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ON THE STAGES AND FORMS OF SYPHILIS, WITH MORE ESPECIAL REFERENCE TO THE HEPATIC MANIFESTATIONS OF THE DISEASE.*

BY J. G. ADAMI, M.A., M.D., F.R.S.E.,
Professor of Pathology, McGill University; Pathologist to the Royal Victoria Hospital, Montreal.

(Continued from page 400.)

The liver was deformed, weighed 1960 grams, and showed four large areas of puckering on the upper aspect of the right lobe. A rounded mass 3 cm., broad and 2.5 cm. long, projected from the lower end of the right lobe, the truncated end of which was characteristically puckered; the appearance of the organ was typically syphilitic. The intestines showed no signs of previous dysentery.

* Delivered at the meeting of the Ontario Medical Association at Toronto, June 1, 1898.

In this case, the section through the puckerings showed singularly little fibrous tissue despite the extreme contraction and deformity of the region where they were present. There were no proper gummatous areas to be made out, and the only satisfactory explanation is that in this liver, which presented so obviously the appearance of tertiary syphilis, there had been complete or almost complete absorption of the syphilitic deposits.

It may be suggested that the resemblance between tuberculosis and syphilis which I have thus emphasized is imperfect, in that, when tuberculosis once affects the organ, the virus always remains latent in that organ, and there is not the complete absorption which we must acknowledge takes place in the majority of cases in syphilis. For it is admitted that at the most (and that in untreated cases) only 30 per cent. of those infected show tertiary symptoms. Among those treated the percentage is only about 10 per cent. But this is another modern popular fallacy; there may be complete cure of tuberculosis and complete disappearance of the tubercles even when they have become distinctly fibrous. This is proved by the experimental infection of dogs with peritoneal tuberculosis and arrest of the process by repeated laparotomy. I need scarce remind you that it also has been recognized in some cases that there may be arrest of tubercular peritonitis in man by similar means. Definite cases are on record in which there has been a complete disappearance of well-marked fibroid tubercles from the serous coats of the intestines. The analogy, therefore, between tuberculosis and syphilis must be regarded as complete in this respect.

Rarely we come across a syphilitic liver showing very clear evidence of the progressive development of the hepatic condition.

CASE 4. Such a case have I met with in a male of twenty-eight, who entered the Royal Victoria Hospital under Dr. Stewart with a rupture of one or more branches of the middle cerebral artery, and who had, two years before, been treated by Dr. James Bell for syphilis. Whether the syphilis then was primary, secondary, or of later manifestations, I cannot ascertain, for the patient died before his history could be elicited. In this case there was syphilitic inflammation of the ventricles of the brain, and early atheroma of smaller arteries. The liver showed three or four puckered scars, and, microscopically, fairly frequent gummata, with giant cells and small localized infiltrations of leucocytes. There were no signs of tuberculosis anywhere, and the sections of the liver stained with carbol-fuchsin did not show any tubercle bacilli. In this case the puckered scars indicated gummata had undergone cicatrization and fairly com-

plete absorption. The small infiltration of leucocytes can only be regarded as miliary gummata resembling in every respect those seen in the infantile liver of congenital syphilis. The case must be regarded as one in which, as shown in the ventricle of the brain and in the liver, the active syphilitic process had been rekindled, or had progressed, with rapidly fatal results.

Case 1 was probably an example of the same condition.

The only manifestation of syphilis in connection with the liver which is to be found in the acquired and not in the congenital form is the condition of perihepatitis. I have not come across or met with in literature any indications of the development or presence of such a condition in the newly-born child; in the adult, more especially at the late stages, it is not very uncommon.

Out of the eight cases, I came upon it in a fairly extensive condition in a female of sixty-two, in which syphilis must have dated back for twenty years, more or less, for she gave a history of having seven children, of which five were miscarriages, and the other two died in infancy. Here the most extensive syphilitic changes were in the neighborhood of the longitudinal fissure and round the gall-bladder. An interesting point was the fact that a mistaken diagnosis was made of atrophic cirrhosis with ascites. The capsule of the organ was throughout thickened, the upper surface very smooth, the abnormal lobulation and puckering. Near to the gall-bladder in the right lobe was a caseous nodule the size of a filbert, showing some calcification on section.

Upon section, the organ showed a thickened fibroid capsule, many small central scars, caseous gummata, and more or less diffuse and apparently recent fibroid change. Here it should be added that, during the last five months of her life, she had been repeatedly tapped, and, following upon tapping, there was found at the autopsy a condition of sub-acute peritonitis with inflammatory lymph covering the intestines. Thus the perihepatitis might not have been entirely syphilitic, indeed, I am a little doubtful whether syphilis, pure and simple, will lead to the condition of generalized perihepatitis.

Case 5. Female, æt. 62, with a history of having had seven children, of which five were miscarriages and the other two died in infancy. The husband said to be phthisical. In 1895 Dr. Roddick removed an epithelial wart, which, on examination, was found to be non-malignant. Suddenly, upon July 31st, 1895, while the patient was feeling in good health, she had an attack of hæmetemesis, which was repeated next day and again two days later. It was accompanied by melæna and great weakness.

Upon admission to the hospital in August, 1895, under Dr. Stewart, the patient was sallow and there were dilated venules on the face. The liver extended from the fifth rib, two and a-half inches downwards; it was not palpable, nor could the spleen be felt; there was a low systolic murmur. The urine was high colored, with a trace of albumin. While in hospital epistaxis occurred once or twice. This history, together with the progressive loss of flesh, the sub icteroid tinge, the abdominal swelling with epigastric pain, the slight œdema of the legs, led to a diagnosis of atrophic cirrhosis of the liver; 270 ounces of fluid were removed from the abdomen, and after removal the fulness in the epigastrium was found to be due to the hard, large mass passing down to within 8 ccm. of the navel. This mass, hard and rounded, was continuous with the right lobe of the liver. The fluid re-accumulated and the patient underwent numerous tappings. She became progressively weaker, and the hepatic tumor appeared to be undergoing progressive diminution.

After having left the hospital she was re-admitted early in January, 1896, dying upon January 24th. The condition was thought to be one of atrophic cirrhosis with enlargement of the left lobe.

Autopsy. Œdema of the legs; extensive ascites with distended abdomen. Upon opening, the visible intestines were found coated with lymph; the omentum, which was fatty and œdematous, was adherent to the parietes in several places. The liver presented numerous adhesions, especially to the intestines and surrounding organs, specially in the region of the gall-bladder. The right lobe did not reach the costal margin, the left extended just below the xyphoid. The organ weighed 1,425 grams, its greatest breadth was 22 cm., the right lobe especially being contracted (breadth, 10 cm.); this lobe was also diminished from above downwards, its length being 15.5 as compared with 19 cm. of the left lobe. The capsule was thickened; the upper surface fairly smooth, with, however, linear indentations, but the under surface presented extensive abnormal lobules, especially in the region of the gall-bladder and upon the right lobe, so that several small lobules of liver tissue were produced, and near to the gall-bladder a caseous nodule the size of a filbert showed some calcification upon section. The under surface of the left lobe showed numerous cicatrices, some distinctly stellate. The largest was close to the longitudinal fissure, and was 3 cm. in diameter.

Upon section the organ showed many small central scars, caseous gummata and *more or less diffuse and apparently recent fibroid*

change. There was further a moderate amount of chronic passive congestion and cholelithiasis, with obstruction of the cystic duct. The organ gave no amyloid reaction, and the spleen was large, firm and tense, thickened capsule. In addition there was fat necrosis of pancreas, brown atrophy of the heart, moderate atheroma of the aorta, slight chronic pachymeningitis, emphysema and bronchitis.

It will be noticed that the most extensive syphilitic change was in the neighborhood of the longitudinal fissure and round the gall-bladder.

Yet another case of syphilitic liver with great thickening of the capsule showed this same complication of peritonitis. In this case (a patient under Dr. James Bell) there had been recurrent attacks of appendicitis during the last four years, with much chronic fibroid typhilitis, and the patient died of acute peritonitis following operation. Although the liver showed numerous stellate scars with abnormal lobulation, these were on the upper surface and there had been no signs of hepatic disturbance. There were in addition moderate arterio sclerosis and fibroid syphilis of the left testicle.

CASE 6. The patient a male, entered for recurrent appendicitis and died of acute peritonitis following the operation, Feb. 27th, 1896. Four years previously had had illness with symptoms of appendicitis. For five or six weeks before admission had dyspepsia, followed by right iliac pain beginning about Feb. 7th, kept at work till the 12th. Operation: Purulent appendicitis with perforation, followed by general peritonitis and death.

Autopsy. Acute peritonitis with evidence of much chronic fibroid typhilitis. Liver large, surface very irregular, owing to great irregular thickening of capsule. Weight, 2,000 grams, numerous large superficial stellate scars with abnormal lobulation; greatest thickening about longitudinal ligament in front. On section, fairly firm, a few small internal cicatrices; portal vein and vena cava free; periportal glands free. Liver showed large periportal fibrous glands with thickened arteries and atrophy of some liver cells. Spleen large, 155 grams, 12.5x6 5x3, firm, soft and rather pale. Pancreas, hæmorrhages and necrosis. Other organs showed evidences of the acute febrile disturbance with moderate arterio sclerosis and its effects; there was in addition fibroid syphilis of the left testis.

In the case of a male, æt. 75, the organ had the characteristically puckered appearance and showed upon the anterior surface of the right lobe a large convex cartilaginous plate, 9.5x7.5 cm., or about 4x5 inches, associated with chronic thickening of the capsule together with numerous small cartilaginous plates elsewhere; the

left lobe did not show much thickening of its capsule. The spleen, however, as is the rule in chronic perihepatitis, presented a much thickened capsule. (In this case there was very extensive gummatous hepatitis, with practically no clinical evidence of affection of the organ.)

CASE 7. Of this patient, a male, æt. 76, under Dr. James Bell, with cancer of the tongue and general arterio sclerosis, there is no history bearing upon the date of infection.

Autopsy. Emaciation; rheumatoid arthritis of fingers; slight icterus; retracted abdomen, abdominal cavity dry; liver 1,335 grams, 21x16x8 cm., right lobe anteriorly and inferiorly broken up into several small lobules; at hilus five or six small accessory lobules between a bean and a walnut in size. On anterior surface of right lobe, left superior angle, large convex cartilaginous plates 9½ by 7½ cm. associated with chronic thickening of capsule. Numerous small cartilaginous plates elsewhere on the right lobe, the left also broken up into several lobules. On section, organ fairly friable with here and there small fibrous strands of tissue intersecting collections of lobules. Spleen, capsule very much thickened, weight 240, enlarged 10.5 c 7.5x5 cm. On section, soft, with slight fibrosis. Other conditions: Cancer of tongue, arterio sclerosis, sclerosed heart valves and coronary arteries, hypertrophy of prostate, hydronephrosis, chronic interstitial nephritis, etc. (This case again shows very extensive gummatous hepatitis, with singularly little clinical evidence of the liver disease.)

In two other cases, there were localized adhesions between the organ and the diaphragm. These adhesions, however, bore no clear relationship to the areas of cicatrization in the organ.

On the whole, therefore, I am inclined to regard diffuse chronic perihepatitis as more a complication than a direct syphilitic manifestation.

There is one further condition of syphilitic disturbance of the liver in the adult to which I have only referred in passing, and that is the development of large tumour-like outgrowths of the organ which are so sharply defined that clinically the erroneous diagnosis may easily be made of malignant neoplasm. These growths are distinct from the bosses produced by the cicatrices of old gummata and subsequent deformity of the organ, and, under the action of potassium iodide, they appear to undergo fairly rapid absorption. Osler in the work already cited has described very clearly one of these cases. So far as I know, in the coarse lesion produced, there is nothing quite similar to this seen in congenital syphilis. Micro-

scopically, however, the mass shows a condition not unlike that seen in the circumscribed areas of fibrosis in the infantile liver. There may or may not be caseous or gummatous change in the centre. There is, however, much central fibroid change with complete destruction of hepatic parenchyma, and towards the periphery there is a more vascular connective tissue area in which strands of liver-cells are to be made out. The nature of the growth and the presence of these liver cells would appear to indicate that what we have to deal with in such cases is a focal syphilomatous change in which, as the process extends from the centre, there is, at the same time, a constant proliferation of the liver tissue, and thus gradually, there is the development of a localized mass of new tissue in the main fibroid, but at the periphery, where the change is not so extreme, there is growing liver tissue.

With this I have, I believe, mentioned the main manifestations of syphilis as they occur in the infant and in the adult, and it will be seen:

(1) In the first place that the lesions, occurring in the congenital and the acquired disease, are identical, and brought about by the same process or processes.

(2) That, whether we have to deal with the disease in the secondary or in the tertiary stage, the same processes are at work. That, if we accept those cases as truly tertiary in which we have to deal merely with the fibroid remains of obsolete gummata, and again those cases in which there is perihepatitis (which perihepatitis appears to be a complication rather than the genuine and direct resultof syphilis), then we are bound to admit that the study of the liver alone would indicate that no sharp boundary line can be made out between secondary and tertiary syphilis. No more can we make out such a boundary between secondary and tertiary tuberculosis.

While I and all others must admit the utility of recognizing these two stages, from an anatomical and histological standpoint one is forced to acknowledge that progressive syphilis is characterized by the same succession of phenomena whether it be studied but a few months or long years after the primary infection. Anatomically and histologically there is no valid distinction to be drawn between secondary and tertiary syphilis.

