Two hours after 1 gram of glycocoll was given subcutaneously, which dose was repeated in 4, 8 and 24 hours. The rabbit recovered.

These experiments suggest that cholic acid is more poisonous than glycocholic acid, and that the administration of glycocoll subcutaneously diminishes the toxicity of cholic acid. Further investigation will be made on this subject.

If cholic acid should prove to be more poisonous than glycocholic acid, one might infer that cholic acid is a poisonous product of metabolism, which nature conjugates with glycocoll in order to lessen its toxicity.

DANGER SIGNALS IN ANESTHESIA.*

By Samuel Johnston, M.A., M.D., Toronto.

The subject I have chosen for this paper was taken on account of the general lack of knowledge on the part of the practitioner in the recognition of signs of danger in the administration of anesthetics, or even, when recognized as something unfamiliar in the routine signs of anesthesia, the inability to interpret them.

It is not to be expected that the busy practitioner can have the time or opportunity to make himself familiar with all or even many of them; nevertheless, since he is called to give not a few anesthetics during the year's routine of duties, a few hints on the more commonly met with signs of danger may not come amiss.

Next to the proper method of administration, the recognition of any variation from the usual signs of surgical anesthesia is of the utmost importance, for if one can train himself to recognize the initial approach of danger the real dangers may often be avoided, and no doubt some lives saved. Signs of danger are so varied and so subtle that unless one is giving more time and attention to their recognition than is possible for a general practitioner to do the dangers are realities to be coped with rather than avoided.

It is difficult to point out, simply by means of reading a paper, all the different indications that present themselves to an experienced anesthetist during an administration. He has come to his knowledge through the slow, varied and time-honored process of personal experience, and besides, there do arise some unaccountable conditions of which, from experience, he has learned what the result will be if the warning they convey is not heeded.

It would be a simple matter for the expert to impart his knowledge were he able to demonstrate clinically, in one or two patients, the signs as they appear to him when giving an anesthetic, but in order to do this it would mean possibly as many different patients and methods of administration as there are dangers to be met.

Dangers do come unexpectedly even when the most careful administration is given and the closest watch kept; nevertheless, many could be avoided if one studies the signals heralding their approach and is prepared to act promptly and efficiently in averting them.

I will endeavor as briefly as possible to indicate a few of the

*Read at meeting of Canadian Medical Association, Montreal, 1907.

more frequent signs of dagner and the methods of treatment which have been most successful.

Before commencing an administration the anesthetist should acquaint himself with regard to the condition of the patient, and although an elaborate examination is not usually desirable, for he will be told of any pre-existing disorder, still on two important points he must be fully informed, viz., the way in which respiration is performed and the condition of the circulation. He should acquire the habit of gaining an impression of his patient's physical make-up, as to the ease or difficulty, rapidity, depth or shallowness of his breathing, and as to the vigor or feebleness of his circulation. He should note the way the patient moves, speaks and breathes, and carefully observe his color, feel the pulse, and, if there is a suspicion of abnormality within the chest, use the stethoscope. People differ much in their behavior towards anesthetics, and this depends both upon their physical and their psychical natures.

A perfectly healthy individual of fine physical development is very often a difficult subject to anesthetize, for the reason that the greater the muscular development the more prone are mechanical difficulties to arise. Muscular spasm of a firmly-set jaw in an athletic young man is no easy proposition to handle.

The red-faced, short-necked, plethoric or alcoholic individual is very liable during the induction period to have much congestion of the tongue and fauces and spasm of the jaw. It is wise in all such cases, especially when ether is the anesthetic, to insert a small prop, with a string attached, between the teeth.

In the edentulous, if a prop is not inserted or a pledget of gauze placed between the gums and cheeks, obstruction to breathing arises by sucking in the cheeks.

When there is obvious and extensive nasal obstruction, the mouth must be propped so that the patient may receive enough of the anesthetic, with proper admixture of air, to produce smooth anesthesia. In partial obstruction I use small rectal tubes, cut six or seven inches long, passed through the nares to naso-pharynx. These, well vaselined, should be placed in position after the patient has been partially anesthetized, and joined with a safety-pin in front, so that they will not slip beyond reach. This is a most excellent method with stout patients, whose tongues swell or fall back.

Pale, weakly individuals are easier to anesthetize than the athletic type and, generally speaking, women more easily than men. Women, are, however, more liable to emotional excitement, but seem to be particularly free from a tendency to muscular spasm.

Very fat persons do not take ether well on account of the congestion of the tongue and fauces and hypersecretion of mucus it produces. With these patients the C_1E_2 mixture acts well.

Neurotic or hysterical people are liable to spasmodic muscular contraction, and complete muscular relaxation is more difficult to keep, as a rule, with them than with other patients.

With painful lesions, especially in connection with those of the genito-urinary organs, reflex excitability is prone to occur, but certainly the operation should not be begun until this excitable condition is overcome.

For example, in stricture cases, in passing instruments, often when the instrument reaches a particular part reflex spasmodic inspiration is set up, even though there is deep anesthesia. This variation in the breathing may occur when the sphincters are dilated or uterus pulled down.

Very nervous, timid people should be anesthetized with ether rather than chloroform. Even without anesthetics such people have died of fright, and so, owing to the depressing effect of chloroform, ether has the element of safety lacking in the other drug.

Dangerous conditions show themselves in the following ways:

1. Obstruction to respiration, due to foreign bodies such as blood, mucus, loose teeth, etc., congestion of the tongue, fauces, etc., spasm of muscles of the jaw and neck, collapsing cheeks in the edentulous, laryngeal spasm and general respiratory spasm.
2. Depression or failure of respiration.
3. Depression or failure of circulation.

These last two effects may be due to the toxic action of the drug, reflex effect of the operation, or the physical condition of the patient. Depression and even failure of circulation may arise from vomiting, but more frequently in any case with chloroform than with ether as the anesthetic. Therefore the probability of trouble arising, as shown by numerous signals, both in the patient before anesthesia has begun and also after the induction, can to a certain extent be foretold and preventive measures adopted.

When *spasm* and *congestion* occur they are to be met first by pushing forward the jaw behind the angles. If this is not enough, the mouth is to be opened with a gag and the tongue drawn forward with tongue forceps. If the anesthetic is being given with a free supply of air, the spasm will soon pass away. But it may be necessary in thick-necked individuals during anesthesia, and in the edentulous, that the mouth be kept open,

the lower jaw pushed well forward and the tongue forceps used from time to time, or the tubes, mentioned before, inserted.

With *foreign bodies,* turn the head to one side and sponge out the offending materials or remove with the finger. When a hard substance has been inhaled the patient must be inverted if passing the finger cannot recover it.

For *laryngeal spasm,* indicated by a high-pitched "crowing" noise with inspiration, occurring usually under chloroform, the treatment is rhythmic tongue traction with the forceps.

Commencing failure of respiration is perhaps the most common condition arising during anesthesia, due partly or wholly to the anesthetic. Pallor or blueness of the face, feebleness of breathing, combined with an insensitive cornea, herald this danger.

If the administrator stops the anesthetic, rubs the face and lips briskly with a towel, and lowers the head, he will usually succeed in restoring breathing; but if not, the case must be treated as one of respiratory failure.

In these latter cases the pupil usually dilates, but it is not a safe sign, for it often remains contracted, especially in infants, until death is imminent.

This incipient respiratory failure must also be distinguished from the very quiet breathing of too light anesthesia. This, however, is easy, as depression in respiration, associated with slow, feeble and irregular pulse, pale or livid countenance, and insensitive cornea, as well as consideration of the length of time of the anesthesia and the previous state of the patient's health, will all have impressed themselves, so that the anesthetist will be alert to impending danger.

In *arrest of breathing* the treatment will be the same whatever the anesthetic employed. Place the patient on his back, with head in line with the body, not above it, and turned to one side. Half open the mouth and draw out the tongue with the tongue forceps; pass the finger to the back of the throat and hook the base of the tongue and epiglottis forward and quickly sponge out the throat. Then firmly compress the chest, placing a hand at each side of the sternum, and using the weight of the body. If breathing does not start now, have an assistant keep the tongue forward and the mouth open, compress the chest again, and if this is not sufficient to reestablish breathing, seize the patient's arms and do artificial respiration by Sylvester's method. Artificial respiration, by Sylvester's method, and squeezing the chest (Howard's method) are to be repeated slowly, a pause after each compression. Then repeat the series, first inflate, then compress and pause,

doing this about fifteen times a minute until breathing begins. Usually a deep sigh signals this return. Be sure and expel the air before beginning to inflate, for the atmosphere in the lungs is laden probably with the anesthetic, and do not carry out the movements too rapidly. This is the essential mode of procedure and of the first importance to be carried out in detail.

Artificial respiration is the great restorer of both cardiac and respiratory action, and it can unaided restore the patient. Time must not be lost getting drugs, injections, etc., for these may fail and valuable time is passing in which artificial respiration would probably have succeeded. However, if further help is available, accessory aids may be used if thought necessary, such as giving a hypodermic injection of strychnia (1-20 to 1-12 of a grain) into the thigh or lower abdomen, rectal injections of one pint of water at 105 deg. F., with two ounces of brandy, brisk friction of the face and gums with a dry towel and bandaging and raising the lower limbs.

If circulatory failure has occurred, compression of the heart between the hands, one on the chest and the other pushing up below the left costal arch, is excellent.

The reflex effect of the operation on respiration is usually seen by a deepening and quickening of the breathing when the skin is being incised, but if the patient is not sufficiently anesthetized the beginning of the operation may cause a spasmodic holding of the breath, which in the case of chloroform is very dangerous. However, it should be borne in mind that operations on the rectum and vagina, even when the patient is fully under the influence of the anesthetic, generally cause a noisy, jerky respiration, so much resembling stertor that it is sometimes mistaken for it. Such respiration does not indicate an overdose of the drug.

The *position in which the patient is placed* may interfere so with respiration that it will lead to depression and stoppage of breathing.

The most formidable accident in surgical anesthesia is *circulatory failure,* which more often accompanies chloroform anesthesia than any other anesthetic. When an overdose of this drug is given, the quiet breathing of deep anesthesia sometimes becomes noisy and stertorous, the pulse loses its strength, becoming intermittent, flickering and disappearing in a few moments of time. Then breathing grows more and more shallow until both respiration and radial pulse are gone. These are the usual signs. At this point artificial respiration will often restore the breathing and rescue the patient from death. But, on the other hand, the pulse may be beating well, the

breathing quiet, the heart and respiration suddenly stop without warning, or one of such an evanescent kind that only the keenest observation will detect it. The fleeting danger-signal alluded to is indicated by a pallor around the mouth projecting upwards beside the alae of the nose, and if the finger is on the facial or temporal pulse an irregularity and then intermittency occurs. If one is quick enough artificial respiration may be started before the pulse disappears.

Heretofore I have said little about the pupil as a signal when danger is imminent, for I have found that in the case of most anesthetics it is unreliable.

In chloroform anesthesia it may, perhaps, be more of a guide, in conjunction with other signs. However, when a patient's pupil is found to be a reliable guide, it affords the earliest signals of danger and the surest signs of safety. The pupil is much contracted, the patient insensible, when no danger is near, but on the slightest amount of over-dosage being given it dilates. Now is the time to resort to measures to effect restoration.

This dilatation of the pupil from overdosage must be distinguished from the same condition when the patient is emerging from the narcosis, and also just before nausea and vomiting ensues. Here the utmost caution is needed. In the latter the patient will show signs of returning consciousness, in the former the condition of deep anesthesia will persist, the pulse will be almost imperceptible and respiration hampered. When the dilatation of the pupil results from returning consciousness, the treatment is a fresh supply of chloroform, which will also usually prevent vomiting and cause the pupils to return to their normal size. In dilatation of the pupil produced by the surgeon's manipulation of sensitive parts, the anesthetist will continue to give the anesthetic.

When *vomiting* occurs in spite of all efforts to prevent it, the head must be turned aside and free outlet given to the vomited matter, and if necessary cleanse the mouth with the finger covered with gauze. The danger to be avoided in this emergency is the sucking backward into the larynx of vomited matter when the patient draws in the deep breath following the emesis.

A word in conclusion. Signs of danger and collapse may arise at any time from the induction period until the last drop of the anesthetic is given. It therefore behooves the administrator to be impressed with the fact that during an administration of any anesthetic eternal vigilance is the price of safety.

PSYCHOLOGY OF THE SICK ROOM.*

By John Hunter, M.B., Toronto.

Medical, biblical and classical literatures furnish abundant evidence of potent influence of mental or psychic factors in healing disease. A physician hands back a cheque for the amount of all a neurasthenic—a nervous wreck from financial disaster—had paid him for former services, and this act cures the patient; Saul's paroxysms of insanity are assuaged by the music of David's harp, and people afflicted with divers diseases have been healed by intercessory prayer or laying on of hands of prophet, priest or king.

Passing over the mediæval ages, when that religio-medical hybrid—in whom the duties of priest and physician were the work of one individual—was rampant, and coming to our own day, proclaimed in the rostrum's stamping rhetoric and in the spring poet's tender sonnet to be "The foremost on the files of time," what do we find? A "trek" of the laity from the services of, and faith in, scientific medicine, greater than any recorded by history of people from one region to another. "Cults" which disguise their ignorance and avarice under the beneficient garbs of religion and medicine, spring up as luxuriantly as wild mustard. "Yellow" advertisements set forth their audacious claims, and are carried by religious and lay press into every household. Many who read these become their victims. Incomes of physicians diminished, with equipment of our hospitals and charities crippled by loss of money that flows so profusely into the coffers of these cults. Great edifices, almost unrivalled in magnitude, style of architecture and wealth of ornamentation are erected, paid for, and dedicated to founders of such cults out of funds that ought to go to physicians, hospitals and charities.

If we examine this "trek" of the laity from scientific medicine and orthodox religion, do we find causes akin to what led to the great "treks" recorded in history, viz., a hope to better social and physical conditions; a desire for greater civil and religious liberty; longing to satisfy innate cravings for something new; appeals of avarice or ambition for wealth or notoriety acquired by earlier adventurers in new fields? The founders of these cults, being "wise as serpents," are astute enough to appeal to all these psychic factors. They teach their

*Read at meeting of Canadian Medical Association. Montreal, 1907.

dupes that all untoward social and physical conditions are only imaginary evils, "figments of the mind." Accept their dogmas, all social evils vanish, earth becomes a paradise. They exhort their followers to disregard many obligations that state, church and medicine impose, *e.g.,* the calling in of a physician in case of illness, the acceptance of a creed, or the taking of drugs—and all will be well socially, spiritually and physically. They proclaim antiquated the church's doctrines and the practice of medicine; their own teachings are all new and their healing powers the latest product of science. The wealth, notoriety and adulation some of these imposters receive make an irresistible appeal to these cults. Nations, churches, and the physicians' *clientele* are depleted by appeals (from one source or another) to these psychic impulses and emotions. Statesmen, clergymen, and physicians fail to take proper cognizance of them, and therefore provide no efficient measures to prevent such disastrous consequences as often follow these "treks."

We pass over the duties of the statesmen and clergymen, as regards the welfare of the state and church, to allow time to discuss the relationship of medicine to this exodus of the laity. This brings us to consider sick-room psychology. Evidently this receives much more attention now than formerly, judging by the number of articles appearing in current medical literature on psychology. We see further evidence also of the growing importance of the psychic factor in the sick-room by the breaking away from that fetich—the writing of a prescription for medicine for the relief of real or imaginary illness in every form and degree. The number of physicians constantly increases who tell patients whether or not they need medicine. The cowardice and dishonesty of those who use placebos for fear of losing patients are now looked on as disreputable.

The psychology of the sick-room could be discussed from many standpoints. It will answer our purpose quite as well if we consider the psychic factors in the order in which we meet them, instead of some more scientific method.

The psychic factors incident to the sick-room are markedly influenced by the onset of the illness, acuteness or latency, time of day or night, and character. Acute illness occurring at night is usually attended with much greater mental perturbation. The psychic impressions and emotions made by the onset, time and character of the illness on patient, family, nurse and physician vary greatly in number and intensity. In regard to the patient, the sensation and emotions engendered by sudden onset of illness, *e.g.,* pain, rigors, fever and nausea,

may be so few and mild as to be borne with indifference, or so many and grave as to produce collapse or wild delirium.

As to the family, the psychic impressions and emotions are influenced both in number and character by many factors. If the patient be the husband, father and bread-winner, or the wife and mother, or son or daughter, or tender nursling, it requires no vivid imagination to paint the scene. In the sway of the emotions, as buoyed by hope or crushed by fear, we have nobler dramas or sadder tragedies acted within the precincts of the sick-room than in the repertoire of dramatist or tragedian. The psychic conditions of nurse and physician are governed by education, experience, temperament, and by the character of the illness, sanitary conditions and complications.

The above is a brief summary of the psychic conditions incident to the sick-room. How does the physician meet them? If taught at college, by text-books, and at hospital clinics, that the chief end of a doctor is to diagnose accurately, prescribe orthodox remedies, and give proper instructions *re* diet, sanitation, etc., and if he has acquired all his experience in strict observance of these teachings, he will conduct himself about as follows: He will submit patient and nurse to rigid verbal examinations, and the former to a careful physical one. He will satisfy himself—at least, as far as he can—in regard to the diagnosis and probable prognosis. He will give instructions *re* diet, ventilation and medicine, and to the family and friends such information about the case as he deems necessary.

He now takes his leave, feeling perfectly satisfied that he has discharged his full duty. To challenge the merits of the course followed almost universally by reputable physicians of every civilized country throughout many centuries seems audacious to the last degree. However plausibly or conveniently custom and age may be used as excuses for doing anything, yet they must never be allowed to usurp reason to guide our conduct. This must be governed by merit alone. Our work is good or bad, irrespective of custom or age.

Granted that the diagnosis is correct, treatment of the disease efficient and orthodox, and the instructions explicit, if psychic conditions have been overlooked or only imperfectly investigated, has not the physician left undone a very important part of his work? If the experience of most medical men corresponds with the writer's, which covers thirty years in general practice, consultations with many eminent men, and clinics in nearly all the large hospitals of Europe and America, the consensus of opinion must be: the amount of attention usually

given to the psychological factors in disease is lamentably small and inefficient. Through this open and poorly protected portal ignorant, avaricious cults swarm in and defile the temple of scientific medicine. I do not detain you now to ask what our psychic conditions may be after we enter

"The undiscover'd country from whose bourne no traveller returns."

If our environment there be congenial for quiet meditation, we will have no time limitations for study of this and kindred mysteries. Of one thing rest assured, while this physical life lasts mind and body are indissolubly united. Each exerts a very potent influence over the other. This holds true under normal as well as abnormal conditions, as can be easily proved. Take, for instance, a child who has lost a top or sprained an ankle; in every cry and gesture he gives abundant evidence of mental or physical suffering. Restore the lost article, the mental anguish is gone; tell him a funny story about dog or cat, you can manipulate the joint, rub on the liniment and apply the bandage with about as little suffering as if an anesthetic had been given. The adult is but the child grown to manhood with increased physical development, knowledge, wisdom and experience. No sane physician ignores psychic conditions in childhood, why do so in adult life? Is it not the physician's duty to acquire an equal degree of knowledge, tact and experience in dealing with psychic as he has for dealing with physical conditions? The benefit to be derived from this equipment will be about as great in the one case as in the other.

This can be easily demonstrated. Whence come the great mass of victims drawn into the nets of these religio-medical cults? Not from the fields of surgery. Mary Baker Eddy says to the man with a broken limb, "Go to your surgeon." Not many are drawn from the aurist or oculist. The host strays from the psychological section. Nervous exhaustion, "brain-fag," or neurasthenia, is the recruiting ground wherein victims never fail the religio-medical charlatan. Not until the regular medical profession investigates the psychological as effectively as it has the other departments—internal medicine, surgery, obstetrics, etc., will these pseudo-religio-medical Hittites and Amorites find themselves bereft of any medical Canaan to exploit, with their malevolent influence nullified and gone.

In conclusion, the vastness of the subject and the limitations of a brief paper allow the writer to review only a few factors, to offer a few suggestions; but if these help in any degree to inspire to more careful study of sick-room psychology, the object of the paper will be realized.

TREATMENT OF ACUTE BOWEL INFECTION OF INFANTS.

By James Burke, M.D.

In the treatment of the acute bowel infections of infants and children three cardinal requirements must be always kept in sight: (1) Clearance and asepsis of the bowels; (2) provide a grade of circulation of the blood and fluids of the body as near as possible to the normal status; (3) a rational food supply. If the infant is breast-fed, the mother should be reinstated to tolerable functional ability of her digestive, secretory and excretory organs; wifely duties or taxes should be reduced to the minimum; social demands must be curtailed, and domestic felicity should prevail.

With the food of the child at the proper standard, the attention to the child's condition will have better results. If the child has been fed in part with cow's milk, the interstices of the walls of the bowels, including the villi, are clogged with hybrid, but mostly with the heterologous protein of cow's milk; the clearing out process must be of such quality as to not only clear the lumen of the bowel of its fermenting contents, but to aid in the dissipation of clogged protein in the walls; in the interval give only mother's milk, if feasible, and create aseptic conditions with one grain hourly doses of sulphocarbolate of lime; if the bowel motions are too frequent, add one grain of zinc sulphocarbolate to every dose of the lime salt. In ordinary cases, when proper conditions of the bowels have been instituted, little sedative medicine will be required.

With exclusively bottle-fed infants, the problem is changed; the absorption of the intake of this heterologous food is not a true index of resulting nutrition therefrom; we have learned that the rythmic movements of the infant's stomach always prevents the curding of cow's milk in it, but passes it on in a flocculent or semi-dissolved state, to be acted on by the trysin ferment, the thoroughness of the fragmentation of the protein of the milk, by the trypsin, much determining the quality of the protein to be obtained after its further fragmentation by the ferment, erepsin of the intestines, which puts on the finishing touches to protein digestion; true, normal digestion reverts the heterologous protein of ingestion to simpler units, which by a reversion of process, by the erepsin, from tearing down to building up, under proper environment, succeeds in the reconstruction to homologous, nutritive pabulum.

Reverse environmental conditions renders a minimum of homologous protein with the remaining protein unequally divided between the hybrid and heterologous variety. As has been ascertained, a large part of the two latter kinds is absorbed into the general circulation, to be dealt with, in the effort to form the homologous variety, or failing in the vicarious function, this foreign protein is stored away somewhere in the tissues of the infant, to await accident or medicinal interference to rid the body of these elements of potential danger. These when added to by the waste proteid matter, of incomplete catabolic changes, form the groundwork of a serious systemic leucomain poisoning—so-called autointoxication.

Ptomains, leucomains, ferments—vegetable and animal—and vegetable alkaloids are all of proteid origin, are allied and closely related in poisonous qualities and therapeutic utility; in natural economy they are always reverted to simpler units of their composition, to be reconstructed into the complexities of nature's various necessities, a unit of one being capable of becoming a component part of a reconstruction of another, yet incomplete, product; of combining with several primary units of two or possibly more simpler substances to form a new entity. Herein lies the potentiality for good or for evil in the living economy—conditions of environment always determining the character of reconstructed proetin.

The role of the alkaloid—vegetable or animal—in the treatment of disease is its physical, chemic and biologic function of rounding out retained, incomplete proteid matter in the tissues—the minor part in making homologous protein, the major part in rounding out heterologous protein and incomplete catabolic proteid, to become normal excretory substances; *diuretics avail not if products naturally excreted by the kidney are incomplete*; hybrid or heterologous protein is not transmuted into the host's tissues; properly formed pabulum must pre-exist in the blood to regenerate brain tissue. The demand for the bile in the intestine is the best stimulus to its flow and reproduction.

Manitowoc, Wis., June 7, 1907.

Society Report.

NINTH CONFERENCE OF THE AMERICAN HOSPITAL ASSOCIATION.

The ninth Conference of the American Hospital Association was held in the Palmer House, Chicago, September 17th, 18th, 19th and 20th. There was a very large attendance—the largest in the history of the Association. Canada was represented by a larger number of new members than any State of the Union, and its delegates secured the next meeting for Toronto, which will be held on the 26th of September, 1908.