It may be asked whether such a conclusion is not wholly at variance with clinical opinion and experience? Upon the face of it, it is—but, if the subject be looked into carefully, I think that such a view will reconcile not a few of the divergences existing among

syphilologists. We have those (and they are the majority) who state that tertiary syphilis is non-infectious, and those who bring forward clear examples of the production of infection five or ten years after primary inoculation of the disease. This difference can be reconciled if we agree upon the following points:

1. That now-a-days, under proper treatment, syphilis, if not a self-limiting disease, is at least a disease which can be healed, so that many of the lesions recognized as being tertiary syphilis are truly the indications of the old healed syphilis, and not signs of progressive or latent disease.

2. If the disease has not completely died out, and remains latent, the resistance of the tissues of the organism is such that in the majority of cases, if it does not tend to light up again, there is so considerable a local reaction, that the infection and consequently the spread of the process tend to remain strictly localized, and the germs (which are probably of bacillary nature) do not become disseminated through the blood. Thus neither the blood nor the secretions contain the virus.

3. In a very small number of cases the reaction on the part of the tissues may be so lessened, and the virus retain or gain so high a virulence, that either it causes ulceration, or in other ways becomes disseminated and capable of causing infection even late in the tertiary stage.[1]

[1] After reading this paper Dr. C. A. Temple, of Toronto, brought to my notice an interesting example illustrating this point which he very kindly permits me to note here. The patient, a vigorous blonde, contracted the initial lesion five years before marriage, underwent mercurial treatment for four years, and later was treated by Fournier's intermittent method, generally for from six to eight weeks twice a year. His wife, a highly educated and cultured woman, never showed any symptom of syphilis. In the fifth year of marriage she became pregnant for the first time, and, ten years after the primary infection of the husband, she aborted at the seventh month, the fœtus showing the typical facial characteristics and a greatly enlarged liver. The husband had always tended to have syphilitic eruptions if he neglected treatment, and when last Dr. Temple saw him, after the abortion, there were scaling circinate lesions on the abdomen and groins and ulcerating patches, some ecthymatous, others healing, on both legs from the knee downwards.

ETHMOIDAL DISEASE.*

By Dr. R. Ovens, London.

ANATOMY.—Before entering into a detailed description of this disease of the ethmoidal sinus we will look at its anatomical structure and compare it with the other sinuses.

Location.—Mass on either side of septum; may press septum. Middle turbinate part of the ethmoidal structure between the orbits. Os planum very thin; separated from brain by thin plate of bone.

Orifices.—Anterior and posterior.

Structure.—Differs from frontal, sphenoidal, and antrum in being divided into two parts by solid septum of bone, and each part sub-divided into numerous small cells.

Diseased.—In antrum and frontal require free opening to drain. This will not do for the ethmoid; you must convert it into one cavity by completely breaking down the bony septum and all the cell walls.

Etiology.—Anything that will cause an attack of acute rhinitis (2) deflected septum, side of concavity diseased; (3) la grippe, especially the influenzal type; (4) ethmoid sinus is the most frequently diseased of the accessory sinuses.

Pathology.—Three stages recognized:

1. Extra-cellular myxomatous degeneration.
2. Intra-cellular myxomatous degeneration.
3. Purulent ethmoiditis.

The three conditions are stages of one and same disease. An acute inflammatory process of the mucous membrane lining those cells very soon results in resolution, or in a chronic morbid condition. Owing to the peculiar anatomical character of this membrane a chronic inflammation tends to develop a soft jelly-like thickening of the tissue, which becomes myxomatous in character. Now, this condition may persist for a somewhat prolonged period of time, giving rise to distension of the cells and a watery or muco purulent discharge.

*Read at the meeting of the London Medical Association.

Second stage.—This myxomatous tissue may crowd out of the ethmoid cells through the orifices and appear like small polypi in the nasal cavity.

As a result of this inflammatory process in the cells, the thin-walls become distended, and we have a somewhat curious development by which the outer wall of the cells yields before the pressure, and we have the middle turbinate bone crowded outward and gradually an extension of these cells into its body (as seen in this specimen).

The entire mucous membrane of the middle turbinate undergoes this myxomatous degeneration.

Third stage.—Suppuration characterizes this condition. Suppuration may develop very early or very late in the course of the inflammatory attack, a great deal depending on adventitious circumstances. The inflammatory process within the cells gives rise to distension by intra-cellular secretion, which results in closure of the normal ducts. The result is the formation of an acute abscess, which, failing resolution, develops into a chronic abscess or chronic suppuration. The pus makes its way into the nasal cavity through one of its normal openings either in front into the infundiblum or into the superior meatus through the posterior opening.

The pus does not invariably make its way into the nasal chamber.

We frequently find it breaking through the os planum into the orbital cavity, giving rise to exophthalmos and orbital disease.

CASE. Mrs. Ross, Journal article, 1894.

Exophthalmos may be produced by distension of cells in to orbital cavity without the escape of pus. As the result of persistent suppuration we may find necrosis of the septum and cell walls of ethmoid. But I believe necrosis does not occur as frequently in this region as it once was thought to.

Symptoms.—First stage—Are those of acute rhinitis, together with those of a more or less neurotic character, as watery discharge from nose, violent sneezing, asthma, headaches, neuralgias. You will frequently meet with cases that, after the acute rhinitis is apparently better and the nasal chamber shows no perceptible pathological lesion, the patient still complains of nasal stenosis, frontal headache, intra-orbital pressure, watery discharge, etc. These were according to "old teaching" set down as "reflex in character." On careful examination you will find these so-called "reflexes" are due to an inflammatory condition of the mucous

membrane lining the ethmoid cells. Both acute and suppurative cases can be traced to an unmistakable attack of "La Grippe."

Second stage.—The intra-cellular pressure gives rise to a peculiar train of symptoms as watery or muco-purulent discharge, violent attacks of sneezing, headache, aching pains across the bridge of the nose, intra-orbital pressure, asthenopia, muscular weakness of the motor apparatus of eyes. *Aprosexia.*—If neurotic—hay-fever and asthma (aprosexia—blanket over the brain—cannot think—absent-minded). All these symptoms are exaggerated at every fresh outbreak, which become more and more frequent as the disease progresses.

CASE. J. M., æt. twenty-three years. Asthenopia and headache, from compression of septum by hypertrophy of middle turbinate—cannot use eyes, sense of weariness, eyes tired, constant desire to keep them closed, constant headache for five years. Jewellers and quack expert refractionists used atropine, glasses and prisms.

Inspection of nose.—Septum to right, large ovoid mass filled left nares in middle fossæ. Cocaine caused no diminution, removed with snare with complete cessation of symptoms.

The crowding out of this myxomatous tissue and the extension of the cells into the body of the middle turbinate. When this occurs it is very manifest on ocular inspection. This distension and extension of the cells into the middle turbinate gives rise to a protuberance into the middle meatus which is easily recognized, the middle turbinated body presenting as a rounded ovoid mass, usually in contact with the septum and encroaching on the middle meatus of the nose.

At the same time this curious myxomatous degeneration of the mucous membrane of the cells conveys itself to the mucous membrane covering the middle turbinated body, and lends additional aid in determining the disease.

Symptoms.—Third stage—Suppuration may develop very early or late in the case. On ocular inspection we may find the pus making its appearance either from beneath the middle turbinated body or from between the middle turbinated body and the septum above. As a rule the pus from the anterior ethmoidal cells makes its way into the middle meatus, and is expelled through anterior nares, while the discharge from the posterior opening makes its way into the pharynx, giving rise to symptoms so often complained of, viz., that of a dropping in the throat, in which way the disease may be confused with ordinary naso-pharyngeal catarrh. The secretion of the latter is muco-purulent and hard to remove and causes a

great deal of hawking and cough, but where we meet this symptom look carefully for empyema of ethmoid cells or sphenoid sinus.

Treatment.—That treatment should be instituted early in the history of the disease, and before the suppurative process has ensued, need not be urged, in view of the very serious discomfort and even danger which attends the stage of empyema, and the great difficulty with which it is brought under control after pus formation has become chronic.

Acute Stage.—Treat same as acute rhinitis. Douche most potent—One to two gallons of hot saline solution at least twice daily. Patency of nostril—Have douche to enter the most obstructed side.

Second stage.—Intra-cellular—Surgical interference in all cases, other measures failing, tendency is to get worse; imminent danger of suppuration. Where there is a swollen condition of turbinated body, turgescent and myxomatous degeneration of its mucous membrane and swollen and distended state of the ethmoid cells, we should operate. The object is to remove intra cellular pressure and this is accomplished by uncapping, as it were, the ethmoid cells. The steel wire loop of the Jarvis or Bosworth snare is easily slipped over the projected turbinated body and the whole mass removed, presenting usually in the form of an ovoid shell. This also reveals to us the condition of the mucous membrane within the ethmoid cells, which may be either in a simple state of turgescence, or a soft, gelatinous mass of myxomatous tissue, filling the cavity thus opened.

The pus formation cannot be cured with lotions, etc. You must uncap the cells, and convert the large number of small cells into one cavity. This is best done with a dental burr with dental engine; the trabeculae and cell walls are easily broken or burred down. The chief dangers are injury to the adjacent brain, or entrance into the orbital cavity. It is better to repeat operation several times, and move cautiously. During intervals keep the cavity open by swabbing it out carefully once a day, and thoroughly applying some disinfectant lotion.

INFANT DIET.*

By Dr. W. J. Greig.

IT is conceded by all that the healthy milk of a healthy mother is the proper food for an infant for the first nine or ten months of its life. The causes which would make weaning necessary during that time are:

1st. Pregnancy.

2nd. Acute or chronic disease of a serious nature.

3rd. Mastitis of both breasts. On no account must a child be allowed to drink milk containing pus.

4th. Continuous and progressive loss of weight for several weeks. An examination of the mother's milk may reveal the cause of this to be a milk insufficient in quantity or defective in quality. These faults may be corrected by a change of diet or of habits.

Assuming that for any of these causes weaning becomes necessary, the question at once arises "What shall we feed the baby?"

Under the name of "infant foods" the market is full of proprietary preparations, each of which claims to be a fit and proper food for the baby. It is evident that to be such they must resemble mother's milk in composition. That the resemblance is not a close one is shown by the fact that they nearly all contain starch. The baby has little saliva until the fourth month. The quantity gradually increases, notably so when the teeth come. But this saliva is not active in changing starch into sugar, as it contains a minimum quantity of ptyalin. Therefore, starchy foods before the fourth month are quite indigestible, and after that time they can be disposed of in very small quantities.

In addition to this, children brought up on these foods are very liable to develop rickets, scurvy and symptoms of mal-nutrition. Holt states that "where these prepared foods are given for any length of time to the exclusion of everything else, some of these conditions will develop with very great regularity. And when they do not, it is because the food has been given with fresh milk."

*Read at the Ontario Medical Association, June 1st, '98.

As articles of infant diet these foods can be dispensed with as unnecessary, as expensive, and as inferior to properly modified cow's milk. They should receive no more consideration from the physician than proprietary and patent medicines do. In the past, scientific surgery rescued the treatment of fractures and dislocations from the bone-setter; scientific obstetrics has rescued the practice of midwifery from the hands of the midwives. Inaugurated a few years ago by Rotch, of Boston, a strong effort is being made by a scientific study of the present subject to rescue "infant feeding" from the hands of the manufacturer of infant foods of different kinds. It is certainly the duty of all physicians to assist as much as possible.

I would refer to condensed milk only to say that while it contains no starch, it does contain an excessive amount of sugar and is very deficient in fat.

The same results will follow its exclusive use as in the case of proprietary foods. A child fed on this milk may look fat and plump, but it will be very anaemic and be deficient in the resisting power to disease.

Cow's milk is at once the cheapest, the most available, and the most suitable substitute for mother's milk. The differences between the two can be readily seen by reference to the following table, which is the average of a large number of analyses:

	Mother's.	Cow's.	8 per cent. cream.	12 per cent. cream.	16 per cent. cream.
Reaction.	Alkaline.	Acid.	Acid.	Acid.	Acid.
Fat.	3 to 4 per cent.	3·5 per cent.	8 per cent.	12 per cent.	16 per cent.
Sugar.	6 to 7 "	4·3 "	4·3 "	4· "	4· "
Proteid.	1 to 1·5 "	4· "	3·9 "	3·8 "	3·6 "
Salts.	·2 "	·7 "	·7 "	·6 "	·6 "

The difference between mother's and cow's milk is one not only of percentages, but also in the character of the proteids. In cow's milk three-fourths of the proteids are in the form of an insoluble casein in suspension, and easily coagulable, while, in mother's milk, two-thirds of the proteids are in solution as lactalhumin and non-coagulable. For this reason, and also because they are largely in excess in cow's milk, the chief secret of success in feeding infants on cow's milk is to reduce the percentage of proteids to an even lower one than what is contained in the milk of the mother. How can this be done?

Not by a simple process of dilution, as that would reduce all the other elements *pro rata*. Look for a moment at the percentages of the creams as shown in the above table.

An eight per cent. cream is so called because it contains eight per cent. of fat, and is the cream which rises on a fairly rich sample

of milk if allowed to stand in a cold place for four hours. Twelve per cent. cream contains twelve per cent. fat and will rise in a fairly rich milk in six hours in the cold.

Notice that these different cream milks differ from cow's milk practically only in the amount of fat present. Notice, also, the proportions of fat to proteids in each of the above tables.

	Fat.	Proteids.
Mother's milk	4 or 3 per cent.	to 1.
Cow's milk	1 "	" 1.
Cream, 8 per cent.	2 "	" 1.
" 12 "	3 "	" 1.
" 16 "	4 "	" 1.