The celebrated Miss Jane Addams, of Hull House, Chicago, delivered an address on "The Layman's View of Hospital Work Among the Poor," during which address she expressed some pretty severe criticism on some hospital workers. What she criticized most strongly was what she called "hospitalization of nurses, doctors and employees," by which she meant the performance of work with other ideas uppermost in mind than the welfare of the patients. She found considerable fault with the attention that was paid to details in regard to the appearance of wards and appearance of nurses, when the patients' wants were often neglected. Convalescent patients, too, were too often sent out before they were ready to go.

The Rev. A. S. Kavanagh, D.D., of the Methodist Episcopal Hospital, Brooklyn, read a paper on "Hospital Support, and How to Secure It." Dr. Kavanagh has succeeded in raising a tremendous amount of money for his hospital, and the secret of it has been a systematic appeal to not only the rich but the poorer classes as well. He has paid great attention to the five and one dollar subscriptions. Another means he took to enlarge the hospital income was to increase the number of attending physicians and surgeons, thus bringing more patronage to his private wards. Another point which he emphasized, which meant money to his institution, was that patients should be treated with kindness, courtesy and skill.

Dr. J. N. E. Brown, of the Toronto General Hospital, read a paper on "The Work of an Immunizing and Inoculating Department," in which he gave a history of such a department in the Toronto General Hospital. He described the technique of procuring the vaccines and of obtaining the opsonic index.

He then cited a series of cases in which the inoculation treatment had been used with distinct success.

Miss Louise M. Coleman, of the Good Samaritan Hospital, Boston, Mass., read a paper on the "Relative Authority of the Superintendent and the Staff in the Control and Discipline of patients." The contention of this paper was that to properly control and discipline patients, the superintendent and staff required to work in harmony.

Dr. R. Bruce Smith, Inspector of Hospitals, read a paper on "Waste in Hospitals." In this paper Dr. Smith explained to the American representatives present some of the features of the Canadian hospital situation, which went to show how it was possible for the Canadian hospitals to show such a good per capita rate as compared with the hospitals on the other side of the line. In the first place, Dr. Smith laid emphasis on the fact that all hospitals in the Province were under Government inspection. He then went into details of how waste could be prevented by the various workers in a hospital. He took occasion to call attention to the card index system, which is employed in the Toronto General Hospital and one of the smaller hospitals in Ontario as a means of checking undue waste on the part of nurses, doctors and employees.

A long discussion took place on the subject of the length of time a nurse should spend in the training school. Some of the members were strongly in favor of a two-year term, while others ardently supported the three-year term. The concensus of opinion seemed to be that the minimum term should be two years plus a probationary period; but where a nurse meant to enter institutional work, or take up special work, she should serve a period of three years.

The following other papers were read:

"Breakage and Loss, and How Far Should Employees be Held Responsible," Rev. M. Wahlstrom, Augustana Hospital, Chicago, Ill.

"An Experience with Floors," Dr. W. O. Mann, Massachusetts Hospital, Boston.

"A Comparison of Hospital Pay-Rolls; Employees and Their Selection and Management," Mr. Asa Bacon, Presbyterian Hospital, Chicago, Ill.

"Some Suggestions for the Organization of the Out-Patient Medical Work," Dr. Richard C. Cabot, Boston, Mass.

"Report of Sub-Committee on Medical Organization and Medical Education in Hospitals," Dr. J. A. Washburn, Massachusetts General Hospital, Boston, Mass.

"The Organization of a Teaching Hospital," Mr. E. S. Gilmore, University Hospital, Ann Arbor, Mich.

"The Modern Hospital Hotel," Mr. Louis R. Curtis, St. Luke's Hospital, Chicago, Ill.

The annual dinner at the Palmer House was a great success. Drs. Ochsner and Wahlstrom, of the Augustana Hospital, entertained a number of the delegates to a private dinner in the University Club, which was very much enjoyed.

Progress of Medical Science.

OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN.

Ocular Symptoms in Cerebro-Spinal Meningitis.

A. J. Ballantyne (*British Medical Journal*) has made a careful study in seventy-three cases.

Retraction of the Eyelids.—This was observed in fifteen cases, in some so marked as to expose the sclera above and below the cornea. This symptom seems to be confined to cases in which the chance for recovery is small.

Blepharospasm.—This was very frequent. The lid spasm was often severe and at first sight suggested photophobia. This is probably the symptom described as photophobia in cerebro-spinal meningitis, but the writer has not observed true photophobia in his series of cases.

Iritis, Cyclitis and Choroiditis.—No evidence of these was found in this series.

Pupils.—Abnormalities of the pupils were the most common symptoms. In sixty-three cases out of sixty-nine there was some abnormality, either inequality, changes in the size or changes in the reflex.

Strabismus.—This was found in fifteen cases.

Nystagmus was seen in seven cases.

Ophthalmoscopic Conditions.—Double optic neuritis was found in five cases, and in nine others were to be seen the premonitory appearances of optic neuritis.

Conclusion.—It will naturally be asked whether the ocular symptoms of cerebro-spinal meningitis are likely to afford any help in diagnosis or prognosis. The frequency of the presence of eye symptoms shows that it is worth while to have the eyes frequently and carefully examined. Perhaps the most striking feature of these cases is the great variation in the symptoms—squint, retraction of the lids, sizes and reactions of the pupils, vision, etc.—in the same patient from day to day, and even in the course of a single examination. This is brought out by the records of the writer's own examinations as detailed above, but even more markedly by comparison of these with the notes made from time to time in the hospital journals. In this respect cases of cerebro-spinal meningitis seem to the writer to differ somewhat from other forms of meningitis.

The Treatment with Argyrol Solutions of the Purulent Ophthalmias.

The Ophthalmic Record has an article on this subject with the following conclusions:

1. The treatment of gonorrheal conjunctivitis with argyrol is efficient, provided it is instilled often enough (every fifteen to thirty minutes) to keep the diseased tissues practically immersed in the solution.

2. The instillations must be continued day and night so as to render the immersion constant and afford the gonococci no chance of unchecked activity.

3. Until the formation of pus has wholly or virtually ceased the eye should not be irritated by any manipulation or the instillation of any other substance.

4. The less virulent course of the disease when so treated confirms the belief that more strenuous methods often abrade the weakened epithelium of conjunctiva and cornea and open ways of invasion to the gonococci.

5. As always, the best results are had when the remedy is thoroughly applied in the beginning of the disease. This can be done no matter how swollen or brawny the lids; a thing not possible with less diffusible liquids or with those which must be applied to the everted lids. It is excusable to repeat that eversion is dangerous in the early stage when the epithelium is softened and pus formation still profuse.

6. Under this plan corneal ulcers are uncommon, and when they do appear are held in check and do not produce widespread destruction. Corneal ulceration, then, far from forming a contraindication, gives an additional reason for its vigorous employment.

7. Argyrol is not a powerful astringent; therefore, as soon as pus formation has ceased and the lids have become flaccid, $AgNO_3$ solutions should be applied to the everted lids once daily to hasten the reduction of the conjunctiva.

8. In monocular cases the safety of the unaffected eye is secured by instilling the argyrol solution but one-half as often as in the infected eye.

9. The method is far less painful, especially in the acute stage, than any other yet proposed. This is an advantage not merely of good feeling, but enables us to treat many who, even at the cost of an eye, refuse to tolerate severer methods.

10. The author has never observed argyrosis following the use of argyrol.

An Experience Tending to Emphasize the Necessity for Routine Examination of the Ear Drums of Children with Fever.

W. B. Hoag (*American Medicine*) has some remarks upon this subject which are worth epitomizing:

Both McKernon and Kerley have in recent publications made the statement that "no examination of a sick child is complete until a thorough inspection is made of the condition of the middle ears." Possibly others have made this same assertion, and emphasized it; but conditions are such that we should keep hammering at the subject until there is a more general recognition of the truth of their contention.

This statement carries with it this fact: all of us who are general practitioners, or who practice as pediatrists, must include in our pocket outfit a headmirror and a set of ear speculums, just as we carry a stethoscope, hypodermic needle, and thermometer.

Hoag urges the routine examination of the ear drums, but admits that this is neglected. The cause of our neglect in this matter is the bred-in-the-bone idea that there can be no acute inflammation of the middle ear unless there is pain, and that the child must either cry severely or tug at the affected ear.

In illustrating this point he gives a record of twenty-six cases who had acute suppurative inflammation of thirty-seven middle ears. In only six of these cases was severe pain experienced, disease in the other twenty having been discovered only by the routine examination of the ears. Details of a number of his cases are given, emphasizing the fact that pain is often absent when it is necessary to incise the ear drum. Therefore a routine examination should be the rule.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

Intra-Nasal Drainage of the Frontal Sinus. FLETCHER INGALS (*Laryngoscope*, August, 1907.)

In this paper the writer outlines his method of treatment, claiming that in suitable cases, which constitute 90 per cent. of all chronic empyemas of the frontal sinus, his operation is as effective as any other operation. At the same time, while less difficult and less dangerous, it leaves no facial deformity as a result. His plan is to pass a steel probe up the nasal pas-

sage and through the fronto-nasal duct into the frontal sinus. Over this is manipulated a revolving electrical burr, which enlarges the passage into the sinus until it reaches a diameter of 6 mm. Through this enlarged canal a gold tube of his own design is passed into the frontal sinus, to remain in position until new mucous membrane has lined the artificial passage. In the meantime it affords the most effective drainage.

A Case of Fatal Meningitis after Removal of the Anterior End of the Middle Turbinate. J. P. MOSHER (*Boston Medical and Surgical Journal*, May, 1907.)

This was a case in which operation was done on a man, aged fifty, to ascertain the origin of pus, which filled the middle meatus, and had been present for several years. After the operation the middle meatus was packed with sterile gauze. This was removed the next day and the antrum syringed. Severe frontal headache was complained of. Two days later he had septic meningitis. The frontal sinus was then opened and found full of pus, as also were the antrum, the ethmoid and the sphenoid. Foul pus was everywhere. The man never regained consciousness. He died within twenty-four hours. No autopsy. The writer believes the packing walled back the pus and infected the meninges through the cribriform plate.

Contributions to the Pathology of Keratosis Pharyngis, with Especial Reference to the Bacteriology of the Disease. HAMM and TORHORST (*Journal of Laryngology*, July, 1907.)

The writers of this paper consider that the evidence brought forward by Liebenmann, and supported by the anatomical and bacteriological studies of Onodi and Entz, is sufficient to prove that the leptothrix is of no etiological importance in keratosis pharyngis. They do not, however, agree with the view of the last two authorities, that the cause of the disease is an epithelial proliferation due to slight but repeated inflammatory attacks, since, apart from other considerations, subjective symptoms are not infrequently absent.

By repeated microscopical examination, however, they are inclined to believe that they have discovered the cause. In addition to many of the organisms belonging to the flora of the mouth, as well as numerous leptothrix threads, they found large numbers of a capsulated bacillus. They describe these organisms as rod-shaped with rounded ends, non-motile and sporeless, each bacillus being surrounded by a broad mucoid capsule. This capsule, which is well developed under all conditions of

growth, stains best by Heim's method or with Giemsa's stain. The bacillus itself is stained by all the aniline dyes, and decolorizes rapidly by Gram's method. It grows easily on all the ordinary culture media, and white mice die of typical septicemia sixteen to forty-eight hours after subcutaneous injection.

The Channels of Infection in Tuberculosis, and the Part Played by the Lymphatic Glands, etc. DR. JOBSON HORNE (*Journal of Laryngology*, July, 1907.)

In a carefully studied and comprehensive paper upon this subject the writer, in speaking of the inter-relationship which should exist between the pathologist and the bacteriologist, quotes Welch as saying: "One misses only too often in purely bacteriological papers on this subject exact knowledge and descriptions of pathological conditions; and, on the other hand, pathologists often fail to utilize pertinent facts and ideas which are familiar to bacteriologists." On the same subject Sir Dyce Duckworth says: "Our modern pathologists reckon without their hosts." Jobson Horne's views are in accord with those of both of these writers. He thinks that a halt should be made in bacteriological and experimental research, and that the shrewd observations of the older pathologists and clinicians should be studied in the light of scientific medicine of to-day. Hence, in the research made for this article, he has combined the exact knowledge and descriptions of pathological conditions seen in post-mortem examinations with the corresponding clinical phenomena in the process of infection, as observed during life.