To produce from one of the cream mixtures a preparation practically identical with mother's milk, take 12 per cent. cream mixture and dilute it twice, *i. e.*, one part cream and two parts water.

12 PER CENT. CREAM.

Fat.....12 per cent. Sugar.... 4 per cent. Proteids..3.9 per cent.	divided by three	4 per cent. Fat. 1.3 per cent. Sugar. 1.3 per cent. Proteids.

Which is approximately the same as mother's milk, excepting in the amount of sugar present. Notice that the fats and proteids are in the proportion of 4 to 1.3 or 3 to 1. And no matter how we may dilute this 12 per cent. cream, the proportion will always be the same. Possibly the child may be able to get along with less fat, in which case, if it is necessary to give less proteid this same 12 per cent. cream diluted three times instead of twice may be used. But if 4 per cent. of fat must be kept and the proteids reduced to 1 per cent. or less, it will be necessary to take a cream mixture richer in fat. Supposing we wish to obtain 4 per cent. of fat to 1 per cent. of proteid, take the 16 per cent. cream and dilute three times, *i. e.*, one part of cream and three parts of water.

16 PER CENT. CREAM.

Fat.....16 per cent. Sugar..... 4 per cent. Proteid....3 6 per cent.	divided by four	4 per cent. Fat. 1 per cent. Sugar. .9 per cent. Proteids.

Here we have approximately the percentage required. If the principles which I have endeavored to indicate are kept in mind, almost any useful formula can be produced from plain milk or the different percentages of cream. Always bearing in mind the fact that the proteids of cow's milk are less soluble than those of mother's milk, and that therefore in giving the baby cow's milk or cow's cream, it is always wise to begin with a low percentage of proteids, ½, ¾ or 1 per cent.

Now as to the sugar in these preparations, which is also a very important constituent. Mother's milk contains from 6 per cent. to 7 per cent. of sugar; cow's milk and the different creams practically 4 per cent. Therefore when cow's milk or the creams are diluted, the amount of sugar present is very small. We want to raise it to 7 per cent. Therefore use as your diluting agent a 7 per cent. solution of milk sugar in distilled water. Or if the dilution is less, and leaving, say, 2 per cent. of sugar in the milk, use a five per cent. solution of milk sugar. This sugar percentage is easily obtained, ʒss. of milk sugar to the ℥i. of water being approximately 7 per cent. It should be mentioned that sugar is not added simply to sweeten, but as an essential for the nutrition of the child.

The necessary alkalinity is obtained by adding ʒiss. of lime water to the quart.

The next question is, what are the clinical indications for the use of the different percentages of fat, sugar and proteids?

Proteids are necessary to life, for they replace the continuous nitrogenous waste of the body. Without them, growth will not take place. In giving cow's milk it is necessary to give a very low percentage at the beginning, for reasons mentioned before. If too high a percentage of proteids is given, indigestion will result, with colic and the passage of curds in the stools. If you do not give enough proteids the child will not thrive, *i.e.*, there will not be a progressive gain in weight, or there may be a loss.

Fat is also an important element in the food. It diminishes nitrogenous waste, and acts as a laxative. If too high a percentage is given indigestion will result, with regurgitation and diarrhœa as symptoms. If too low a percentage, constipation will occur, with symptoms of malnutrition. The child will not thrive. Fat is present in the mother's milk in the high proportion of 3 or 4 to 1 of proteids, therefore the infant in the early months of its life should receive a comparatively high percentage of fat with a low percentage of proteids.

Carbohydrates in the form of milk sugar must be freely supplied to the child, taking the 7 per cent. in the mother's milk as a guide to the quantity. If sugar is given too freely the child will become fat very quickly, be anæmic, and be very liable to develop diseases of malnutrition. This is practically what occurs in infants fed on condensed milk.

The indications, then, for regulating the percentages during the first few months are 3 or 4 per cent. of fat, 1.5 per cent. or less of proteids, and 7 per cent. of sugar; remembering that these per-

centages may require temporary modification for a variety of reasons.

To illustrate the practical working of this scheme, take a child at the age of two months for whom it is necessary to provide a food. Each feeding would consist of ℥iiiss. of milk given at intervals of 2½ hours during the day ; or eight feedings during the twenty-four hours ; that is ℥xxviii. of milk would be required. The percentages needed by a healthy child of that age would be approximately :

Fat.....	4 per cent.
Sugar.....	7 "
Proteids....	1·5 "

or a proportion of fat to proteids of 3 to 1. The proportion of fat to proteids in 12 per cent. cream is 3 to 1. And 12 per cent. cream diluted twice will produce exactly the formula we require. Therefore we must obtain enough 12 per cent. cream to produce when diluted ℥xxviii. of food. This ℥xxviii. is made up in the proportion of 1 part cream to 2 parts water. Therefore we will require ℥ix⅓ of cream and ℥xviii⅔ of a 7 per cent. sugar solution. Eight sterilized feeding bottles are now obtained ; ℥iiiss. of this diluted cream is put into each bottle. They are then submitted to a heat of 160° F for half an hour ; in other words the milk is Pasteurized, and you have a baby's food prepared in accordance with the most approved method.

This is practically Holt's scheme. Rotch inaugurated the method, and in his book, Pediatrics, he made the matter very clear, yet he did not outline a plan by which the practitioner could prepare these formulæ for himself. In his book, he simply gave a large number of formulæ, prepared to suit a large number of possible cases. These it was necessary to remember. Holt, following in his footsteps, went further and developed this plan, which if remembered will enable the practitioner to work out his own formula. When you have mastered the method it is just as easy to write out a suitable formula as it is to write a prescription for a cough mixture. Unless you deliberately go to work and master it, it will be of no use to you. Since Holt's scheme has been published quite a number of others have been printed in the journals. One of these was based on the decimal system, and as such the calculations were simple, but the metrical system was also necessarily used, and this detracted from its value as a popular method.

Selected Articles

A CONTRIBUTION TO THE STUDY OF HYSTERIA IN THE MALE.

By Dr. Silvio Ciarrocca.
University of Naples.

(Continued from July number.)

THE variety of the symptoms observed in my patient, and their changeableness, give additional proof of the identity of the neurosis in the two sexes, both as regards its fundamental features and also as regards the succession of the phenomena dependent on the neurosis; and, in truth, in our case there have appeared almost all the chameleon-like qualities of the affection, from the narrowing of the visual field to the disassociation of the cutaneous sensibility, from tremor to contracture, from visceral anæsthesia to vaso-motor disturbances, from sensations of pain, entering the psychical field, to the attempt to commit suicide.

As for the insomnia, with which the disturbances in our patient began, various authors have lately dealt with this subject with special precision. Herzen (1887) says that the brain is like a gasalier: when all the jets are burning one is awake; when all are extinguished we have natural sleep; when one only is burning we have hypnotism.

S. de Sanctis (1896), in his recent study, says that disturbances of sleep are frequently seen in hysteria, but does not undertake to interpret them. According to P. Sollier (1897), hysterical patients suffer from insomnia at night, because they are constantly plunged in a pathological sleep, which keeps them from sleeping normally; this state is nothing else than somnambulism, or, better, "vigil-ambulism," and all the symptoms and stigmata of hysteria would be but phenomena of this particular condition of the brain.

Without claiming to throw any light on the subject, I limit myself to stating that, in my patient, sleep followed all the oscillations of

the disease, even to failing completely when the manifestations of the disease were more profound and more numerous; so that the disturbances of sleep seem to be connected with the disease in the same way as the other symptoms. Among these latter, I mention specially the involuntary loss, of short duration, of the fæces and urine. When this symptom accompanies motor and sensory disturbances in the lower limbs the diagnosis may be made difficult, owing to the resemblance to myelitis. In my opinion it is due to the diminished sensibility of the mucous membrane of the anus and urethra, which has been observed, amid the manifestations of the hysterical neurosis, like that of the other mucous membranes (Raymond). Therefore, while the sensibility of the sphincter of the anus and of the neck of the bladder is such as not to give rise to true incontinence, yet it is not perfect enough to cause consciousness of the need of defaecation and micturition. The stasis of blood in the lower limbs and the excessive flow of saliva, as seen in our patient, are regarded as vaso-motor disturbances, which, besides, are not rare in hysteria, so that they alone may form a large part of the picture (Waton, 1892). It is to be noted, however, that the increased salivary secretion was conjoined with a diminution in the quantity of urine, so that there was a physiological compensation. Similarly, hysterical polyuria is, in the greater number of cases, accompanied by polydipsia and by a lessening or complete cessation of other secretions. So also the furfuraceous desquamation of the skin is not to be here regarded as a primary trophic disturbance, since it followed the stasis in the lower limbs and represents the result thereof. Indeed, it is almost always seen when the nutrition of the superficial layers of the skin is altered owing to various hyperæmic conditions.

The stammering, already observed by Ballet and Tissier (1890), is due largely, according to Pitres, to a spasmodic contraction of the phonetic muscles. To this cause he attributes many disturbances of speech in the hysterical. But the fact that, in our patient, the phenomenon is in complete relation to the greater or lesser affection of the psychical processes, makes me claim that its manifestation is accompanied by the diminished tension of the nervous wave which empties itself into the motor centres of language with force insufficient to determine the synergistic contraction of the muscles intended for the articulation of speech. There happens then what is noticed in children when they repeat a lesson not learned by heart, that is, to fill up, by lengthening out and repeating the last syllables of the previous word, the mnemonic gap and the want of association.

What results then, clearly enough, from my observation is the constant association of sensitive disorders, more or less generalized, with the various symptoms, as if the alteration of the sensibility were the condition necessary to their manifestation. All the authors who have studied the hysterical neurosis thoroughly have observed that in the cases of hemi-anæsthesia it is on the anæsthetic side that appear almost constantly the various hysterical phenomena, and that the anæsthesias are wanting in almost five out of ten cases of hysteria (Pitres).

P. Sollier, in his work above referred to, brings forward a large number of observations, which would show how the simple functional changes in the receptive centres of the cortex are capable of producing all the disturbances which appear in the very complex picture of hysteria. He, too, is inclined to recognize in the cortical superficies, special centres, which preside over the functionality of the organs pertaining to vegetative life—a thought put forth also by our Prof. Bianchi, in one of his recent lectures on cerebral localization.

Without entering upon the discussion pertaining to the localization of the dynamic disturbance which produces hysterical anæsthesia, the fact which the study of cerebral localization has brought to light, the relation, that is to say, of topography between the zones of a motor nature and the sensitive zones, besides their close physiological relation, would be, I think, sufficient to explain how the functional changes in the sensitive areas can determine disturbances of the centrifugal current, from tremor to the most complete paralysis, in proportion to the intensity of these changes. If indeed we imagine that the registering centres of the tactile images, of the muscular, of those which come from the tendons and from the articulations of a limb, or of any section of the body, are affected ever so little, voluntary movement is no longer possible; just as we cannot speak if all the images which preside over the complicated function of language are exhausted.

It seems to me we can explain in an analogous manner the disorders of the psychical field, which our patient has presented. The melancholy depression, the short periods of somnambulism, the slight and intercurrent attacks of amnesia, the short periods of mental confusion, appeared together with the other sensory, motor, vasomotor, visceral phenomena, and disappeared with them, so as to seem, I might almost say, a result of these latter. The more exalted psychical functions are developed, as Bianchi has shown (1895), in the frontal lobes, which form the last station in which converge,

modified by the intermediate neurons, all the impressions arising from the working of our organs, all the images, sensorial, sensitive, kinæsthetic. There takes place the synthesis of all these diverse elements from which the personality results, and it is from the combination of them that arise ideas and sentiments. If, then, these images are not sent from their depositing centres (through changes whose nature I do not discuss), or if they are sent incompletely, that is to say, in such a way as to change the physiological harmony, then it will follow that the mode of reaction of this part of the brain, all the more delicate because of its greater functional dignity, will be disturbed and the synthesis defective. Moreover, in the same manner as sensation is not possible if the stimulus does not attain a given intensity and a certain duration, so the more complex nervous phenomena of a psychical nature are not produced if the various elements of which they are the resultant have not the necessary energy and the required initial velocity. Memory, attention, consciousness, personality, will, are not primordial functions like motility and sensibility. The former need various elementary components for their constitution, and it is owing to changes in the latter that they are disarranged.

In our patient the depression is a reactive effect of the altered function of the nervous system. The brain behaves, I might almost say, as the other viscera. To our consciousness in general there is present only the finality of all its working, not the single units from which thought results. If in the formation of the latter, or in the unfolding of intelligence, there arise qualitative or quantitative disturbances, and we are conscious of these, we have the painful depression, in the same manner as one is gloomy when digestion or intestinal peristalsis is not physiologically performed. The patient observes that the physiological harmony of his organism is disturbed, and therefore the tonality of the *ego* is lowered. As soon as the disorders of cutaneous and visceral sensibility disappear, as soon as the dynamogenesis of the nervous elements is re established, the individual again becomes calm and regains confidence in his recovery.

The attempt to commit suicide depends on a fixed idea, which, dominating all the others, empties itself through the motor centres, and these act in consequence. That he attributed to the devil the command to take his life may have been an interpretation of the fact, since it is a popular thought, partly due to bringing up and to religious beliefs, that every individual's good actions are determined by the *dio del bene*, and his bad acts by the *dio del male*.—*Translated from Giornale Internazionale delle Scienze Mediche, for the* CANADIAN PRACTITIONER *by* DR. HARLEY SMITH.