Although it is accepted that infection may take place *in utero* in cattle, with regard to the human subject it is considered so far as not proven. Infection through the skin is so unusual that he excludes it from consideration in a paper upon practical research.

The great portals of entrance of the tubercle bacillus are the respiratory tract and the mouth, leading to the infection of the lungs and alimentary canal, the bacilli, in the vast majority of instances, being first localized in the lungs. As a direct evidence of the method of infection it was found that when dogs were made to inhale tuberculous virus, and were examined a few hours afterwards, the bacilli were no longer present in the alveoli, but were found in the bronchial glands and the lymph channels leading from them, indicating that these glands act as filters, absorbing the bacilli as they would particles of

dust. It would further seem that when the bronchial glands, from being choked or exhausted, or any other cause, are no longer able to take up or dispose of the bacilli, then direct infection of the lungs from inspired air may take place.

The post-mortem appearance of the tuberculous process, developing from the root of the lung, sustains the same theory; either that it is the outcome of an active and direct infection through the bronchial glands, or else an indirect or passive infection of the lung, due to the inability of the glands to deal with the invasion.

In the existence of laryngeal tuberculosis as a distinct disease Jobson Horne has no faith. To use his own words: "Laryngeal tuberculosis is not an entity. Primary tuberculosis of the larynx is a pathological phenomena which I shall show to be a negligible quantity. When the larynx is infected with tubercle the disease is already established in the lung."

The clinical conclusions of his research were founded upon 359 consecutive cases of phthisis. These, of course, were divided into different groups, the character and extent to which the larynx was also similarly affected being likewise divided. In these investigations the astonishing fact is brought out that in the 359 cases examined changes due to the disease occurred in the larynx 350 times, or in 97 per cent. of the whole. These changes he divides into three groups:

1. Changes in color and impaired movement, which could be observed in life but not in post-mortem.
2. Infiltration, etc., without breach of the epithelium.
3. Changes, additional to the above, due to ulceration and destruction of tissue.

Among the changes in the larynx of a person affected with pulmonary tuberculosis the writer draws attention to one that has not been sufficiently noted, namely, the dulling of the normal characteristic lustre of the vocal cords. They lose their semi-translucent mother-of-pearl sheen, and present a semi-solid opaque pallor approaching a dead white hue.

This lustre of the mucosa is maintained by the muciparous glands discharging their contents on the surface. And the loss of lustre is attributed to the pathological choking of these glands, largely due to a loss of tone in the intrinsic muscles of the tuberculous patient.

Changes in the vocal function were observed in 240 of the 359 cases noted; in 60 per cent. of the male patients and 72 per cent. of the female patients.

The frequency with which infiltration and edema affected the different parts of the larynx was well worthy of record. In 176 cases the interarytenoid space was affected, in 139 the arytenoids bilaterally, in 57 the ventricular bands, in 30 the epiglottis. Cases in which the affection was unilateral were rare.

The parts of the larynx most subject to ulceration and destruction, in this long list of cases, were those in which the stress and strain were the greatest, that is, the interarytenoid region, together with posterior tracts of the vocal cords—the neighborhood of the cartilages of the vocal processes.

Spasm of the Esophagus.

J. W. Farlow (*Laryngoscope*, August, 1907) gives the history of a somewhat unusual case. It occurred in a woman, aged fifty years, at intervals of about a year, and without any notable exciting cause. The patient's health had always been good, and she was neither hysterical, anemic nor dyspeptic. Although she had several narrow attacks of discomfort in the throat while eating apples, nuts, or dry bread, the first severe attack occurred in the middle of luncheon while swallowing a piece of masticated apple. She suddenly became pale and seriously distressed, with pain in the lower part of the neck. She was able to speak, and the pulse and respiration were both unaffected, while unable to swallow anything, not even water. Hot applications were made to the neck, and although agreeable, they did not relax the spasm. In about twenty minutes pain ceased, frothy mucus was expectorated, and the spasm relaxed.

One year later a similar attack occurred while eating a piece of meat at luncheon, relaxation taking place as before in about twenty minutes.

Again there was a year's interval, and another attack after eating a biscuit. This time it took three-quarters of an hour to relax the spasm.

Treatment at the time in none of these attacks seemed to avail. But after the last one, massage of the neck, compresses and local treatment for simple chronic pharyngitis were tried for some time. The subsequent year she escaped, but whether the treatment had any bearing upon the case the writer questions. One point, however, he insists upon in these cases, and that is the importance of diagnosis, the attempt to pass food, from some idiosyncrasy of the patient, being the immediate cause.

It is to be distinguished from lodgment of food in the larynx. This would cause dyspepsia as well as loss of voice, neither of which need result from esophageal spasm. In laryngeal obstruction the patient might still be able to swallow, which would be impossible in the former condition, while swallowing would be easy as soon as the spasm was over.

In angina pectoris, dyspepsia is very great, while there are marked changes in pulse and respiration, conditions quite foreign to those attending spasm. At the same time pain is much more severe in angina, and of a radiating character.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES AND W. J. GREIG.

The use of Sodium Citrate in Infant Feeding. PRENTISS (June *American Journal of Obstetrics*).

The author names a number of medical writers who claim that when sodium citrate is added to cow's milk the hard casein curds which form in the stomach are prevented. It has been found that one grain added to an ounce of cow's milk will produce the desired effect.

The hard casein curds are produced by the presence in the milk of caseinogen, hydrochloric acid and calcium salts. When citrate of sodium is added a chemical combination takes place with the calcium and less firm clots of sodium casein are formed.

Poynton urges its employment for the following purposes:

1. Weaning healthy children. When small quantities are added to the milk the babies will digest a higher percentage of proteids, and thus better nutrition will result.

2. To increase the amount of milk taken. All writers agree that when sodium citrate is used infants can take and assimilate a larger quantity of milk.

3. Correction of milk dyspepsia. Sodium citrate given in full doses to a nursing mother will be eliminated in the milk and result in a less firm curd (grs. 15 at a dose). When given to the bottle-fed baby in doses of 1, 2, 3 or 4 grains to the ounce of milk the hard casein curds are prevented. Thus the cause of the greater number of cases of infantile dyspepsia is counteracted.

4. Avoidance of scurvy. It does this because by its use fresh cow's milk can be taken.

Administration.—Begin with 1 grain to the ounce. If curds persist in the stools, or if vomiting or regurgitation of curdled

milk occurs, increase the amount to 2 or 3 grains. When the infant is all right gradually reduce the dose to ½ grain, ¼ grain to the ounce and then stop. The most convenient way to prescribe it is in a solution with 1 ounce containing the amount needed for 1 ounce of milk. One drop of chloroform to 12 ounces of the solution will prevent fermentation.

Abdominal Signs of Pulmonary Disease in Children. JNO. D. THOMAS (*Amer. Journal of Obstet.*, July, 1907.)

Kelly, in his work on appendicitis, devotes two or three pages to this topic. The differential diagnosis is more important in children than in adults. The importance of this subject is emphasized by the fact that the results of appendicitis in children, unless dealt with promptly, are more serious than in adults. Abscess and peritonitis are more apt to complicate appendicitis in children than in adults. Carson, in the *British Medical Journal* (Nov. 10, 1906), says that the most important thing to diagnose appendicitis in children from is pneumonia. The two diseases which I will refer to particularly are pneumonia and pleurisy. Carson gives the differential diagnosis as follows:

1. Pneumonia has an acute onset, high temperature and rapid respirations out of proportion to the pulse.

2. Dilatation of the alæ nasi is present in pneumonia.

3. When the abdominal muscles are rigid in pneumonia they relax between respirations.

4. Right-sided pneumonia may cause an acute hyperesthesia over the appendix which disappears on firm pressure with the flat hand.

5. Doubtful abdominal symptoms occurring in association with unmistakable thoracic symptoms are probably reflex.

In a number of cases reported the abdominal symptoms did not disappear until the thoracic signs were undoubted. Sometimes the thoracic signs were not certain until the crisis of the pneumonia. Sometimes the explanation is an inflammation of the pleura of the diaphragm or of the mediastinum.

Other points in the diagnosis are the absence of chlorides from the urine, the presence of a leucocytosis, the expiratory grunt given by children in pneumonia, the flush on the cheek and the greater tenderness along the attachment of the diaphragm to the costal cartilages.

A Case.—A five-year-old girl taken with sudden pain in the abdomen when eating dinner. Next day she had pain and tenderness in the right iliac fossa, temperature 104.4, head-

ache. On the third and fourth day temperature and pain kept up, but the tenderness disappeared. On the fifth day pain continued and temperature was higher. Later, the right thorax was discovered to be flat on percussion, tubular breathing and bronchophony were present. Dr. Richardson, in speaking on this subject, says "*that the chief difficulty in making a distinction is to recognize that the necessity for the distinction exists, for the thoracic symptoms are always masked by the more conspicuous and distressing abdominal symptoms.*"

Two cases are cited which show the possibility of the two conditions existing together.

The pathology is that the reflex is carried through the lower six dorsal nerves which extend from the thorax over the abdominal wall and supply the abdominal wall to the brim of the pelvis. The diaphragm and the lower part of the pleura are also supplied by these nerves. If the seventh, eighth and ninth nerves are affected, the epigastric tenderness and spasm will simulate a gastric ulcer perforation or a gall-bladder or liver trouble. A case of this kind is cited.

Another curious feature is that the pneumonia may be in the left lung, but the abdominal signs on the right side.

The writer gives a table of forty-nine cases of thoracic disease, in eight of which laparotomy had been performed.

Many other peculiar complications are mentioned in this very interesting article.

Addison's Disease in Children. FELBERBAUM, *N. Y. Med. Jour.*, Aug, 10th, 1907.

Addison's disease is very rare in children. Of 290 recorded cases only eleven were in children. The authors report another in a child twelve years old. Microscopical examination of the stools showed a great number of oval, egg-like bodies, each four times the size of a red blood cell. The cytoplasm appeared as a thin, distinct rim around a large oval nucleus, giving the impression of encysted protozoa. Various well known pathologists examined these bodies, but were not able to determine their nature. In this case there was eosinophilia, and the case terminated by convulsions and coma. The authors collected twenty-five cases, and desire to call attention to the following facts:

1. Extreme rarity of the disease under thirteen years of age.
2. Evenly divided between boys and girls.
3. Mildness of gastro-intestinal symptoms.
4. Peculiar condition of the hair.
5. Death usually with convulsions.

Acute Enteric Intussusception with Apparent Reduction by Irrigation, Abdominal Section and Fatal Result. WM. TEMPLEMAN, *B.M. Journal*, Aug. 3rd, 1907.

Boy, three years old. Slight tympanites, with a definite elongated swelling, not sausage shaped, two inches long and one inch broad, pointing downwards and inwards in the left iliac region, dull on percussion. Nothing felt per rectum. A pint of water slowly injected was followed by reduction. It reappeared the next day and was again reduced by injection. Three hours later it reappeared, and while the child was being prepared for operation it was again reduced. In a few moments it reappeared. When the abdomen was opened an intussusception two inches long was found, which was easily reduced. The child recovered well from the operation and passed a large distinctly fecal motion. Thirty-six hours after it became collapsed and died. The case is interesting in relation to the question whether acute cases should be operated on as soon as diagnosed, or whether irrigation or inflation should be first tried. In the enteric variety (which form one-third of all the cases) irrigation is of no use and may, as in this case, cause delay in operation.

Editorials.

THE CANADIAN MEDICAL ASSOCIATION.

The recent meeting of the Canadian Medical Association in Montreal was one of the poorest we have known in connection with that body. It fortunately happened, however, that the visiting members had a very pleasant time because of the kindness and courtesy of our genial and hospitable friends in Montreal. Dr. McPhedran was fortunate in his ability to persuade so many Torontonians to attend the meeting.

Among those present from Toronto were: Drs. Geo. Elliott, Rudolf, Hodgetts, Bruce Smith, A. McPhedran, J. H. McPhedran, Hart, Hunter, Newbold Jones, Helen MacMurchy, F. N. G. Starr, C. L. Starr, W. A. Young, C. R. Dickson, Cameron, A. H. Wright, Chambers, G. S. Ryerson, McKeown, W. H. B. Aikins, G. Wishart, D. A. L. Graham, Reeve, Mackenzie, Walters, Gordon, Warner Jones, Sam Johnston, Goldsmith, J. Ferguson, Primrose, Geo. W. Ross and Fotheringham.

Among the Montreal doctors who worked most zealously for the success of the meeting were Dr. Ridley Mackenzie, Local Secretary, and Drs. Birkett, Roddick, Klotz and Finley. The clinics which were given at the different hospitals were excellent, the physicians and surgeons going over much ground in a very short time.

There was a large audience on the evening of the first day, when the President read his address, which was received with hearty marks of approval. The greater part of the second day was occupied by a very tedious discussion and consideration of the lengthy report on the Constitution of the Association, under the chairmanship of Prof. I. H. Cameron. As a consequence there was very little work done in the sections.

On the forenoon of the third day, when the sections should have commenced work, Professor Adami occupied the forenoon in reading his very long paper. We think the President was

hardly justified in allowing one member to monopolize the time which should have been spent at section work. However, his position was a somewhat delicate one, and he, being a Torontonian, probably did not like to apply the closure to a prominent Montrealer. It thus happened that no one appeared to take any interest in the scientific part of the meeting after the clinic which was held in the Montreal General Hospital at noon of the second day.

The Nominating Committee unanimously decided that Ottawa should be the place of meeting for the next year. It gave the members greater pleasure than usual in choosing Ottawa, because it gave them the opportunity of making Dr. Montizambert the President. It is likely that in any case this gentleman would have been selected as President, but it was thought desirable that the President should live in the city where the meeting was to be held.

Following is the result of the elections of other officers:

General Secretary, Dr. George Elliott, Toronto; General Treasurer, Dr. H. B. Small, Ottawa; the two latter being re-elected. Provincial Vice-Presidents: Prince Edward Island, Dr. Alex. McNeil, Summerside; Nova Scotia, Dr. M. A. Carry, Halifax; New Brunswick, Dr. Ross, Sackville; Quebec, Dr. F. R. England, Montreal; Ontario, Dr. W. H. B. Aikins, Toronto; Manitoba, Dr. Harvey Smith, Winnipeg; Saskatchewan, Dr. Kemp, Medicine Hat; Alberta, Dr. R. D. Sansom, Calgary; British Columbia, Dr. C. J. M. Pearson, Vancouver. Provincial Secretaries: Prince Edward Island, Dr. R. D. McLaughlin, Morell; Nova Scotia, Dr. R. S. Mathers, Halifax; New Brunswick, Dr. J. V. Anglin, St. John; Quebec, Dr. A. H. Gordon, Montreal; Ontario, Dr. Hackney, Ottawa; Manitoba, Dr. Gordon Bell, Winnipeg; Saskatchewan, Dr. R. J. Kee, Esterhasy; Alberta, Dr. Dow, Calgary; British Columbia, Dr. Eden Walker, New Westminster. Executive Council: Dr. R. W. Powell, Dr. E. B. Echlin, and Dr. G. Gibson, all of Ottawa.

BRITISH MEDICAL ASSOCIATION.

In our last issue we mentioned the fact that fourteen Canadian physicians attended the meeting recently held in Exeter. We had supposed that those who worked so diligently for a whole year to make the Toronto meeting a success, and entertained the visiting members so handsomely, would have received courteous treatment at Exeter. We have since learned with extreme regret that the majority of them were absolutely ignored during their attendance at the meeting.

We are told that there were certain entertainments, and notices were put up asking the members to send in their names if they wished to attend such functions. In most cases the numbers were limited, and the selected few were chosen from the hungry applicants by ballot. This generous hospitality was not appreciated by the majority of the visitors, who declined to send in their names, and as a consequence they did not appear at the picnics and tea parties.

So far as we can learn they were not pining for buns and tea, but they would have liked a handshake or a friendly greeting of some sort. It would scarcely be fair to expect a small town of 50,000 people to do much in the way of entertaining, but surely the local members might have taken the trouble to show a little civility to prominent visitors from Canada and other countries. If, however, the residents of Exeter did not care to take so much trouble, we think the Council of the Association might have put forth some slight efforts to extend a welcome.

THE MEDICAL PROTECTIVE ASSOCIATION.

The sixth annual meeting of the Canadian Medical Protective Association was held in Montreal, Sept. 12th, the President, Dr. Powell, of Ottawa, being in the chair The chief business transaction was the decision to limit the membership to those who were eligible for membership in the Canadian Medical Association. The report showed that the Association

was in a flourishing condition, and the report of the solicitor, Mr. F. H. Crysler, showed that for the year ending in July last the Association had not been called upon to defend any member. Since then a member has been sued for $10,000 on a charge of performing a major operation without the consent of the patient.

The following officers were elected: President, Dr. R. W. Powell, Ottawa; Vice-Pres., Dr. J. O. Camarind, Sherbrooke: Sec.-Treas., Dr. Fenton Argue, Ottawa; Solicitor, F. H. Crysler, Ottawa.

The following were elected as members of the Executive for the different Provinces: Ontario—Edmund E. King, Toronto; Ingersoll Olmsted, Hamilton; D. H. Arnott, London; J. C. Connell, Kingston; J. D. Courtney, Ottawa. Quebec—H. S. Birkett, E. P. Lachapelle and J. E. Dube, of Montreal. New Brunswick—T. D. Walker and Murray McLaren, of St. John. and A. B. Atherton, of Fredericton. Nova Scotia—John Stewart, Halifax; J. W. Patton, Truro; H. E. Kendall, Sydney. Prince Edward Island—S. R. Jenkins, Charlottetown. Manitoba—Harvey Smith and J. A. McArthur, Winnipeg; J. Hardy, Morden. North-West Territories—J. D. Lafferty, Calgary; F. Seymour, Regina. British Columbia—S. J. Tunstall, Vancouver; O. M. Jones, Victoria; J. H. King, Cranbrooke.

UNIVERSITY OF MANITOBA.

The Government of Manitoba has created a Royal Commission, under the chairmanship of Mr. J. A. M. Aikins, M.A., K.C., to enquire into and make recommendations concerning the University of Manitoba in Winnipeg. The commissioners will be expected to take all necessary steps for acquiring such information as may be desirable, and will have the power of compelling the attendance of witnesses. They have been asked to consider the present system of government and management of the same. They will also consider the general financial status and give the general outline of a

scheme for financing the University. They will also consider the relations between the said University and several affiliated colleges and other educational institutions. Many other things which will also come under their consideration are the nature, scope and method of teaching at present in vogue, and the suitability and sufficiency of the present University buildings, having regard particularly to the advisability of procuring another site in, or in close proximity to, the city of Winnipeg and erecting thereon new buildings.

THE USE OF MEDICINES.

The physicians of Great Britain were not favorably impressed by the address of Sir Frederick Treeves at the opening of a new isolation hospital at Preston in the early part of the summer. In referring to the use of medicines Sir Frederick said: "He was afraid that a long time would elapse before people would break this extraordinary habit of taking medicine when they were sick. It was a prejudice deep down in the hearts of all people. Why it existed it was hard to say, but there it was and he supposed would continue for some little time. If they pictured the environment of a doctor they would see a multitude of shelves covered with bottles. These bottles were gradually vanishing, and the time is not far off when they will be reduced to an extremely small number, and the empty shelves would be replaced by simple living, suitable diet, plenty of sun and plenty of fresh air."

The Medical Magazine, published in London, England, in an editorial which appeared in its July number, expressed the opinion that these statements, made before a lay audience, were not such as should have come from a man in the position of Sir Frederick Treeves, who, although an eminent surgeon, possesses neither authority or knowledge which entitles him to speak in the name of physic.

The writer also thinks his remarks cast an aspersion on the ordinary practice of medicine, because the taking of medicine

when people are ill is due to the prescriptions of their attending physician.

The article concluded as follows: "It is sometimes said that surgeons are apt to look askance at medicine, the reason being that they are so much enamored of their *operations* that they are blinded to the higher methods of treatment, for conservative medicine and conservative surgery are truly the higher aims. We conclude by affirming that the remarks of Treeves were grossly irregular and foolish, and the outcome merely ignorance and vanity."

THE DETENTION HOSPITAL AT QUEBEC.

The recent fire at the Detention Hospital has proved, as calamities so often do, a blessing in disguise. The Dominion Government has adopted an enlightened policy and erected a modern, absolutely fire-proof and admirably-planned hospital, fitted in every way for this branch of Government Medical Service work. The building is situated on several acres of ground outside the city. It is of red brick, and every detail has been worked out with great success. There will be an observation cottage and several other cottages, one for measles, one for diphtheria, etc., etc., away from the main building, and then other patients will be cared for in this central building. Ingenuity and a clear understanding of the necessities of such a hospital are shown at every turn.

There are family rooms, an operating room, bath-rooms, treatment rooms, etc., etc., and several large, very airy wards. One of the chief features is the verandah space. This is ample and carefully protected. In fact, the site and the plan of the hospital approach the ideal.

Dr. Page spent some months last winter, after the close of navigation, visiting Antwerp, Liverpool, and all other ports where immigrants sail for Quebec. The encouraging result of his labors abroad is that inspection methods have improved, and the number treated in the Detention Hospital has fallen from 300 and more in 1906 to about 40 in 1907, up to the present time.

A great deal of interest is felt among the profession in Quebec in regard to a proposal made by Dr. Page that during the five months that navigation is closed and the hospital empty (inasmuch as there is no sanitarium for tuberculosis in Quebec), that the empty hospital might be used as a sanitarium. This seems an excellent idea, and we hope to hear that it is being carried out. A visit to the Detention Hospital in Quebec will afford any member of the profession great interest and satisfaction, and it is to be hoped that all who have any opportunity to see it will not fail to do so. It is now almost complete, and will shortly be opened.

HONOR TO AN VENERABLE PHYSICIAN.

On the 1st of August last there was a very interesting function in St. John, N.B., when a large number of the physicians of that city met in the house of Dr. Wm. Bayard to offer their congratulations on the seventieth anniversary of his graduation as a doctor of medicine from the University of Edinburgh. They also expressed their gratification because of the fact that his Alma Mater had honored him by conferring upon him the honorary degree of Doctor of Laws.

On the same occasion Dr. Thos. Walker read an address from Dr. D. J. Cunningham, Dean of the Faculty of Medicine of the University of Edinburgh, containing the Faculty's cordial greeting and warm congratulations. It also contained the statement that, "So far as we know you are the senior graduate of our roll." In connection therewith it is interesting to read a letter of Dr. Wm. Dashword Kingdon, of Exeter, which appeared in the *British Medical Journal* of August 24th. Dr. Kingdon congratulated Dr. Bayard on his longevity and good health, but he disputes his right to the title of the "patriarch" of Edinburgh graduates, because, while he, Dr. Kingdon, graduated on the same day as Dr. Bayard, that is August 1st, 1837, he was born in December, 1813, and is therefore eight months older than Dr. Bayard. We offer our congratulations to both of these venerable and distinguished physicians.

THE TREATMENT OF MENTAL DISEASES.

Hon. Dr. Willoughby and Dr. Clarke, of Toronto, and Dr. Ryan, of Kingston, returned to Canada in August. It will be remembered that they went to Europe as representatives of the Provincial Government in June. They visited asylums in Great Britain, France and Germany, and studied the methods of treatment with a view to obtaining data for use in the asylums of Ontario. It is expected that the Toronto Asylum will be removed to a new site, and it is hoped that a psychiatric clinic, in some respects similar to that at Munich, Germany, will soon be established. It is likely that this will form a part of the new General Hospital. It is expected that proper treatment will save many patients who are on the borderland of insanity.

ABDOMINAL ARTERIO-SCLEROSIS.

Although clinicians have recognized some of the more common forms of arterio-sclerosis and have made practical application of their knowledge, they have been slow to realize that many obscure conditions of the abdominal and pelvic organs are due to a thickening of the entire vascular system of the abdomen. Huchard was perhaps the first to call our attention to this symptom-complex, where we may have almost anything from simple nausea and flatulency to severe hematemesis, always associated, however, with arterio-sclerosis and characterized by intermittency. If such a patient improves with vaso-dilators, such as the nitrites, and with potassium iodide, the diagnosis may be made with reasonable surety.