THE MEDICINAL TREATMENT OF TUBERCULOSIS.

By Hector Mackenzie, M.D., F.R.C.P.,

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At the present day the tendency is rather to make too little than too much of medicinal treatment in tuberculosis. Climate, hygiene and diet are remedial agents which are far more powerful than any drugs, but an important lesson to be learnt from out-patient practice at a large hospital for consumption is that medicine can do a good deal to influence the course of the disease and to improve the patient's condition under very unsatisfactory circumstances as to food, climate and general environment. Drugs may become unnecessary when other powerful influences such as those mentioned can be brought to bear on the disease, but the usefulness of medicines is undoubted with the ordinary conditions under which the disease is met with in this country.

The discovery of the bacillus tuberculosis by Koch was immediately followed by attempts to apply this discovery to therapeutic purposes. The idea which first suggested itself was to administer various substances possessed of antiseptic or bactericidal properties, in the hope that they might kill the bacillus in the body. But although a large number of substances were proved to be able to kill or attenuate tubercle bacilli as cultivated in artificial media, it was found to be a very different matter when they were employed to attack the bacilli in the body of an animal. Little help in treatment has so far been afforded by the attempts to treat the disease in this way.

Dr. Sims Woodhead has elsewhere described the efforts which Koch and others have been making to obtain something of the nature of an antitoxin. All we know of the disease is not very encouraging to the hope that an efficient antitoxin will be obtained. In the case of some diseases, such as the specific fevers, the individual acquires immunity through successfully passing through an attack of the disease. So far is this from holding in the case of tuberculosis

that the reverse might be asserted with truth—namely, that susceptibility is increased once the bacillus acquires a successful footing in the body.

Neither in the local and chronic nor in the general and acute forms of the disease does any sign of immunization ordinarily appear. Koch believes, however, that in certain cases of acute miliary tuberculosis an immunization against the bacilli does occur, although too late to be of benefit to the body attacked. He has pointed out that in the course of acute miliary tuberculosis a certain stage sometimes occurs in which the number of stainable bacilli greatly diminishes, a fact which is the more remarkable because ordinarily dead bacilli are absorbed very slowly indeed. This disappearance of a large number of the bacilli is looked on by Koch as a sign of immunization resulting from a rapid inundating of the body with micro-organisms which have been absorbed or digested. He infers that the reason immunity does nor ordinarily occur is because the bacilli attain their development only in small numbers in the body, being there environed by dead tissues, and only becoming absorbed long after when they are dead and are profoundly altered, or, as more commonly occurs, being eliminated unchanged from the body without any absorption at all.

Working out this idea, Koch was led to the discovery of the various forms of tuberculin elsewhere described. The failure of the old tuberculin as a curative agent is now a matter of ancient history, nor can it be said that the reports as to a curative action of Tuberculin R. are at present any more encouraging than those of the older product, while both local and general reactions have been frequently met with after treatment with the newer tuberculin.

It is not necessary to add anything to what Dr. Sims Woodhead has said as to the use of anti-tuberculous serum, which is still in the experimental stage. The results so far obtained are not sufficiently conclusive to justify an extended use of any of the sera so far prepared. For the present we must be contented with simpler remedies, and, accordingly, we propose to give a short review of the principal medicinal agents which are now in use.

In the medicinal treatment of pulmonary and other forms of tuberculosis, each case must be carefully considered in all it bearings. Frequently at the time the patient seeks advice the appetite is poor, the digestive powers are weak, and the bowels act irregularly. In such cases great good can often be done by the administration of an alkali in combination with a bitter infusion before meals. A mixture containing 15 grains of bicarbonate of soda and 3 minims of dilute hydrocyanic acid to an ounce of compound infusion of

gentian is largely prescribed at the Brompton Hospital. A simple mixture of this kind often does much to restore the appetite and improve the powers of digestion, and thus paves the way for other remedies.

The bowels are often constipated and an occasional aperient is necessary. Aloes and cascara sagrada are the most useful remedies, and pills containing one or other of these ingredients in combination with nux vomica and belladonna may be prescribed, to be taken at bedtime. If the bowels are loose the subnitrate, the subgallate, or the carbonate of bismuth may be ordered along with a few drops of tincture of opium, or of the tincture of chloroform and morphine. On the whole, except in the later stages, and when ulceration of the intestine has occurred, constipation is more usual than diarrhœa.

Cod-liver oil has now for half a century played a leading part in the treatment of tubercular diseases in general and pulmonary tuberculosis in particular. Although used as long ago as 1772 in the Manchester Infirmary as a remedy for chronic rheumatism, it was not until about the year 1841 that it really came within the sphere of practical therapeutics, when Dr. Hughes Bennett, of Edinburgh, advocated its employment in the treatment of gout, rheumatism and scrofula. How little was known of it previously is shown by the fact that a writer in the *London Medical Gazette* in 1839, referring to the use of oleum jecoris aselli in Berlin, said it was unknown to what ingredient ass' liver oil owed its efficacy, but perhaps it was to the presence of a small quantity of creosote!

Cod-liver oil improves the condition of the blood, and patients previously anæmic often regain a healthy color under its administration. It promotes nutrition and metabolism, and has a tendency to cause the deposition or formation of fat in the body. Its action in tuberculosis is probably altogether an indirect one, depending on the improved condition of the blood and general nutrition which it brings about. Dr. C. J. B. Williams, from an experience of forty years, concluded that cod-liver oil was a most powerful agent in the treatment of phthisis. In the first decade of this period of forty years the beneficial effects of treatment were very limited, and were chiefly confined to incipient cases, life being rarely prolonged beyond the duration of two years. In the next decade a marked improvement took place, apparently in connection with a more liberal diet and the use of mild alterative tonics. During the latter twenty years, with the introduction of cod-liver oil, the average duration of life in phthisis was quadrupled—raised from two to eight years.

It is generally in text-books that cod-liver oil consists of

olein, palmitin, and stearin, with traces of iodides and biliary principles. The glycerides mentioned are those which form other animal fats, such as mutton suet, goose grease, or lard, the firmer fats having a larger proportion of palmitin and stearin, the softer more olein. The question at once arises, Why, if cod-liver oil consists of the same bodies as other animal fats, should it be therapeutically so much their superior? Very various answers have been given to this question. Some have said that on account of the presence of biliary principles, cod-liver oil is more easily assimilated and digested than the other fats. It is contended, however, that neither bile pigments nor bile acids are really present, and that the play of colors observed when a drop of sulphuric acid is added to a few drops of the oil on a porcelain slab is due to the presence of cholesterin, a peculiar pigment called lipochrome, and fatty acids.

Others, again, have alleged that the beneficial action of the oil is due to the iodine it contains; but the quantity actually present is extremely minute, never exceeding one part in two thousand, and it is extremely unlikely that such small quantities of iodine could impart any special virtues. Still another view is that the oil contains certain active principles, which some have actually attempted to separate from the oil itself.

Certain researches by Heyerdahl seem to show that cod-liver oil has a much more complex composition than was previously believed, and that there is neither olein nor stearin in the oil, and only four per cent. of palmitin, while two very unstable glycerides, which have been called therapin and jecolein, are each present to the extent of twenty per cent. The composition of cod-liver oil is therefore something *sui generis*.

There is, unfortunately, a great tendency in cod-liver oil to the formation of hydroxy-acids, bodies not only actually injurious in themselves, and very apt to set up gastric disturbances, but imparting to the oil a nauseous taste.

It is very important, therefore, that great care should be exercised in the manufacture of the oil, and that the livers used should be fresh and carefully selected. The best oil will, however, become rancid when exposed to the air for some length of time.

At the present day cod-liver oil is probably in much less favor as a remedy than it was formerly. The amount of oil consumed by the patients at the Brompton Hospital has greatly diminished, and the quantity used by others than hospital patients has probably become still more restricted. I am, however, old-fashioned enough to believe that it is one of the best remedies we possess for the treatment of chronic cases.

The dose and mode of administration are matters of considerable importance. As to the dose, opinions have varied considerably. The practice at the Brompton Hospital is ordinarily to give it in doses of one or two teaspoonfuls twice a day. Larger doses are seldom given. Jaccoud was of the opinion that the best results were obtained by the administration of doses of from two to three tablespoonfuls three times a day. We do not consider that such large doses are necessary or beneficial. The oil should not be given on an empty stomach, but either along with or after food. Some patients can be induced to take the oil with orange wine when they will not take it by itself.

A great variety of modes of administration have at one time or another been introduced. Flavorings such as eucalyptus, cocoa, anise, etc., have been added, but were not found to improve it. It has been made into a liniment with limewater and syrup, into a jelly with gelatine, or into a compound with iron, ozone, chloral, or creosote; but all of these have proved unpalatable. Two forms of preparation have met with great success—at all events, as far as the manufacturers are concerned. These are emulsions with gum acacia, tragacanth, sugar, hyphophosites and water, and mixtures with malt extract. The former contain at the most sixty-six per cent. of oil, but frequently not more than fifty per cent., and sometimes not more than twenty-five per cent. The latter contain from fifteen to thirty five per cent of oil, with malt extract and water. Some of these are erroneously called solutions, because the separate globules of oil cannot be detected with the microscope. This depends, however, on the fact that the index of refraction of the oil and that of the malt extract are nearly the same. The addition of osmic acid will at once show that there is no real solution.

Many patients will take emulsions who will not take the plain oil, but, on the other hand, some much prefer a pure oil to any emulsion. It should always be pointed out to patients that the dose of the emulsion is twice as much as that of the oil. Apart from the question of palatability, there is no reason to suppose that an emulsion has any advantage over the unsophisticated oil, and the question of palatability must be left to the patient to decide. The preparations with malt extract stand on a somewhat different footing from emulsions, for malt extract has some nutritive value which gum, sugar, and water do not possess. Malt extract, moreover, fairly well masks the taste of the oil. The only objection is that the preparation is generally so dilute in cod-liver oil that a tablespoonful is probably the equivalent of a teaspoonful of the oil.

Malt extract alone cannot be regarded as a satisfactory substitute for cod-liver oil, but, on account of the diastase it contains, it helps to digest starchy food, and if taken with meals may be useful when the digestive powers are weak.

Glycerine has some nutritive value, but, although sometimes given instead of oil, forms a poor substitute for it. It may, however, be given occasionally during hot weather, when oil is apt to disagree. One to four drachms may be taken three times a day.

Among other substitutes for cod-liver oil, pancreatic emulsion and petroleum emulsion may be mentioned. The former is fairly palatable, and the latter is tasteless; and both appear to exert a favorable influence over nutrition. The petroleum emulsion seems to have a soothing action on the irritable pharyngeal condition, and, in this way, helps to relieve cough, and, in some cases, it certainly appears to assist digestion.

Creosote, although discovered in 1830, did not attract much attention as a remedy for tuberculosis until 1877, when Bouchard and Gimbert published their paper on the use of creosote in the treatment of pulmonary phthisis. They insisted that only beechwood creosote should be used, and attributed the indifference with which the drug had previously been regarded to the impure form in which it had been employed, and to the attempts to use a very feebly volatile body by inhalation.

When creosote was administered internally, Bouchard and Gimbert observed first a diminution of the expectoration and cough, and later a return or improvement in the appetite, a diminution or cessation of the fever, and a return of strength. Night sweats also gradually disappeared after some weeks of treatment. Their observations have been amply confirmed by later experience.

Professor Sommerbrodt in 1887 published the results of the treatment of some 5,000 patients with creosote, and concluded that the drug was possessed of a specific action in tuberculosis. He obtained the best results in young subjects and in early cases, and he advocated the employment of gradually increasing doses.

While few probably are prepared to admit that creosote has a specific action, most of those who have had a large experience of the drug will admit that it has very valuable properties in the treatment of tuberculosis. The purest beech creosote should be employed. It should at first be given, preferably in the form of capsules, in doses of 1 to 5 minims, three times a day. The dose may be increased to 10 or 15 minims. If under its administration

the appetite comes back, the cough and expectoration diminish, the fever abates, the night sweats cease, strength returns, and nutrition improves, the object with which the drug has been given will be attained, and happily these are the effects which are often observed.

The remedy should be taken after food. It has a disagreeable taste, and, if it is not administered in the form of capsules, it may be given milk, which is perhaps one of the best vehicles. Dr. Clifford Beale has lately been giving creosote dissolved in cod-liver oil, in which form he has found it to be well tolerated. Beginning with doses of 3 to 5 minims, he has gone up to doses of 50 or 60 minims three times a day, and speaks favorably of the effect of such large doses on the condition of the patient.

Guaiacol has of late years come into favor as a substitute for creosote, of which, indeed, it is the principal constituent.

Guaiacol is a methyl ether of pyrocatechin, and, as ordinarily met with, is a colorless highly refracting liquid, freely soluble in oils and ethers, but sparingly so in water. Its taste and odor are less disagreeable than those of creosote. It is given in the same doses and mode as creosote. Apart from the fact that it is more readily borne by the stomach—certainly a very important matter—it does not appear to have any very special advantages over creosote, while it is much more expensive.

Guaiacol has recently been given in very large doses—60 minims three times a day—by Dr. Edward Squire, in the form of capsules, or as an emulsion with glycerine and tincture of orange, not only without toxic effects, but with apparent benefit, although the patients complained of the emulsion burning their throats, and sometimes objected to swallowing so many capsules.