It is only during late years, too, that we have come to understand that in certain cases of angina pectoris the pain may be entirely epigastric, and so lead one astray, unless a careful examination is made. There can be no doubt, also, that pains of a similar nature arise from the thickened condition of the abdominal aorta, and these might properly be termed angina abdominalis. There are thus two conditions, probably due to similar causes, which must be differentiated for purposes of

prognosis. Cases of abdominal arterio-sclerosis have been often mistaken for gastric ulcer or carcinoma, imitating the symptoms so closely that only time revealed the error. Vomiting and distension are very common, and sometimes hemorrhages are very severe, but the clue lies in the comparatively long intervals in which the patient is free from all pain and distress. The usual treatment for the condition causing the trouble is fairly successful, and the patient who lives a quiet life may spin out his existence for many years.

CANADIAN SOCIETY OF SUPERINTENDENTS OF NURSES' TRAINING SCHOOLS.

At the recent meeting of the Canadian Society of Superintendents of Nurses' Training Schools held in Montreal, Sept. 11th and 12th, the following officers were elected for the coming year: President, Miss Snively, of Toronto; 1st Vice-President, Miss Chesley, of Ottawa; 2nd Vice-Pres., Miss Livingston, of Montreal; Secretary, Miss Brent, of Toronto; Treasurer, Miss Meiklejohn, of Ottawa. The following were elected Councillors: Miss Henderson, Toronto; Miss McDougald, Halifax; Miss Wilson, Winnipeg; Miss Chesley, Ottawa; Miss Patton, Toronto; Miss Greene, Belleville, and Miss Scott, Kingston.

It was announced in the address of the President that the Society had received a message from Col. Jones, of Ottawa, presenting the wish of Princess Christian that a staff of nurses be formed in Canada, to act in the same relation to the militia of the country as that of the Red Cross nurses of the regular army. The President proposed that the Society affirm its willingness to adopt the idea, and this was unanimously carried.

The Association of Medical Officers of the Militia of Canada.

This Association, which was first organized in 1892, has been revived and reorganized. All medical officers of the militia, A.M.C. and regimental, are *de facto* members without election. The objects of the Association are the development of departmental *esprit de corps,* the discussion of military medical subjects, the reading of papers and discussions thereon

on military medicine and surgery, hygiene and equipment. The following officers and committees were elected: Hon. President—Hon. Sir Frederick Borden, K.C.M.G., M.D., Minister of Militia and Defence. Hon. Vice-Presidents—Col. E. Fiset, D.S.O., Deputy Minister of Militia and Defence; Lieut.-Col. G. Carleton Jones, D.G.M.S. President—Col. G. Sterling Ryerson, M.R.O., Toronto. Secretary-Treasurer—Lieut. T. H. Leggatt, A.M.C., Ottawa. Vice-Presidents for Military Districts—No. 1, Capt. D. H. Hogg; No. 2, Lieut.-Col. Hillary, 12th York Regt.; No. 3. Lieut.-Col. Duff, P.A.M.C.; No. 4, Major J. D. Courtney, M.R.O.; No. 5, Major McTaggart, 1st Regt., Prince of Wales' Fusiliers; No. 6, Lieut.-Col. A. N. Worthington, A.M.C.; No. 7, Lieut.-Col. Grondin, 87th Regt.; No. 8, Lieut.-Col. McLaren, A.M.C.; No. 9, Lieut.-Col. Sponagle, A.M.C.; No. 10, Major Devine, P.A.M.C.; No. 11, Lieut.-Col. J. A. Grant, P.A.M.C.; No. 12, Lieut.-Col. Johnson, A.M.C.; No. 13, Capt. W. S. Hewetson, A.M.C. Executive Committee—Capt. H. A. Kingsmill, 7th Regt.; Major G. A. Rennie, A.M.C.; Lieut.-Col. K. Cameron, A.M.C.; Capt. M. Lauterman, Duke of Connaught's Hussars; Capt. E. A. Lebel, 9th Regt.; Major G. J. McNally, 71st Regt.; Capt. G. M. Campbell, Nova Scotia Regt.; Lieut. J. W. Manchester, 90th Regt.; Capt. F. C. McTavish, 6th Regt.; Lieut.-Col. Warburton, 82nd Regt.; Lieut. T. A. Hislop, Headquarters Staff. The next meeting of the Association will be held at Ottawa on February 26th, 1908.

Canadian Medical Association.

Au point de vue purement scientifique, nous n'avons pu noter rien de particulièrement saillant ou portant un véritable caractère d'originalité. Citons cependant le travail du Professeur Adami sur la classification des tumeurs en Anatomie Pathologie, celui de W. W. C. Chipman sur les grossesses extra utérines en gynécologie de Von Eberts sur un diverticule congénital de la Vessie, de Keenan sur le Lymphosarcome.

L'ecole française était représentée par les travaux de A. de Martigny, sur le Traitement de la Tuberculose par le serum de Marmoreck, et de J. N. Roy, sur l'huile de Vaseline dans le pansement des mastoidites et un cas de mélano-sarcome du voile du palais.

Le mercredi soir il y eut réception des congressistes au cercle des Etudiants de McGill, le jeudi après-midi, réception par le Dr. Roddick, doyen de la Faculté et la réunion se terminait de façon charmante le vendredi, par un concert au Victoria Rifles Armoury.—*Le Journal de Medicine et de Chirurgie.*

Personals.

Dr. F. H. Scott, of Toronto, has been appointed a Lecturer on Physiology in University College, London, England.

Dr. John L. Bray, formerly of Chatham, is now regularly domiciled in Toronto, and is at 260 Avenue Road, cor. Macpherson Ave.

Dr. C. H. Thomas, of Toronto, after spending some months in Great Britain at post-graduate work, has returned and resumed practice.

At a recent meeting of the American Laryngological Association, Dr. H. S. Birkett, of Montreal, was elected President for the coming year.

Dr. Allan Kinghorn, who has been in England for some time, has gone with the Liverpool Expedition to Africa for the purpose of studying the sleeping sickness.

Dr. Douglass Montgomery spent some days in Toronto last month visiting relatives and friends on his return from Europe before leaving for his home in San Francisco.

The Medical Section of the National Fraternal Congress held its annual meeting in Buffalo, Aug. 19th and 20th. Dr. Wm. Warren Potter, of that city, delivered the address of welcome.

Dr. J. Russell, formerly Superintendent of the Asylum for Insane, Hamilton, is now living at 168 Main Street West, Hamilton, and is practising as a consultant in mental and nervous diseases.

At the last meeting of the Montreal Medico-Chirurgical Society the following officers were elected: Dr. Wesley Mills, President; Dr. Alex. Hutchison, Vice-Pres.; Dr. A. H. Gordon, Secretary, and Dr. A. T. Basin, Treasurer.

Dr. J. H. Elliott, for nine years in charge of the Muskoka Cottage Sanitorium at Gravenhurst, announces to the profession that he has taken residence at 611 Spadina Avenue, Toronto, and will devote his attention to diseases of the chest and tuberculosis.

We learn from the *Montreal Medical Journal* that Dr. J. L. Todd, formerly of Montreal, after several years of work in connection with the Liverpool School of Tropical Medicine, and for some time a Director of the Tropical Research Laboratories at Runcorn, has decided to return to Montreal.

Obituary.

THOS. BRUNSKILL, M.D.

Dr. Brunskill, a graduate of Victoria University, 1868, died Sept. 2nd, at his late residence, 261 Wellesley Street, Toronto, aged 62.

FITZGERALD SUTHERLAND, M.D.

Dr. Sutherland, of Norwich, Ont., died July 26th, aged 76.

SENECA D. POWELL, M.D.

Dr. Powell, of New York, and well known to many physicians in Canada, died at his country home, Greenich, Conn., August 24th, aged 60.

CLOUDSLEY HERBERT BRERETON, M.D.

Dr. C. H. Brereton died at the residence of his father, Dr. W. J. Brereton, Schomberg, September 17th, aged 34. He graduated from Trinity in 1896, and practised for some years in Chesley, Ont.

We regret to learn from *Merck's Archives* that Mr. Fred J. Grant, the well known and valued co-worker on the Merck's publications, died suddenly from apoplexy, June 29th, aged 61.

Book Reviews.

DISEASES OF THE STOMACH. By Dr. I. Boas, Specialist in Gastro-enteric Diseases in Berlin, Germany. The sole authorized English-American edition from the latest German edition. By Albert Bernheim, M.D. (Freiburg, Germany), Assistant to the late Dr. D. D. Stewart at the Philadelphia Polyclinic Hospital and Post-Graduate School, as Instructor in the Department of Diseases of the Stomach and Intestines, etc., etc. Appropriately illustrated with five full-page plates and sixty-five engravings in the text. 730 royal octavo pages. Extra cloth, $5.50 net; half-morocco, $7.00 net. Sold only by subscription. Philadelphia, Pa.: F. A. Davis Company, Publishers, 1914-16 Cherry Street.

We have in the above volume an exhaustive treatise on the stomach and its diseases brought up to so late a date as May, 1907. The style throughout is clear and practical; the print, paper and illustrations reflect credit on the publishers. The general arrangement of reading matter is as follows: Anatomy, physiology and chemistry first receive attention; then the methods used in examination (the use of X-ray, diagnostic significance of blood, urine, gastric contents, etc.) are fully detailed; general therapeutic measures (including dietary, balneotherapy, lavage, etc.); finally comes a division embracing the various diseases encountered, organic and functional. We cannot praise too highly this excellent translation. From every standpoint it is everything a practitioner could desire.

FIVE HUNDRED SURGICAL SUGGESTIONS. Practical Brevities in Surgical Diagnosis and Treatment. By Walter M. Brickner, B.S., M.D., Chief of Surgical Department, Mount Sinai Hospital Dispensary, New York; Editor-in-Chief, *American Journal of Surgery*, and Eli Moschcowitz, A.B., M.D., Assistant Physician, Mount Sinai Hospital Dispensary, New York; Associate Editor *American Journal of Surgery*. Second Series. Duodecimo; 125 pages. New York: Surgery Publishing Co., 92 William Street. 1907. Price, $1.00.

It is not surprising that the first edition of "Surgical Suggestions" was quickly exhausted. The attractive little volume was most favorably received by reviewers, and its contents—the snappy, practical "suggestions"—have been reprinted again and again by medical journals all over the country.

In this second series all the surgical suggestions of the first issue have been incorporated, and as many more, making a total of five hundred terse, useful "therapeutic hints and diagnostic wrinkles." Several new topics have been thus introduced and the old ones much expanded. An index is provided. The paragraphs, as before, have all been suggested by the authors' own observations. Many of them are bits of wisdom that are not to be found in the text-books. We do not believe that even an experienced surgeon will fail to find among these five hundred suggestions some hints that will repay him many fold for the leisure hour spent in reading this small manual. We commend this book.

A Manual of Clinical Diagnosis by Microscopical and Chemical Methods. For Students, Hospital Physicians and Practitioners. By Charles E. Simon, M.D., Professor of Clinical Pathology in the Baltimore Medical College. Sixth edition, revised. Octavo, 682 pages, with 177 engravings and 24 colored plates. Cloth, $4.00 net. Philadelphia and New York: Lea Brothers & Co. 1907.

This new edition of a work already well known and widely used has been thoroughly revised, with an added chapter on the opsonins, which have recently attracted so much attention. They are clearly and concisely explained, and an exposition is given of the best teachings. Dr. Simon has given a great deal of care to this book, and the reader can confidently consult it for the very latest knowledge. The illustrations are ample and good.

Manual of the Diseases of the Eye. For Students and General Practitioners. By Chas. M. Hay, M.D. Fifth edition, revised. 1907. Price, $2.00 net. New York: Wm. Wood & Company.

This is an excellent little book of 376 pages, which meets the requirements of students and general practitioners, and which is even a useful reference for the specialist. Evidently it has been very popular, for it has been translated into the French, German, Dutch, Italian and Spanish languages, while there is also a British edition.