Two additional modes of administering guaiacol may be mentioned. First, it may be used as a local application to the skin; or, secondly, it may be administered hypodermically. Guaiacol when painted on the skin appears to be freely absorbed. Applications of 10 to 60 minims may be made at intervals of two or three days, the remedy being used either undiluted or mixed with glycerine, olive oil, or tincture of iodine. The hypodermic method of administration is painful. From 1 to 7 minims are injected deeply into the subcutaneous tissue. Neither of these methods appears to have any special advantages, but they may be useful in exceptional cases when the ordinary mode of administration upsets the stomach.

Creosotal or creosote carbonate and guaiacol carbonate have also been introduced as substitutes for creasote and guaiacol respectively.

Creosotal slowly breaks up in the intestine into creosote, of which it contains 92 per cent., and carbonic acid. It is like creosote, liquid, but has little taste, and, as a rule, causes little or no gastric disturbance. Five-minim doses may be given to begin with, but the dose has sometimes been increased to 30 or 100 minims three times a day. A palatable mode of administration is to drop it into the well-beaten yolk of an egg, this being taken after meals. Its therapeutic effects are the same as those of creosote itself.

Guaiacol carbonate is a tasteless powder, and would probably have met with much more favor than it has done were it less expensive. It may be given in doses of 5 to 15 grains three times a day.

Various other preparations of creosote and guaiacol have from time to time been introduced. One of the latest of these is a combination of iodine and guaiacol introduced by Coronedi (*Atti d. Accad. Med. Fis. Fiorent*, July, 1897), under the name of iodoguaiacol camphorate. P. Bacialli (*Boll. d. Sci. Ned. d. Bologna*, s. vii., vol. ix., March, 1898,) has reported favorably on the effects of this remedy administered hypodermically.

Benzosol, a finely granular, insoluble, tasteless powder, containing 54 per cent. of guaiacol, and splitting up in the intestines into benzoic acid and guaiacol, may be given, in doses varying from 4 to 60 grains, in all conditions where guaiacol is indicated.

Guaiacolate of piperidine, which resolves itself into guaiacol and piperidine in the duodenum, has been tried and recommended as safe, well borne by the stomach, and free from unpleasant effects. As is the case with guaiacol itself, the patients, while under its influence, improve in appetite and general strength. The dose may be gradually increased from 5 grains to start with, three times a day, up to 25 grains. The principal objection to it is its expense.

Intratracheal injections of guaiacol and menthol (1 drachm of a solution consisting of guaiacol 2, menthol 10, olive oil 88), although beneficial in bronchiectasis and fœtid bronchitis, have not proved specially useful in phthisis.

Among constitutional remedies, those known as alteratives hold a high position. Arsenic has been employed in the treatment of tuberculosis from very early times, and few drugs are believed to be more useful at the present day. Given in small doses, 2 to 3 minims of Fowler's solution, after meals, it acts as a tonic, enhances the beneficial action of cod-liver oil, and improves the condition of the blood and general nutrition. In this connection it may be mentioned that the arsenical mineral waters of Mont Dore have long been held in high repute in the treatment of phthisis.

Iron, although largely used, especially when anæmia is a marked symptom, is in our experience not so valuable as arsenic. If there is a tendency to hæmoptysis it appears to increase it, and when there is anæmia depending on tuberculosis, iron does not seem to improve matters. In any case the neutral preparations are better borne than the astringent. Pyrexia is regarded as a contraindication to the use of iron.

Sulphur and its compounds, sulphurous acid and sulphuretted hydrogen, are remedies which have at one time or other been in vogue, and, although little used at the present time, may again enjoy a measure of popularity. Inhalations of sulphurous acid were advocated as recently as 1887 by Dr. Auriol, who published an account of seventy cases so treated by him, and concluded that great benefit had resulted. Similarly, inhalations of sulphuretted hydrogen gas have been employed with some show of benefit. One of the most curious methods of treatment which has ever been devised was that of Dr. Bergeon (1886), of injecting into the rectum a mixture of carbonic acid gas and sulphuretted hydrogen. It had been shown by Claude Bernard that sulphuretted hydrogen introduced into the rectum is rapidly eliminated by the lungs, and Dr. Bergeon dreamed that in this way he would be able to attack the tubercle bacillus *in situ*. The method had an extensive trial, and many reported favorably as to its effects; but experience failed to prove that any lasting benefit resulted, and it has fallen entirely into disuse.

Mineral waters containing sulphur, like those containing arsenic, have been highly recommended in the treatment of tuberculosis; but although the waters of Les Eaux Bonnes are in high repute in France for this purpose, the waters of Harrogate and Strathpeffer are not much resorted to by tuberculosis patients in this country.

Hypophosphites of lime, soda, etc., are often given, but there is little evidence that they have any special action. A largely used proprietary preparation which contains small doses of the hypophosphites probably owes most of its popularity to its palatability and the persistent advertising which keeps its name constantly before the public and the medical profession.

Quinine and strychnine or *nux vomica* are useful tonics, and are often given in combination with other remedies, as in the well-known Easton's syrup.

Nuclein and the so-called nucleinic acid prepared from yeast have received a good deal of attention in America. Sixty to eighty minims of a 1 per cent. solution of nucleinic acid are administered

by hypodermic injection daily, and the same preparation has been given by the mouth in larger doses. Vaughan and others who have used it largely have published some very favorable results. A recent method of treatment associated with the name of a French physician, and alleged to be equally efficacious in cancer and in tubercle, appears to be nothing more or less than treatment with nuclein.

It is impossible to refer to all the drugs which have been used in the treatment of phthisis. Oil of cloves, oil of cinnamon, oil of peppermint, ichthyol, garlic, and cinnamic acid are a few of those which have recently enjoyed a measure of support. The oils of cloves, cinnamon, and peppermint may be given in the form of capsules in doses of 5 to 30 minims, or they may be dropped on the sponge of an oro nasal inhaler and used as inhalations. Ichthyol, a bituminous substance containing a large amount of sulphur, on which its efficacy probably depends, is given in doses of 20 to 60 grains a day, preferably in the form of keratin-coated pills, the outer covering of which will not dissolve until the intestine is reached. Garlic may be given in the form of powder, in capsules, in doses of 3 to 10 grains, or in the form of the syrupus allii (U.S.P.), in doses of 1 to 4 drachms.

Cinnamic acid has been recommended by Heusser as innocuous, and, although not a specific, as capable of curing a considerable number of cases of pulmonary tuberculosis. It is employed in the form of a 5 per cent. emulsion, of which 1½ minims or more are given by subcutaneous injection in the gluteal region, the maximum dose being 15 minims.

We may conclude with a few remarks on the medicinal treatment of various complications of pulmonary or other forms of tuberculosis.

(1) *Fever.* Extended investigations have been made as to the effect of all the well-known antipyretic drugs in reducing fever in tuberculosis. Neither antipyrin, phenacetin, acetanilide, quinine, nor other similar drug, appears to have any permanently beneficial effect on the course of the temperature, while with general treatment a subsidence of fever will often follow.

(2) Fever is often accompanied by a troublesome symptom—namely, *sweating at night.* In such cases the temperature and ventilation of the bedroom and the amount of the bedclothes must be regulated. When profuse perspirations occur, changing the night-dress, rubbing the patient down with a dry towel, and the administration of some food and stimulant, are useful measures to employ.

There are various remedies which are more or less successful in

checking night sweats. Oxide of zinc in doses of 5 grains in pill form, half a grain of the extract or 15 minims of the tincture of belladonna (B.P. 1885), $\frac{1}{100}$ gr. of atropine, half a grain of extract of nux vomica, $\frac{1}{20}$ gr. of strychnine, $\frac{1}{12}$ gr. of agaricin, $\frac{1}{60}$ gr. of picrotoxin, and 20 grains of camphoric acid, are among the remedies that have been found useful. They may be given either singly or in combination. I generally commence with oxide of zinc, which, on the whole, I have found the most satisfactory.

(3) *Hæmoptysis.* It must be borne in mind that in most cases hæmoptysis tends to subside of its own accord, and that quiet and rest are what, as a rule, the patient most requires. A hypodermic injection of morphia (gr. $\frac{1}{4}$) will generally fulfil all the indications. The diet should be plain and no stimulants should be allowed.

Hæmostatics such as hamamelis and ergot are sometimes employed. It is difficult to explain how they act, and it is likely that the esteem in which they are held is due to the natural cessation of the hæmorrhage already referred to. Tincture of hamamelis is used in doses of 20 or 60 minims, and ergot is best given in the form of hypodermic injection (1 or 2 grains of ergotin in solution).

When the bleeding is profuse and continued, sometime depressants such as antimony may be cautiously given, a dose of $\frac{1}{60}$ gr. being repeated every half-hour until some effect is produced.

(4) *Cough.* Space will permit only a very brief reference to the treatment of this frequent and troublesome complication of pulmonary tuberculosis. Our endeavor to treat the cough must be guided by a knowledge of the condition on which the cough depends. If there is active secretion from the bronchi or from the wall of cavities, or if breaking down of lung tissue is going on, expectoration is a necessity. In such cases opiates should be avoided, and in all cases they should be given with great care. Cough mixtures and linctus are generally apt to spoil the appetite, and remedies should be as simple as possible. Lozenges of gum acacia and liquorice are much used at the Brompton Hospital. Certain dry inhalations given on inhalation respirators are very useful where the cough depends on an irritable condition of the mucous membrane. Twenty drops of a saturated alcoholic solution of menthol, or a similar quantity of a mixture consisting of equal parts of creosote or guaiacol and spirit of chloroform, are examples of dry inhalations which have been found useful. Menthol is often used in the form of a lozenge or pastille. When there is laryngeal catarrh the use of a steam inhaler containing a drachm of compound tincture of benzoin to a pint of water at 140° F. sometimes affords relief. When there is excessive secretion, belladonna or codeine may be cautiously used.—*The Practitioner* (*Special Tuberculosis number, June, 1898.*)

Clinical Notes.

A CASE OF EXTRA UTERINE PREGNANCY.

Reported

By Dr. Ferguson.

At the May meeting of the London Medical Association.

HISTORY.—(1) Menstruation. Patient thirty-six years of age; one child, fourteen years old. Case came under his care in April 1896; had not menstruated for one year previous. Complained of pelvic pains in inguinal regions, tenesmus and chronic diarrhœa. Examined under an anæsthetic with negative results. Curetted, and then menstruated the two following months (June and July, 1896). Curetted again in September, 1897, and menstruation followed in October, but no recurrence of menses afterwards. A discharge, sometimes leucorrhœal in character and latterly sanious, was present for the last three or four months. (2) Abdominal distension and slight elevation of temperature, continuously present, in varying degrees, for past two years. (3) Peritonitis. The patient, on the 24th February last, was suddenly seized with an acute attack of abdominal pain, attended by shock, rise of temperature and tympanitis. She rallied, and the symptoms gradually moderated, but did not entirely subside.

Operation. She was admitted to the hospital April 6th, 1898, and was operated upon April 8th. The operation was performed by Dr. Eccles, assisted by Dr. Ferguson and Drs. H. J. and W. Stevenson. (1) Fœtus. Median abdominal incision disclosed pelvic viscera and lower bowels adherent. On exploration, fœtus was found deposited in *right* iliac fossa, behind the caecum and small intestines, and bound down by firm adhesions. In size and development it had the appearance of a five months' fœtus. Only the end of the elbow was visible on opening the abdomen. There was no fluid and no clots in the abdominal cavity. The amniotic membrane covered the upper portion of the fœtus. (2) Placenta.

The placenta was situated on the *left* side, at the fimbriated extremity of the left fallopian tube, and apparently grasped by or implanted on the fimbriæ, and was adherent to the posterior layer of the broad ligament. It was of the shape of the closed hand, but larger, and the rent through which the fœtus escaped scarcely admitted the point of the index finger. Very free hemorrhage, bright in color, from the placenta on separating it from adhesions. The ovarian artery bled profusely, and was separately ligated. The tube, ovary, and placenta were removed by tying off on the uterine side of the placenta about one half-inch from the uterus. (3) Right fallopian tube. This tube was enormously thickened, red, and slightly œdematous, but there was no evidence of pregnancy having taken place in it. (4) The umbilical cord. The cord was broken one-third way from the placenta and well-preserved throughout. (5) Drainage. The pelvic cavity was drained through the abdominal wound with gauze drainage.

Progress of the case. At the date of the report, April 9, one month after the operation, the patient was sitting up, the abdominal wound closed, and the pulse and temperature normal for the preceding week. Recovery uneventful.

Remarks: (1) What was the probable duration of pregnancy? If only five or six months (from October, 1897), what was the cause of the elevation of temperature and abdominal distension for preceding year and a half? (2) When did rupture occur? Would the inflammatory deposits and dense adhesions present have formed in six weeks (since February 24th), and would there not be some evidence of hæmorrhage having taken place on the supposed recent date of rupture? (3) Was there any growth of the fœtus after rupture took place? The rent through which the fœtus escaped, unless much constricted, was too small to admit of the escape of so large a body. (4) Did the placenta continue to grow after the escape of the fœtus? The bright arterial hæmorrhage from the placenta suggests this possibility.

Dr. H. J. Stevenson prepared and exhibited to the association the placenta and fœtus removed at this operation.

Progress of Medicine.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto. Obstetrician to the Toronto General Hospital

AND

H. T. MACHELL, M.D.,

Surgeon St. John's Hospital and Physician to Victoria Hospital for Sick Children.

ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children and St. John's Hospital.

Oophorectomy for Inoperable Cancer of the Breast.