The illustrations are numerous and excellent, among them being some eighty plates and colored figures, the latter being the most natural we have seen. The author must have taken great pains to have produced such life-like representations of some of the diseases of the conjunctiva, cornea and iris.

Nothing goes unmentioned, but the discussion of rare complaints is wisely left out. Numerous illustrations are given to demonstrate operative measures and instruments, and the book closes with a very excellent chapter on ocular therapeutics and general rules for eye operations.

We can highly recommend the manual as a very readable book and as a valuable addition to any medical library, but particularly to that of a student, house-surgeon or a general practitioner.

CLINICAL TREATISES ON THE SYMPTOMATOLOGY AND DIAGNOSIS OF DISORDERS OF RESPIRATION AND CIRCULATION. By Prof. Edmund von Neusser, M.D., Professor of the Second Medical Clinic, Vienna; Associate Editor, Nothnagle's "Practice of Medicine." Authorized English translation by Andrew MacFarlane, M.D., Professor of Medical Jurisprudence and Physical Diagnosis, Albany Medical College; Attending Physician to St. Peter's and Child's Hospital and Albany Hospital for Incurables. Part I., Dyspnea and Cyanosis, Oct., 200 pp., cloth, $1.50; ready September. Part II., Angina Pectoris, in press. Part III., Tachycardia and Bradycardia, in press. New York: E. B. Treat & Co., publishers, 241-243 West 23rd Street.

GREEN'S ENCYCLOPEDIA AND DICTIONARY OF MEDICINE AND SURGERY. Vol. V. Inulir to Lumbar-Puncture. Edinburgh and London: William Green and Sons.

With this volume the completion of the first half of the work is accomplished, and the high standard set in the earlier numbers is fully kept up. There has been practically no change in the general outlines adhered to in the former volumes. The subject-headings number over nine hundred. Among the more prominent articles we note especially those dealing with diseases of joints, the kidneys, liver, and of greatest length is that devoted to labor, which claims over one hundred and fifty pages, illustrated by numerous plates and diagrams. It fully takes up physiology, mechanism, diagnosis, the various accidents, operations in use, and finally the hemorrhages encountered. A considerable section dealing with the larynx and its diseases is well worthy of the specialist's attention, and to those interested in dietetics ample matter is provided, with dietaries, recipes, etc., occupying a prominent part.

Selections.

A Clinical Study of 293 Cases of Pulmonary Tuberculosis.

In a comprehensive article, comprising a clinical study of 293 cases of pulmonary tuberculosis treated at the Winyah Sanitarium, Asheville, N.C., in 1905 and 1906, Karl von Ruck and Silvio von Ruck, of Asheville, N.C., speak well of the results they have obtained with the watery extract of tubercle bacilli in the various stages of the disease. Other drugs were but rarely employed, but styracol (guaiacol cinnamic ester) gave satisfaction. The following remarks are thus made concerning tuberculous affection of the intestines. In sixteen cases the clinical symptoms were sufficiently marked, even if tubercle bacilli had not been demonstrated in the feces, to leave little if any doubt of the presence of ulceration. In nine of the cases the symptoms subsided, and there was no return on the resumption of an ordinary diet. In four cases the symptoms were much improved, while in three cases they could be only more or less controlled. In these cases opium with lead acetate appeared most serviceable in checking the diarrhea, the addition of the lead salt bringing striking benefit. The much better results in the present cases, as compared with the cases of the authors' last report, may, of course, be matter of coincidence, and they fully appreciate that so small a number of cases does not justify conclusions of the therapeutic value of remedies employed, but they are nevertheless of the opinion that the use of styracol in large doses and for prolonged periods was of material aid in the treatment of this most undesirable complication of the cases discharged, as also in a number of others still under treatment.

Diarrhea was noted in six cases, apparently of non-tuberculous origin and of indeterminate immediate cause, except in one case, in which amyloid of the intestine was suspected and eventually confirmed.

In the other five patients the diarrhea has existed for periods of several months to a year prior to coming under the authors' care. The stools were found liquid, evacuations occurred from two to six times a day, unattended by pain or tenesmus; the feces contained more or less undigested food remnants, especially meat fibers; there was neither pus nor mucus to suggest ulceration or catarrh. Under dietetic regimen some improvement was noted. The administration of digestive ferments and acids, astringents, or bismuth had apparently no influ-

ence, but the use of styracol seemed to render valuable aid. In two cases complete cure was obtained under its use; two cases were greatly improved; in one case in which styracol was not prescribed the diarrhea could be controlled only with opiates (paregoric).—From Report from Winyah Sanitarium.

Increasing Usefulness of Ichthyol.

Ichthyol possesses a widening range of useful application, comments R. B. McCall, of Hamersville, O. Erysipelas promptly yields to its influence; heat, redness, and tumefaction rapidly giving place to normal conditions. The affected area must be entirely covered and the surrounding healthy skin as well, for one inch or more, with the undiluted remedy. When the violence of the attack has somewhat abated, a dilution may be applied by means of cloths, which are to be constantly renewed. Anginose attacks, as pharyngitis or tonsillitis, when there is bright redness of the mucous surfaces, are greatly benefited by ichthyol gargles. In inflamed articulations of rheumatism and rheumatoid arthritis it must be thickly spread over the joint and covered in with cotton wool. Small joints of the hands and feet are very tender and painful in rheumatoid arthritis, therefore they should early be thickly covered by layers spread one upon the other.

A use of ichthyol that perhaps best illustrates its peculiar power and efficacy is found in the treatment of carbuncle. No fear of overstating the truth when it is asserted that it is superior to all other known medicaments for the purpose. One need only to employ it in a few cases to prove its surpassing promptness and effectiveness. Uniformly spread over the carbunculous mass and beyond its base, leaving only the apex uncovered, its influence is seen almost at once in disorganization. Usually in twenty-four or thirty-six hours free discharge takes place, with satisfactory relief of all the symptoms. This is stated as a rule, to which there are exceptions, perhaps one in five or six that will require longer time. A few years ago, after demonstrating to his entire satisfaction its great efficacy in this disease, the author first published an account of his findings.—Ellingwood's Therapeutist, April, 1907.

Various Forms of Uterine Hemorrhage Treated with Stypticin.

M. Nigoul finds in stypticin an agent as valuable in controlling hemorrhage from the uterus and adnexa as are ergot or hydrastis—if not more valuable. By reason of its chemical

constancy, moreover, the action of stypticin is uniform and it has a mild, analgesic action. The author has made a series of observations on its use in the treatment of various groups of gynecological affections. In the first group he classes the menorrhagias and metrorrhagias of young menstruating girls, as well as the dysmenorrheas. In these cases 5 to 6 tablets of ¾ grn. each are given daily until the pain and bleeding have markedly diminished. From 3 to 4 tablets a day have proven serviceable in preventing attacks. Stypticin is particularly indicated in the bleeding at the climacteric period. Nigoul administered 3 to 5 tablets a day for ten days, and repeated the treatment after a week's pause, with the result of greatly lessening the flow and the pain, and bringing about a more rapid completion of the period of the menopause.

In a second group of metritis and displacements, stypticin proved very effective. In metritis fungosa it has a marked hemostatic action, especially following curettage.

For the hemorrhage of parenchymatous metritis and the bleeding of child-birth, its hemostatic action is prompt and efficient. Three to four tablets after the beginning of menstruation in retroversions, associated with neuralgic pain and profuse menorrhagia, have cured. In hematosalpinx and catarrhal salpingitis he reports some striking results, particularly in a case of tubal hemorrhage in a thirty-seven-year-old woman. The administration of 6 tablets was followed by a marked reduction in the hemorrhage.—*Aerztl. Mitteilungen*, 1907, No. 5.

Appendicitis in Infants and Children.

Dr. Erdman states that the diagnosis of appendicitis is more difficult in children than in adults, owing to the lack of a good history and the presence of gastro-intestinal complications. He disregards the eating of meat as a cause of appendicitis, because he has found the disease occurring frequently in milk-eating infants. The appendix has not assumed its normal position until the third or fourth year and is often found under the costal arch, so that the point of pain and tumor is much higher than in the adult. The gastro-intestinal symptoms are vomiting, elevation of temperature, and tenderness. Fecal concretions and pinworms have been found by the author in the appendix of children. He is a firm believer in early operation. The bowels should move the day after operation, and the patient is allowed to roll and sit up in bed after the third day.—*Medical Record.*

Calcium Chloride.

Arnold Netter reports in *Le Bulletin Médical* that while so far no method has been found to prevent the appearance of the urticarial eruption after the injection of a dose of serum, he has found that the use of calcium chloride in the dose of one gram a day on the day of injection and for two days following constituted an efficient prophylactic in a large proportion of the cases. Out of 252 patients who took the remedy as directed there were only a little over 2 per cent. of eruptions, while in 258 cases not receiving it the eruptions were over 15 per cent. The use of calcium chloride does not in any way impair the action of the diphtheria antitoxin, the mortality in the two groups being nearly the same. Instead of the calcium chloride may be used the lactate, which has no taste and is also very soluble.—*Wisconsin Medical Record.*

Ethyl Chloride as an Anesthetic,

Like chloroform ethyl chloride paralyzes the heart-muscle; but it requires nineteen times as much ethyl chloride vapor as chloroform vapor to produce similar results. Like chloroform, ethyl chloride relaxes the arterioles, but the amount required to do it is greater than that of chloroform. Ethyl chloride stimulates the central vasomotor mechanism. When the vapor is present in the air in the proportion of 10 per cent., vagus inhibition of the heart readily occurs, resulting in sudden fall of pressure. When the amount of vapor in the inspired air reaches 30 per cent., the sudden fall of pressure is also due to weakening of the cardiac and arterial musculature. The cardiac inhibition due to ethyl chloride is not so serious as that from chloroform, however, because it appears before the spontaneous excitability of the heart is much depressed. It does not seem possible to arrest the sound heart of a dog permanently under ethyl chloride narcosis by vagus inhibition.

It requires nineteen times as much ethyl chloride as chloroform to produce a given degree of cardiac depression, while it requires only four times as much to produce cardiac arrest by vagus stimulation; hence inhibition sets in with relative rapidity. Herein lies the comparative safety of ethyl chloride. The cardiac inhibition arises from central stimulation; it is not reflex. There is no evidence of paralysis of vagus endings. In ethyl chloride narcosis the integrity of the respiratory mechanism is dependent upon the maintenance of blood-pressure. In the administration of ethyl chloride vapor for anes-

thetic purposes the rational method would be to employ a gasometer and to administer less than 10 per cent. of the anesthetic. The solution should not be poured into the instrument between the face-piece and the bag, but should be allowed to mingle with the air by being introduced at the end of the bag.—*New York Medical Journal.*

Typhoid Fever and Modern Treatment.

Good elimination should be maintained from every gland and emunctory, writes W. T. Marrs, of Peoria Heights, Ill. Every secretion should be aroused and made to do its best. Calomel in small doses is one of our best remedies. Salines are nearly always indicated. Abbott's saline laxative is pleasanter and better than crude salts. He has observed that if the bowels act not less than twice daily, the course and severity of the disease is modified. The old idea that in typhoid the bowels should be kept confined for a few days at a time is now looked upon as having been an untenable theory. The more debris and toxins are eliminated, the less will the disease be compelled to oxidize by the process of fever. The more water the patient drinks, the more are poisons eliminated or diluted, thus lessening their absorption. In case of hyperpyrexia, give a colonic flushing and the high temperature usually comes down a degree or two. The sulphocarbolates (W-A Intestinal Antiseptics) should be given to neutralize remaining foci of infection. Patients treated along this line seldom require the cold bath. Tepid spongings at frequent intervals usually serve a better purpose than the bath of low temperature.—*Merck's Archives.*

Brachial Neuralgia.

Dr. Tilmann (*Ebstein-Schwalbe, Chir. des prakt. Aerztes*).