Prof. Watson Cheyne was induced to operate on two cases lately by the remarkable success which attended Dr. Beaston's case of this kind. In his first case a young woman aged 34 had a history of cancer of the breast for nearly three years. One year after it had been noticed the breast was removed, and one year after this some enlarged glands were removed from the axilla. When seen by Prof. Cheyne the old scars were inflamed and the whole axilla practically filled with cancerous nodules, and, in addition, some were felt in the posterior triangle of the wall. As this was a case in which the attempt to remove the disease was out of the question, he accordingly removed both ovaries. In four months afterwards he noted the disappearance of a great deal of skin infiltration, a distinct subsidence in the axillary mass, and the disappearance of a number of the nodules in the wall. For six months there was a steady and progressive improvement; after that time the case went on from bad to worse, the old scar tissue breaking down again, and the cervical and axillary glands enlarging and producing so much pain as to call for frequent doses of morphia.

In the second case, while the breast and axillary nodules seemed to get slightly smaller and softer, the patient became weaker and weaker, and steadily sank. He concluded that there was not

the slightest benefit from the operation in this case. In the first, however, oophorectomy had, in his words, "undoubtedly a very marked effect on the growth of the cancer, and led to a very distinct breaking down or absorption of portions of the growth. The interesting point, however, is that the effect of the oophorectomy gradually passed off, so that at the end of six months the disease began to grow again, and since then has made rapid strides. The result of these two cases, which were typical cases in young women where the ovaries were still active, and where, therefore, their removal, if of advantage, should have produced the most marked results, is extremely discouraging, and I doubt if it is worth while going on with the procedure."

Audebert (*La Gynécologie*) reports a case of salivation due to retroflexion of the gravid uterus. The uterus was reduced on placing the patient in the genu-pectoral position. She was then two and a-half months' pregnant. Immediately after reposition salivation had diminished and at the end of three days had ceased entirely.

The bicycle must be absolutely forbidden in amenorrhœa associated with phthisis, cancer, diabetes, organic disease of the heart and albuminuria, and organic renal disease; in metrorrhagia or excessive menstruation; in acute metritis, perimetritis, salpingitis, ovaritis, pelvic abscess and paramitritis; in hæmatocele and bleeding fibroids; and lastly in vulvitis and vaginitis.

FANQUEZ.

TUBERCULOUS PERITONITIS: The results of the treatment of this disease by simple incision have been little short of miraculous. In a certain number of recorded operations the peritoneal cavity has been washed out, or drained, or into the inflamed area has been introduced some such medicament as iodoform. Statistics show that the most favorable results on the whole have been attending the mere opening of the abdomen. FREDERICK TREVES.

Dr. Haggard, Nashville (*Am. Jour. Obs.*), in an article on The Necessity for Early Recognition and Treatment of Carcinomata Uteri, asks the profession to note particularly the following, viz.: (1) Education of female patients to the danger of cancer at or about the menopause; (2) early interpretation of suspicious symptoms, followed by immediate local examination; (3) prompt surgical interference in malignant disease. Medical treatment, he says, is neglect! Early surgical procedure, prompt and efficient, is the only rational treatment.

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy; Lecturer in Organic Chemistry and Toxicology Woman's Medical College

When may Women with Heart Disease Marry?

Kisch (*Therapeut. Monats*, February, 1898) discusses this question. He does not agree with Peter's dictum: "*Fille pas de mariage, femme pas de grosse, mère pas d'allaitement.*" Every case, however, must be decided upon its merits. The chief points to be considered are: (1) the kind of heart disease, (2) its duration, (3) the presence or absence of compensation, (4) the general health, (5) the social position of the patient. (*a*) They may marry if the disease is not of long standing, and compensation is good, and the general health not undermined. They will have during pregnancy, and still more during and for a time after delivery, many troubles due to their heart, but in by far the greater number of cases there will be no danger to life. This applies to well compensated mitral regurgitation and stenosis, aortic regurgitation, fairly marked sequelæ of pericarditis, and to muscular degeneration if not too far advanced. The patients must also be in a position to spare themselves bodily exertion as much as possible during pregnancy, to avoid mental excitement, and to have constant medical supervision. (*b*) The prognosis is not so good if the patients are very anæmic or nervous, or advanced in years, or if the valvular disease is congenital or acquired in childhood. In these cases the physician should advise against marriage, or at any rate point out that the disease will almost certainly become worse after marriage. (*c*) Marriage is to be absolutely forbidden as dangerous to life when compensation is failing or when there is advanced muscular degeneration. In all cases where there is dyspnœa, palpitation and a quickened pulse on slight exertion, or marked œdema not disappearing after rest in bed, when there is a tendency to arrhythmia, scanty urine with albumen, and

attacks with irregular small .pulse, coldness of the extremities, nausea, dyspnœa, syncope, etc., marriage is dangerous whether the cause of the symptoms be valvular disease, diseased arteries, or cardiac muscles. Even those for whom marriage is allowable must follow certain rules strictly: (1) Coitus must not be frequent, and must be continued to the end of the orgasm, otherwise reflex heart troubles and depression result. (2) They must not have more than one or two children, as the strength of a diseased heart diminishes with every pregnancy in geometrical progression. If this rule is followed induction of premature labor will be luckily seldom necessary, since when it is the results are very unfavorable.—*Brit. Med. Jour.*

MENTHOLATED COLLODION IN THE TREATMENT OF CONTUSIONS.

The following is said to be a useful application for contusions:

Menthol, from 3 to 6 parts.

Collodion, from 24 to 27 parts.

M. Sig. To be painted on once or twice a day. It is said to relieve the pain promptly, and, by the contractile action of the collodion, to hasten the absorption of the effusion, provided it is not a joint that has been bruised.—*The Practitioner.*

IODOFORMOGEN.

Kromayer (*Berl. klin. Woch.*, March 7th, 1898) describes this new preparation, which is a combination of iodoform with albumen. It is a very fine, bright yellow powder, which does not roll into balls. It is practically odorless. It is insoluble in water, and can be sterilized at 100° C. The author has used it in more than a hundred cases, and he gives illustrative details of three of them. It has some of the disadvantages of iodoform, in that it may produce an eczema. Kromayer says that at the present time it is the best dusting powder for wounds, etc., available.—*Brit. Med. Jour.*

TRACTION OF THE TONGUE IN APPARENT DROWNING.

A report was recently published in *La Tribune Médicale*, which appears to illustrate the value of traction of the tongue in the restoration of the apparently drowned. A boy fell into one of the docks at Havre, and was not recovered till he had been immersed fully five minutes. He was quite unconscious when brought to land, but a custom-house officer at once proceeded to perform artificial respiration by Laborde's method (rhythmical traction on the tongue),

while other attendants rubbed him vigorously and blew air into his mouth. In half an hour signs of life reappeared in the form of respiration and a few moans. He was quite two hours longer before completely recovered. Our contemporary considers that the result was mainly due to the tractions on the tongue, and with Dr. Gilchrist, of Nice, who has called our attention to the report, suggests that it should be made widely known throughout the lay press that traction on the tongue, repeated regularly fifteen times a minute, is a highly efficacious treatment in many cases of apparent death from asphyxia.—*Brit. Med. Jour.*

Ten Hygienic Aphorisms.

The late Dr. Frank H. Hamilton, of Bellevue Hospital, is said to have framed the following decalogue of health precepts: (1) The best thing for the inside of a man is the outside of a horse. (2) Blessed is he who invented sleep—but thrice blessed the man who will invent a cure for thinking. (3) Light gives a bronzed or tan color to the skin; but where it uproots the lily it plants the rose. (4) The lives of most men are in their own hands, and, as a rule, the just verdict after death would be—*felo de se.* (5) Health must be earned—it can seldom be bought. (6) A change of air is less valuable than a change of scene. The air is changed every time the wind is changed. (7) Mould and decaying vegetables in the cellar weave shrouds for the upper chambers. (8) Dirt, debauchery, disease, and death are successive links in the same chain. (9) Calisthenics may be very genteel, and romping very ungenteel; but one is the shadow, the other the substance, of healthful exercise. (10) Girls need health as much—nay, more than boys. They can only obtain it as boys do, by running, tumbling—by all sorts of innocent vagrancy. At least once a day girls should have their halters taken off, the bars let down, and be turned loose like young colts.—*Medical News.*

Arsenic should be administered in dry dermatoses only, moist skin-diseases are made worse by it—*Amer. Med. Surg. Bulletin.*

Editorials.

THE ONTARIO MEDICAL LIBRARY ASSOCIATION.

THE first meeting of the directors, appointed at the annual meeting in June last, was held on the 22nd of July, when the following officers were elected for the ensuing year: President, Dr. J. E. Graham; Vice President, Dr. W. J. Greig; Secretary, Dr. H. J. Hamilton; Treasurer, Dr. Herbert A. Bruce; Curator, Dr. N. A. Powell; Assistant Curator, Dr. W. J. Wilson. The establishment of an academy of medicine, as urgently advocated by Dr. Osler at the annual meeting and reported in our last issue, came up for consideration. As the proposal had the unanimous approval of the directors it was thought that the scheme merited a full and free discussion and the serious consideration of the three medical societies which are interested equally with this association. It was therefore hoped that this subject would be brought to the notice of each society as soon as the autumn meetings were well under way.

For the purpose of making the association more useful to its members and to the profession of the province outside of Toronto, it was pretty well decided to have printed a catalogue of the more important and useful works now on the shelves—said catalogue to be distributed among the members.

Heretofore the library has been open only from two o'clock to six each afternoon (Saturdays excepted). The directors, feel that the opening of the library during the morning hours would be of advantage to some of its members. Henceforth we understand the library will be open during the morning as well as the afternoon. This, we are given to believe, depends somewhat upon the support and encouragement given by the Toronto members. We trust that the reading, the progressive, the advanced among our confreres will take steps, if they have not already done so, to identify themselves with an association which was originated by the profession, is maintained by the profession and conducted solely in the interests of the

profession, and, therefore, indirectly for the benefit of the public at large. Of the advantages of joining such an association as this we propose to speak briefly in the next issue.

TUBERCULOSIS.

THOSE who take a deep interest in tuberculosis should read the June number of *The Practitioner* (English), which is devoted entirely to a consideration of that disease. The editor, in the first place, refers to its destructiveness. He says: "No pestilence which visits mankind makes anything like the havoc that is wrought by tuberculosis; typhoid fever, diphtheria, scarlet fever, measles, small pox, cholera, and all other infectious diseases together do not claim half so many victims as are killed by tuberculosis.' He thinks that a vigorous crusade against it ought to be successful; and, in proof of such contention, he refers to the fact that already improved sanitary conditions have greatly diminished its prevalence. He quotes from Ransome to show that the death-rate from phthisis in England and Wales has been greatly diminished during the last fifty years. Better methods of treatment have also had much influence in accomplishing such good results. After referring to the requisites for a sanitarium, he says that "what is needed is an organized movement for the provision of sanitoria for poor tuberculous patients where they can be treated while their disease is yet in a curable stage." He thinks that "the public, if appealed to in the right way, would liberally help," and adds: "But the question is not one of merely philanthropic interest; it is of national importance, as it closely concerns the maintenance of the vigour of the race. On this ground the co-operation of the State might well be asked. Let us, in short, have a national crusade against a national disease."

The following original communications appear in the same issue: "The Treatment of Consumption," by Sir Samuel Wilks; "The Susceptibility to Tuberculosis Under Different Conditions," by Dr. Arthur Ransome; "The Bacteriology of Tuberculosis," by Dr. Sims Woodhead; "The Relation of Tuberculosis of Animals to Man," by Dr. Allan Macfadyen; "The Hospital Treatment of Consumption," by Dr. Pollock; "The Sanatorium Open-Air Treatment in Pulmonary Tuberculosis," by Dr. Hermann Heber; "The Treatment of Pulmonary Tuberculosis by Residence at High Altitudes," by Dr. Theodore Williams; "The Mediterranean Littoral as a Health Resort for Phthisis," by Dr. Michael Foster; "Desert

Climate for Lung Tuberculosis," by Dr. Sandwith; "The Climate of South Africa," by Dr. Hillier; "Ocean Voyages in Phthisis," by Dr. Parkes Weber; "Sanatoria for Consumptive Patients," by Dr. Ruffenacht Walters; "The Open-Air Treatment of Phthisis in Great Britain," by Dr. Burton-Fanning; "The Medicinal Treatment of Phthisis," by Dr. Hector Mackenzie (published in this issue of THE CANADIAN PRACTITIONER); "The Causes of Tuberculosis, and its Prevention by Legislation," by Dr. A. Kerr Chalmers; "The Prevention and Restriction of Tuberculosis in the City of New York," by Dr. Hermann Biggs.

MANSLAUGHTER IN ENGLAND.

THE trial of a physician in England for murder created much interest. A certain Dr. Collins, a professional abortionist, was accused of murder by the Crown officers. Mrs. Uzielli, a lady of fashion and wealth, became pregnant; but, not wanting pregnancy to go on to full term, went to Dr. Collins and asked him to induce an abortion. He treated her twice in his office, and for such treatment received thirty guineas. Abortion resulted, and septicæmia followed, causing death in a few days. A full report of the trial was given in *The British Medical Journal*. *The Journal* said that it was no secret that this scoundrel had for years carried on a large trade as a procurer of abortion.

The evidence for the prosecution showed that in this case death was caused by septic peritonitis; there was a wound of the uterus; the uterus presented signs of recent abortion; Collins, a stranger to the patient, had attended her; the patient, being aware of her pregnancy, wished an abortion; while under the care of Collins she aborted.

Collins said he was treating her for a "weakness" and uterine displacement, and had used a curette to remove a membrane from the womb. His counsel endeavored to show that the fatal peritonitis might have been due to a pre-existing inflammation, and that a sound might have been used to correct a retroversion.