Neuralgia of the arm is generally the result of traumatism of the brachial plexus, due to traction and forcible extension of the arm as a whole. The nerve which is chiefly involved may be identified by the boundary lines of the hyperesthetic or hypoesthetic skin areas. A further important part is played by diseases of the spinal column, overexertion, perineuritis, tumors of the nerves, the supraclavicular fossa and the cervical ribs, as well as by disease of the bones of the arm. Other factors entering into consideration are all those conditions which involve a lowering of the scapular girdle on one side, or a slight lengthening of the upper extremity, such as, for instance, paralysis of the deltoid muscle and stretching of the

joint capsule of the scapula in habitual luxation of the shoulder joint. The pain is usually most marked about the insertion of the deltoid muscle.

The treatment must be primarily etiological. In the first place, the affected nerve must be identified by the most careful examination, after which the cause must be sought for and treated. The assumption of a pure neuralgia is justifiable only in those cases where no cause can be discovered. Periodical attacks may be relieved by nerve-stretching, performed in the free interval, at first non-sanguinary. The arm as a whole must be stretched in all its joints, with abduction and lateral elevation up to the vertical position, for a period of one to three minutes, or until a sensation of tingling in the hand appears. In those cases where the patient can positively locate the beginning of the pain at a definite nerve point, the nerve should be exposed in this location, by looking for it in the corresponding muscular interstices, according to the anatomical landmarks. Existing scars or neuromata are dealt with by detaching the scar and removing the growth. When nothing of the kind is found, the nerve should be moderately stretched. Among the local methods of treatment, warm baths and the galvanic current are the best, but results in a general way are satisfactory in those cases only where the cause can be discovered and removed.—*The Post-Graduate.*

Fibrolysin in a Case of Fibrous Adhesions.

Fibrolysin has been reported on so favorably in recent times that Dr. Emmerich, of Ostrau, was led to use it in a case of fibrous adhesion, and inasmuch as nothing like this case had appeared in the literature of either fibrolysin or thiosinamine, he reported it.

The case was that of a middle-aged man of thirty, a native of Switzerland, who, seven years ago, in carrying out his occupation, was tossed by a cow. The horns wounded the abdomen in the left upper segment. Since that time he had suffered severe pain, especially in the region of the stomach, and less often of the intestine, and finally had to undergo an operation. After the operation it was found that there was tenderness over the abdomen and constipation, so that only every two or three days would the patient have a movement, which was accompanied by severe pain. There was a marked fibrous adhesion in the neighborhood of the stomach which was the cause of this obstructive constipation. Fibrolysin was accordingly injected, 30 vials of 2.3 Cc. each, the first two injec-

tions in the upper abdominal region, but these were so painful that all others were injected into the glutei. As a result of the injections, there was marked burning in the situation of the operation scars, and it was remarked that the patient also had the taste of fibrlysin (or thiosinamine) in his mouth during the day. He gradually grew accustomed to the remedy. The results following the injections were very good, the bowels became more regular, and finally moved daily without the aid of any laxative, and five months after the last injection the patient appeared to be perfectly well.—*Allgem. med. Central-Zeitung,* Feb. 9, 1907.

Recovery from Exophthalmic Goiter after the Use of Antithyroidin.

M. L. Abelmann, of the Elizabeth Children's Hospital of St. Petersburg, after giving a short *résumé* of the work done by others with Moebius' serum, or antithyroidin, in the treatment of exophthalmic goitre, reports the history of a striking case which came under his own observation. The patent was a girl only thirteen years old—a very young patient to suffer from this disease. The father had exophthalmic goitre and died at a comparatively early age. The child was of medium size and weight; the skin was clear, although she was somewhat anemic. Syphilis and tuberculosis were denied in the family history. The symptoms of Basedow's disease were all characteristic: exophthalmos, Stellwag's sign, von Graefe's sign, and Moebius' sign. There was a marked thyroid tumor, being 9 cm. across. The pulse frequently was raised from 130 to 150. The patient was placed upon antithyroidin, with beginning doses of 2 drops t. i. d., gradually increasing until 12 drops were given three times daily. At the end of three weeks the clinical picture had markedly altered. The patient became much quieter, the tachycardia disappearing completely. The exophthalmos diminished, so that the bulging of the eyelids was scarcely perceptible. The goitre had also disappeared. Stellwag's and Moebius' sign had also disappeared; von Graefe's sign persisted somewhat. The patient recovered completely.—*Russki Vratsch,* Sept., 1906.

Apomorphin in Acute Alcoholism.

Rosenwasser speaks highly of the value of apomorphin in doses of from 1-30 to 1-10 grain as a sedative and hypnotic in cases of acute alcoholism. A very few minutes after administering an emetic dose by hypodermic injection vomiting occurs,

due to the action of the drug on the vomiting centre of the medulla. Just before vomiting the pulse is weakened and increased in frequency, and after vomiting ceases it becomes slower and stronger, often stronger and slower than it was before the injection was given. Vomiting is preceded by salivation and slight nausea. It may occur only once or be repeated several times. Very soon after the vomiting subsides, a matter of a few minutes in most cases, the patient falls into an apparently natural sleep and may sleep from two to eight hours, awakening refreshed, sober, and rational in most cases. It is not necessary, however, to give the emetic dose in order to obtain the hypnotic effect, and in many cases 1-30 grain will induce sleep.—*Med. Record* and *J. A. M. A.*

Operations on the Cerebellum.

The results of these operations have improved so rapidly in recent years that Borchardt (*Archiv für klinische Chirurgie*) has reviewed the entire subject in the light of present statistics.

Very extensive exposure of the base of the brain can be made safely. Both sides of the cerebellum may be exposed at once by forming on each side a quadrangular flap of scalp and skull, extending from the mastoid process to a point above and inside the occipital protuberance. These flaps being turned down and all bleeding stopped, the central part, not including the longitudinal sinus, is cut through at its upper and lower ends and also turned down. The bone is thick and must be partly sawed before cutting or breaking. The danger from breaking into the foramen magnum has been exaggerated. The brain is well protected here by very thick membranes. The ligation of the transverse, sigmoid, and occipital sinuses is in itself harmless. The longitudinal sinus and the tentorium must be spared. If the tentorium is injured, prolapse is almost certain to follow. The cerebellum being exposed is palpated, punctured, or incised as required, and also pushed aside with spatula, to facilitate examination of the base of the skull. If the shock is very great after opening the skull it is best to wait, and to examine the brain and complete the operation later. If after the operation is concluded it is found impossible to return the cerebellum inside the dura, it is better to reduce its size by partial resection than to leave part of it outside the dura. Puncture of the ventricles is apt to lead to sudden death. The dura is loosely closed to allow escape of secretions. Prolapse after operation is not always a sign of infec-

tion, but is almost always fatal. Operation is indicated when there are signs of pressure at the base of the brain, and when the diagnosis is not certain. The first indication of choked disk is the sign for immediate operation.

The various conditions which demand operation are the following: (1) Cholesteatoma. The results have been favorable when the tumor was small enough to be removed *in toto*. A layer of sound tissue must be removed on all sides, as cholesteatomata resemble the malignant tumors in their tendency to recurrence. (2) True tumors, neuroma and sarcoma. The results here are also good. Of 101 cases reported, the tumor was found in 51, and of these 12 were cured. No tumor could be found in 60, but 5 of these were entirely relieved by the operation; 12 other cases showed temporary improvement. (3) Cysts. Here again the results are very good. As many of the cysts arise from softened sarcomata it is not wise to merely tap them. The entire wall should be examined, and, if necessary resected. In 14 cases 13 were cured. (4) Nouroma of the cranial nerve roots. Tumors are found on the roots of the fifth, sixth, seventh, eighth and ninth nerves, especially the eighth. Operation is always justified, as the localization is quite certain and the tumors are rapidly fatal if let alone. They are generally well encapsulated. Removal should not be attempted if the tumor is very large or not well defined. Is it justifiable to remove part of the cerebellum in order to expose such a tumor? Experiment has shown that the removal of more than half of one lobe is not well borne, so no more than this should be resected. (5) De-compression. This is performed for large tumors and for some cases of chronic meningitis. The results are generally good, but temporary. The indications are not yet entirely precise.—*Therapeutic Gazette.*

Hour-Glass Stomach.

The diagnosis of hour-glass contracture of the stomach is neglected in almost all the text-books, and Schmitt (*Archiv für klinische Chirurgie*) gives its characteristic phenomena in detail. With the exception of the congenital form, which causes no symptoms, he believes that all forms, spastic, cancerous, and cicatricial, are dependent on ulceration of the stomach. If dilatation is present it may depend on a narrow stricture or on associated stricture of the pylorus.

The most striking symptom is usually vomiting. This may resemble the vomiting of pyloric obstruction if the stricture

is near the pylorus, but differs in a tendency for only certain sorts of food to be vomited, although other food was ingested at the same time. The more easily digested foods pass through the stricture and are not vomited. Vomiting occurs soon after eating if the stricture is near the cardia, and only a small part of the food ingested is vomited. If the stricture is central, as is usually the case, the vomiting occurs in two to three hours, and in several portions. There may be apparent vomiting after eating, but nothing come up if the cardiac portion is irritated and empty and the pyloric portion is dilated and too weak to empty itself through the stricture. In some cases the matter first vomited is recent, and later old and decomposed; this is also seen in some cases of extreme dilatation following pyloric obstruction. The pain is more severe than that of ulcer and less amenable to treatment. It is not so promptly relieved by vomiting, and returns sooner when food is taken or the patient rises after a treatment in bed. The pain which accompanies vomiting is especially violent.

Valuable information is given by the observation of lavage, but the chemical examination of the stomach contents is of little value. With the patient in the erect posture the stomach is repeatedly washed until the water returns clear; the patient then leans toward the right or backward, and there is often a sudden flow of fresh or old and decomposed food, which has come from the pyloric part of the organ. In other cases the lavage water fails to return. "It seems as though the stomach had a hole in it." The double form of the stomach may be shown by palpation and percussion of the organ dilated with gas or water, or may be shown by intragastric illumination with a gastric electric lamp. The most conclusive method is, however, the examination with the fluoroscope after ingestion of bismuth. Several hours must elapse between the ingestion and the illumination, as the bismuth may pass the stricture slowly. The treatment is not very satisfactory. It is rarely possible to unite the two portions of the stomach more freely, and the most effective treatment at present seems to be gastro-enterostomy. Even if a plastic operation on the stomach is performed, a gastrointestinal fistula should be added.—*Therapeutic Gazette.*

Professor Friedrich Muller has been awarded the Order of the Bavarian Crown in recognition of his professional eminence.—*Medical Press.*

Sterility Among X-Ray Workers.

The dangers attending the continuous use of the X-ray, and especially the dangers which menace the operator, are not yet fully appreciated. Jordan claims that any man who works daily with the ray for a year or two, even if he takes reasonable care, becomes sterile. By reasonable care this observer means the keeping of the X-ray apparatus in a protected box, the use of a protective shield for the tube, the wearing by the operator of a protective apron, and keeping at a distance of several yards from the direct ray. This being the case, it seems certain that the ordinary operator of the X-ray in this country has been protected in a very inadequate manner. So far as we know, statistics regarding the sterility of X-ray workers have not been collected. It would be of interest to gather such figures, and it would also be of interest to determine whether operators who give up the X-ray work recover from their sterility. This is a point which has never been settled. In the meantime every X-ray worker, even the practitioner who occasionally uses the X-ray for diagnostic or therapeutic purposes, should bear this danger in mind and take protective steps. The protection of the tube so far as is possible, the use of a strongly protective apron, and the interposition between the operator and the ray of screens guarded by heavy sheet lead should be carried out in every instance.—*J. A. M. A.*

Irritable Bladder.

The following has been advised in irritable bladder in neurasthenic subjects:

℞ Tincturæ belladonnæ.
Liquoris potassi hydroxidi, of each ʒj.
Potassi citratis, ʒij.
Aquæ anisi, ℥ij.
Aquæ cinnamoni, q. s. ad ℥vi.

Misce. Signa: One tablespoonful every four hours.—*Medical Bulletin.*

There seems to be an increasing call for the doctor to enter politics—but how can a good doctor afford to turn his attention into such entirely foreign paths? There is nothing about the practice of medicine that particularly qualifies a man for such public questions as belong to a statesman, aside from those that pertain to sanitation and hygiene. And a man who gives up an established practice for the fickle term of a political office, in nine times out of ten awakens to the realization of having made a huge mistake.—*Clinical Review.*