The jury found the prisoner guilty of manslaughter, and handed in the following rider: "The jury wish to express their deep concern at and condemnation of the growing tendency on the part of certain classes of the community, as proved by the evidence in this case, to avail themselves of their marital rights, and try to evade the responsibility of their acts." It is supposed that a verdict of wilful

murder was not returned because there was no evidence to indicate that the abortionist wished to kill his patient. The judge passed a sentence of four years' penal servitude.

PRACTICE BY UNREGISTERED PERSONS IN ENGLAND

WE also learn from *The British Medical Journal* that the Collins case shows some peculiar points of interest both to the profession and the public. Dr. Collins was a disreputable person in many ways. He was convicted of forging a promissory note June 27, 1892. His name was directed by the General Medical Council to be erased from the Medical Register November 23, 1892. In spite of this he resumed practice after such erasure. It appears that as the law stands a man whose name has been erased from the Medical Register may continue to practice, but cannot recover fees by legal action. He is not allowed to dispense his own drugs, but he may prescribe. He may retain his degree of M.D., because the university that conferred it has no statutory right to take it away, even though he be convicted of felony or other infamous conduct. Collins has an M.D. from the Royal University of Ireland, and he can apparently retain it notwithstanding the fact that he is an ordinary scoundrel and criminal undergoing sentence in a prison.

While we have never been able to boast that our Medical Act in Ontario is perfect, still we ought to derive some satisfaction from the fact that it provides machinery by which the Disciplinary Committee of our Medical Council can absolutely prevent any man from practising who is found guilty of disgraceful conduct. If numerous chronic grumblers in this province, who can find no good in our Council, would take the trouble to consider some of the better features of our medical governance, they might profitably take an occasional rest from their continuous labors of fault-finding. We have frequently found, however, that the worst grumblers in our midst are those who know the least about our curricula, our standards, and our legal status.

THE ROYAL ARMY MEDICAL CORPS.

IN another part of this issue we publish the full text of the Royal Warrant forming the Royal Army Medical Corps. To Lord Lansdowne, the present Secretary of State for War, the medical

profession owe a great debt of gratitude. He has shown himself superior to his military advisers. Previous war ministers have attempted to right these grievances but have always yielded to military pressure. Lord Lansdowne has recognized the injustice, and had the ability to carry out the needed reforms. Medical officers will no longer have to endure the snubs of their juniors in rank and at mess, or be called non-combatants and treated as camp followers—a term that one of the commanders-in-chief so inconsiderately applied to them. Rank has been granted, grievances righted, and appointment in the Royal Army Medical Corps will no longer go begging.

SURGEON-MAJOR BERTOL H. SCOTT.

MEDICAL heroes are by no means rare, yet amongst them we are always delighted to find the names of those we know and love. Dr. Bert. Scott, Trinity '83, of the Army Medical Staff, is a hero, and like all medical heroes, the idea of self did not occur to him until those around him had been cared for. Surgeon Capt. Scott had only been on the West Coast of Africa a couple of weeks when he was dispatched as medical officer to the Expeditionary Force under Major Norris and was wounded twice while taking part in the march from Karene to Port Lokko. The wounds were both severe, one fracturing the left femur and the other a chest wound in the region of the heart. He was the only medical officer with the force, and with these severe wounds, dressed only by inexperienced assistants, he nobly attended to the soldiery who had been wounded in the same action. He had to endure this suffering for three days before receiving medical attention. Such actions are those of a true hero. Long may he live to reap the reward of his bravery. His promotion has been gazetted. Surgeon-Major Scott had seen previous active service with the Chitral Relief Expedition.

THE MEDICAL DEPARTMENT.

THE Government has evidently recognized the fact that there should be some organized Medical Department, because they have appointed a Medical Director. We now want to see some movement made whereby a corps could be placed in the field equipped and ready for service. There is absolutely nothing in the way of medical and surgical equipment in stores.

The ambulance corps that are connected with the different regiments are clothed, paid and equipped from the regimental funds—the Government in no way recognizing them. This should be changed, and this heavy charge removed from the regimental funds. Keep in each corps a well-equipped and drilled ambulance corps, paid as other men of the regiment are, and brigade the city ambulance corps for drill purposes.

Meetings of Medical Societies.

TORONTO PATHOLOGICAL SOCIETY.

THE last regular meeting of the year was held in the Biological Department of Toronto University on May 28th.

Dr. H. B. Anderson, president, in the chair. The meeting was called to order at 9 p.m.

Present—Drs. Primrose, Wilson, Anderson, Wm. Oldright, J. J. Mackenzie, Bruce, Carveth, Fotheringham, Nevitt, Silverthorne, Reeve, McPhedran, Rudolf, Cameron, H. H. Oldright, Parsons.

Visitors—Drs. Large, Mullin, and Gowan Ferguson, of Grand Falls, Montana.

The minutes of the previous meeting were taken as read and adopted.

Dr. H. A. Bruce showed seventy-eight gall-stones, removed from a woman thirty-five years of age who was taken with a severe attack of biliary colic four days before. On opening the peritoneum a small quantity of serous fluid escaped and a mass of lymph presented. On removing this the gall-bladder was exposed and a small perforation found, projecting through which was a small stone.

The omentum was rolled up into a mass and adherent by lymph to the gall-bladder. The general peritoneal cavity was shut off by plastic peritonitis. The opening in the gall-bladder was enlarged and the stones removed. Five of them are of unusually large size.

The large, conical-shaped one was lying in the cystic duct completely plugging it. There was no bile in the gall-bladder. Its wall was greatly thickened and soft, except surrounding the point of perforation where it was thinned.

The patient had had two previous attacks of biliary colic—the first one two years ago. An interesting feature in the case is the fact that the patient had typhoid fever some six months previous to the first attack. She has never been jaundiced.

During the first twenty-four hours after the operation eight ounces of bile drained away from the gall-bladder.

Dr. Fotheringham, discussing Dr. Bruce's paper, asked whether any new theory could be formulated as to the continuous formation of gall-stones independently of the entrance of bile into the viscus. It might be possible that here, though bile could not enter the bladder on account of the conical calculus which plugged the cystic duct, the cramming full of the bladder by stones was progressive.

Dr. Carveth, discussing Dr. Bruce's paper, stated that he had heard the discussion last September in the British Medical Association on the subject of the relationship of typhoid fever and gall-stones, and asked Dr. Bruce what his experience had been in the matter.

Dr. Mackenzie called attention to the interesting fact of the history of typhoid preceding the appearance of the gall-stones.

Dr. Bruce, replying, said that he had met with two other cases in which gall-stones had followed typhoid fever. A great deal has been written about the subject recently, and many observations have been made which tend to show that typhoid fever is frequently followed by an attack of cholelithiasis and the formation of gall-stones.

CALCULI IN THE OS PENIS OF A DOG.

By Dr. Primrose.

The dog was sent to a veterinary surgeon (Dr. F. A. Campbell, V.S.) for the purpose of being treated for a lacerated paw which had been torn by a trolley car, and for which the foot was amputated. While under treatment for the injury he showed no symptoms that would indicate the presence of calculi in the bladder. He voided his urine without any difficulty until a few days after he was sent home, cured as far as the leg was concerned. The veterinary surgeon was then sent for again because the animal was straining very hard in his attempts to pass urine; the attempts were wholly ineffectual. A number two catheter was passed into the urethra, but an obstruction was encountered which was diagnosed as a calculus in the os penis. Urethrotomy was performed, but it was found impossible to remove the calculi which were present, they were wedged in so tightly in the urethral groove of the os penis. The dog was destroyed, and the specimen obtained which is now presented to the society. The bladder was found to contain about twelve stones of different sizes and six in the urethra. The specimen presented is the os penis of a dog; the bone is 8 c.m. long, and in the proximal part of it in the urethral groove are three calculi, each of them being 4 mm. in diameter. They are firmly wedged in the groove, and cannot be removed without crushing them. The

shape of the urethral groove being greater than half a circle on section, and not of uniform diameter throughout, permits of such calculi being embedded firmly without the possibility of their being dislodged.

Dr. Oldright, discussing Dr. Primrose's paper, narrated the occurrence of a calculus about 1½ inches long and ¼ inch in diameter which he had removed (by incision) from the urethra of a man. It had been gradually forming during three years. The specimen is now in the museum of the University of Toronto.

Dr. Nevitt also discussed the case.

Pulmonary Emphysema, by Dr. Silverthorne. This specimen is a right lung from a case of tuberculosis of several years' standing; age about forty years; female. She had occasional hæmorrhages, and death was due to a copious hæmorrhage from a cavity in the left lung. The specimen is interesting only as an example of vesicular emphysema of a lung otherwise slightly affected. There are three or four indurations of the right lung shown on the surface as depressions.

FUSIFORM ANEURISM OF AORTA.

By J. T. Fotheringham.

The specimen is a beautiful example of the reparative effects of nature, combining in an unusual degree elasticity and thickening, showing very little of the hardening and calcification so commonly seen, and presenting uniformity of progress and dilatation without sacculation in a way not often seen. The intra-pericardial portion is very elastic, though so much dilated, and the clinical evidence made me diagnose the case one of aneurism of the first portion of the thoracic aorta with sacculation towards the right, which, so far as it went, was quite correct. The patient D.M., aet. 52, was a man of excellent habits in every way, in charge of the stock room in a large departmental store, and without any history of syphilis or alcoholism. In December last he consulted me about a truss which was hurting him, and in looking him over I found that the subjective complaint as to the truss was the least thing wrong. He had also first a huge varix of the right internal saphenous vein, dilated but with little thickening about it; second, a peculiarly neurotic and emotional disposition to cry for no cause merely while calmly detailing his case to me, and an unusual neurotic difficulty of urination at night and no diurnal abnormality. But the third discovery which I made was the most important one, this aneurism, of which he made no complaint except that his voice was changing and that at

times phonation was very difficult. It is surprising to find practically no subjective difficulty referable to the circulatory system, a fact which enhances still further the admiration already expressed for nature's reparative efforts. His pulse averaged eighty—there was no œdema of the ankles or shortness of breath, or other evidence of circulatory insufficiency. He used only one pillow, and did his work as usual up to thirty hours before his death. Death was due to cerebral embolism. He had last August a small embolism from which he speedily recovered except for a slight dragging of the right leg. Symptoms of a second embolism developed gradually one night this month and became noticeable to his wife about 2 a.m. He grew gradually more comatose, complete right hemiphlegia came on and at 6 p.m. the following day he died, with widely dilated pupils, of respiratory failure and Cheyne-Stokes breathing in which the suspension of breathing lasted sometimes fully thirty seconds. I regret very much that a post-mortem examination of the brain was not made; the thorax and abdomen only were opened.

Dr. Fotheringham referred to lack of tone in the vascular system, described by Thoma as one of the causes of aneurism.

Dr. A. McPhedran, discussing Dr. J. F. Fotheringham's paper, said he thought the old theory that degeneration of the wall of the artery always precedes aneurism of any vessel was the true one. Loss of vascular tone can scarcely be accepted as a sufficient cause.

Dr. Primrose asked if there was any theory advanced to account for what is an apparently normal dilatation of the aorta. This dilatation is described by anatomists as the "great aortic sinus," and appears to be due to the force of the contraction of the left ventricle impinging directly upon the vessel wall at this point. If this were the proper explanation, however, one would not expect the dilatation to remain within definite bounds as it appears to do.

Dr. Rudolf said this dilatation referred to by Dr. Primrose was not present in childhood, but appeared to commence about the twentieth year and increased to the fortieth year, when it ceased. He referred to some literature on the subject, and thought Dr. Primrose's explanation of the condition correct.

Dr. Large reports a case of extra-capsular fracture of the femur, with specimen, *under care of* Dr. Nevett. *Age* 84. *Admitted* to Toronto General Hospital, March 19th, 1898. *Died* May 15th, 1898. *Disease*—Fracture of femur and ulna. *History*—While coming down Yonge street March 19th, 1898, he was run

into by a bicyclist, struck in the right hip and thrown to the ground. He was carried into a house and afterwards brought into hospital. On examination there was marked eversion and rolling outward of right leg, loss of movement, and 1½ shortening. Crepitus was elicited, and from the position of the fragments an extra-capsular fracture of the femur was diagnosed. A long splint was placed on limb and the shortening and deformity partly overcome. Next day, at the request of the attending surgeon, extension was placed upon limb and six-pound weight attached. Patient had good appetite, and, as he had been in the habit of lying in bed most of the time before the injury, only going out when he had to, to solicit financial aid, he progressed favorably till about May 12th. By this time the extension had been removed, and there was some return of movement to the leg. An endeavor was made to get him out of bed, but he became quite faint and had to be put back. Now, for the first time, he suffered from passive congestion, although he had a slight cough previously. His condition became gradually worse, and he died May 15th, 1898.

P.M. Senile decay well marked. No excessive fluid in pleural cavities, calcification in mitral and aortic valves. Lungs: Some slight adhesions (not recent) at apex and ant. margins. Both lungs emphysematous anteriorly, and hypostatic œdema very marked in dependent portions.

Left kidney: Cortex atrophied, fœtal lobulation, small cysts on surface, weight four ounces.

Right kidney: Lobulated, increased pelvic fat. Stellate veins prominent, pale in color. Smooth on surface, weight four ounces.

Gall bladder: Distended with bile.

Right femur on removal was found to have an impaction of neck into the greater trochanter and a fracture splitting the greater trochanter above and extending down the posterior inter-trochanteric line to below lesser trochanter, and terminating above and below by running into the line of cleavage caused by the impaction of neck. Fairly firm union has resulted, and the deformity is pretty thoroughly overcome, although the head of bone is nearly at a right angle to the shaft.

Dr. Nevitt complimented Dr. Large on the success of his treatment, saying that the union and position being so good as to make one doubt as to the existence of a fracture. Such a result in a patient eighty-four years of age was unusual.

Dr. Wm. Oldright and Dr. Anderson also discussed the case.

Synostosis of rib—From a case of empyema—exsection of a portion of the rib for drainage. The section had filled up—the new bone lapping over and holding the lower rib in its embrace.

Dr. Wm. Oldright also presented elbow joint which he had excised. The patient had been referred to him by a senior student, and was seen by him after she had been about four weeks ill with what had at first been supposed to be rheumatism. There was much pain in the joint (which was instinctively kept as immobile as possible), and great œdema of the arm and forearm. There had been high temperature, rapid feeble pulse, great pallor and emaciation. Seen a week later, there was crepitus on lateral motion. Operative interference was decided upon, and on cutting into the joint a small quantity of thick pus exuded and the surface of the joint found to be so disintegrated that excision had to be resorted to; about 1½ inches of the humerus and the surfaces of radius and ulna which articulated with the humerus, were removed; these being the respective portions found diseased. The point of pathological interest is absence of satisfactory cause for the condition of the joint. There was no history of injury to the joint, nor of infection in any other region; no previous wound; she was questioned as to gonorrhœal infection, but this was denied.

The other specimens—hæmatoma, appendix and pus tubes—were reserved owing to the length of the programme.

A paper on tuberculosis of suprarenal capsules without pigmentation of the skin was read by Dr. Anderson.

To be published later.

Dr. Cameron, discussing Dr. Anderson's paper, asked as to what part of the glands was affected. The cortical and medullary portions appeared to have different functions, acting as two separate organs.

Dr. Rudolf asked if the semilunar ganglia were involved.

Dr. Anderson replied that the whole organ seemed to be equally involved. There was no adhesion of the capsules to the surrounding structures, so he took it that the ganglia were not involved.

The business of the society was then proceeded with. Mr. J. J. Mackenzie, the treasurer, read his report which showed a good cash balance for the year. The elections for the coming year resulted as follows: President, Dr. Primrose; vice-president, Mr. J. J. Mackenzie; Council, Dr. Parsons, Dr. Anderson, Dr. Fotheringham.

Dr. Anderson on vacating the chair thanked the society for their co-operation during the year.

Dr. Primrose then took the chair and expressed his appreciation of the honor the society had done him in electing him president.

Dr. Reeve, after some very complimentary remarks regarding the work of the retiring president, moved a vote of thanks to Dr. Anderson. This was seconded by Mr. Cameron. Carried unanimously. The motion of thanks was presented. Dr. Anderson replied.

Moved by Dr. McPhedran, seconded by Dr. Wm. Oldright, that a vote of thanks be extended to the recording secretary. Carried. Dr. Parsons replied.

The meeting then adjourned.

H. C. PARSONS,
Rec.-Sec'y.

Correspondence.

ARE BACTERIA TRUE SAPROPHYTES AND POST HOC?

To the Editor CANADIAN PRACTITIONER.

SIR,—Several years ago being convinced that in pathology bacteria are post hoc and auto-intoxication the primary factor in the lesions produced, I ventured to predict the "passing" of Koch's bacillus as *the* cause of tuberculosis. Already we have had strong doubts, thrown out by former believers, as to whether this organism is entitled to the important position it has from the first held, as a causative factor. True, some high authorities never did believe in Koch's theory. Even Zeimssen had doubts—saw great obstacles in it.

Now, we are told that the brilliant work of Sydney Martin "leads us to believe that the poison of diphtheria is a product of our own body" (*Brit. Med. Jour.*, July 16), but "under the stimulus" of the bacillus.

This may be a kindly way of letting the microbes "down easy." It is possible that purely chemical and physiological processes are alone capable of generating the poison, which we are told is "otherwise analogous to that form which follows the ingestion of dead matter."

Man is characteristically prone to blame "some other fellow," rather than his own false habits of life, for his physical defects.

All recorded evidence, and much unrecorded, indicate that bacteria have a saprophytic origin, and are rendered pathogenic by their environment. What causes the B. coli com. to become so virulent as it sometimes is?

Is it not entirely in accordance with nature that these organisms —"disease germs" so called—come in, benignly, to "clean up"—split up the self-generated poisons in the body, and make for restoration of physiological equilibrium?

What evidence have we that diphtheria would not be a worse disease, more fatal, were it not for the bacilli? Or that even the

false membrane is not a curative product, possibly sometimes from an excessive curative process?

How do we know that incipient phthisis, evidently an auto-intoxication, probably from want of oxygen, would not eventually make more rapid progress without the tubercle bacillus? Or that the formation of tubercular masses is not a curative process? Bovines may continue in apparent good health and condition while yet harboring in various tissues of the body large masses of tubercular matter. And Dr. Brush, who has had much experience amongst these animals, declares they may be tuberculous from birth to old age.

It may be asked, how about the communicability or infectiousness of so-called germ diseases? May not the microbes be but carriers of an auto-intoxicant—retaining it even after repeated cultures in the laboratory? It appears that the washings or an infusion of yeast cells will cause fermentation without the cells.

Does not the apparent success of the serum treatment of these diseases favor the view above indicated?

This may be looked upon as too speculative. But without some degree of speculation—theorizing—there would be but little progress.

Yours, etc.,

EDWARD PLAYTER.

Toronto, August, 1898.

Book Reviews.

DACOSTA'S SURGERY: Second edition, revised and greatly enlarged. Modern Surgery, General and Operative. By John Chalmers DaCosta, M.D., Clinical Professor of Surgery, Jefferson Medical College, Philadelphia; Surgeon to the Philadelphia Hospital, etc. Handsome octavo volume of 900 pages, profusely illustrated: Cloth, $4 net; half Morocco, $5 net. Philadelphia: W. B. Saunders; Canadian agents, J. A. Carveth & Co., 413 Parliament street, Toronto.

The second edition of this work is at hand. Small works on surgery seem to fill a want more or less apparent, but they also tend to induce lack of thoroughness, which should not be encouraged. We are not in accord with these abbreviated works, although we can candidly say that this is one of the best of the small works on surgery.

VAN VALZAH AND NISBET'S DISEASES OF THE STOMACH. By William W. Van Valzah, M.D., Professor of General Medicine and Diseases of the Digestive System and the Blood, New York Polyclinic; and J. Douglas Nisbet, M.D., Adjunct Professor of General Medicine and Diseases of the Digestive System and the Blood, New York Polyclinic. Octavo volume of 674 pages, illustrated. Cloth, $3.50 net. Philadelphia.

This work is an embodiment of good sound common sense. Too many works are simply compilation, the errors included, and frequently without credit. This work has much that is original, it is concise but not too restricted, never too wordy. Its authors have tried to explain the changes in the stomach from a physiological and pathological standpoint. Theory without practice is largely omitted from its pages.

They have embraced in chapters diseases of common origin "Dilatation of the stomach," like "heart failure," is placed on a scientific basis and relegated to oblivion. The conditions, however, are fully described under their proper heading.

The section on diagnosis and diagnostic methods is comprehensive yet concise. Considerable importance is placed on the clinical history, and a very exhaustive chapter is written, with many practical details, to enable one to understand the significance of signs and symptoms. All through the book is to be found advice and descriptions that place the work amongst those essential to the busy practitioner. It is well printed and bound.

PRIMER OF PSYCHOLOGY AND MENTAL DISEASE: By C. B. Burr, M.D., Medical Director of Oak Grove Hospital for Mental Diseases, Flint, Michigan, &c. Second edition. Philadelphia: F. A. Davis & Co., 1898.

This little book will no doubt be welcomed by many who have often felt the need for just such a concise practical work, affording as it does, an introduction to the first principles of psychological study, and tempting the reader to further investigation in a line of study peculiarly attractive. The author evidently appreciates the necessity of a general understanding of the principles of normal psychology by all who are interested in the study and treatment of mental diseases. Although the work is intended for use in training schools for attendants and nurses, and in medical classes, no general practitioner will fail to find in the pages of the book lessons worthy of much more than a passing notice. The study of psychology has in recent years become a most inviting field to the medical reader, and Dr. Burr has done much in his excellent *multum in parvo* to popularize a subject of which he is justly entitled to speak with authority. The fact that a second edition was so soon imperatively demanded is the best commendation the author could desire. We can readily understand the reception which has been accorded this interesting primer, and its quick adoption as a text-book in training schools for nurses in connection with hospitals for the insane. More than one leading medical college in the United States, where Dr. Burr enjoys a wide reputation as a distinguished alienist, has placed the work on its list of principal text-books, and we fancy none will regret the trifling investment necessary to possess a copy.

ATLAS OF INTERNAL MEDICINE AND CLINICAL DIAGNOSIS. By Dr. Chr. Jakob, of Erlangen. Edited by Augustus A. Eshner, M. D., Professor of Clinical Medicine in the Philadelphia Polyclinic; Attending Physician to the Philadelphia Hospital. 68 colored plates. Cloth, $3.00 net.

ATLAS OF LEGAL MEDICINE. By Dr. E. von Hofmann, of Vienna. Edited by Frederick Pearson, M.D. Clinical Professor of Mental Diseases, Wowan's Medical College, New York; Chief of Clinic Nervous Dept., College of Physicians and Surgeons, New York. With 120 colored figures on 56 plates, and 193 half-tone illustrations. Cloth, $3.50 net.

ATLAS OF DISEASE OF THE LARYNX. By Dr. L. Grunwald, of Munich. Edited by Charles P. Grayson, M.D., Lecturer on Laryngology and Rhinology in the University of Pennsylvania; Physician-in-charge, Throat and Nose Department, Hospital of the University of Penn. With 107 colored figures on 44 plates, and 25 text illustrations. Cloth, $2 50 net.

ATLAS OF OPERATIVE SURGERY. By Dr. O Zuckerkandl, of Vienna. Edited by J. Chalmers DaCosta, M D., Clinical Professor of Surgery, Jefferson Medical College, Philadelphia; Surgeon to the Philadelphia Hospital. With 24 colored plates and 217 illustrations in the text. Cloth, $3.00 net.

ATLAS OF SYPHILIS AND THE VENEREAL DISEASES. By Prof. Dr. Franz Mracek, of Vienna. Edited by L. Bolton Bangs, M.D., late Professor of Genito-Urinary and Venereal Diseases, New York, Post-Graduate Medical School and Hospital. With 71 colored plates from original water colors by A. Schmitson. Cloth, $3.50 net.

SAUNDERS' MEDICAL HAND ATLASES.

The appearance of these works marks a new era in illustrated English medical works. For many years the Germans have monopolized all illustrations that were of practical value—colored to nature and true in detail. Colored illustrations are usually an eyesore. In these atlases they are works of art. We are enabled now to enjoy these same German illustrations through the generosity and business enthusiasm of that very progressive medical publisher, Mr. W. B. Saunders, of Philadelphia. This series of atlases is a translation of the famous "Lehmann Medicinische Hand Atlanten," and the volume contains from 50 to 100 colored plates, which are themselves typical clinical studies, and serve the purpose of clinical work where one is situated away from the hospital centres. The plates are accompanied by complete descriptions, and other points are illustrated by diagrams, photogravure and line cuts. The advantage of the clinical matter in these volumes is that the cases are described by noted authorities, and are not selected from those rarer forms of disease, but are of cases one is likely to meet in daily practice. The publisher should be encouraged by a large sale of these valuable atlases. The price is exceedingly moderate considering the excellence of the lithographic illustrations. We will refer to some of them more in detail in next issue. In the meantime, however, judging from the one at hand, we are more than delighted with the quality of the work.

DIABETES MELLITUS AND ITS TREATMENT: By R. T. Williamson, M.D. (Lond.), M.R.C.P., Medical Registrar, Manchester Royal Infirmary; Hon. Med. Officer, Pendleton Dispensary (Salford Royal Hospital); assistant to the Professor of Medicine, Owens College, Manchester. With eighteen illustrations (two colored). Edinburgh and London: Young J. Pentland, 1898.

A work of over four hundred pages dealing exclusively with diabetes and its treatment, from the pen of an able and painstaking author, is a valuable possession for a physician who has one or more diabetics under his care. The book is splendidly printed on heavy paper, and the author's style is clear and direct.

The first fifty pages are devoted mainly to sugar tests of which a large number are discussed; the author has found Fehling's solution, the phenylhydrazin test, and fermentation, by far the most satisfactory, and their combination leaves nothing to be desired. If a negative result is obtained with Fehling's test the urine may be declared free from sugar in the clinical sense; but if only a faint reaction is obtained the phenylhydrazin and fermentation tests should be applied.

The vexed question of the glycogenic functions of the liver is next discussed. The rival theories of Claude Bernard and Pavy are contrasted and the arguments in favor of each stated briefly. After dealing with experimental diabetes and phloridzin diabetes, a very interesting chapter is devoted to experimental pancreatic diabetes.

Alimentary glycosuria, puerperal glycosuria, and the glycosuria produced by poisons and chemical substances are then described. Sugar is said to be present in the urine of women during lactation at some period in every case, and when the breasts have been engorged from any cause it is very commonly present though in small amount.

Among the diseased conditions in which glycosuria is sometimes present are brain lesions, injury to the head, mental diseases, after various febrile affections, *e.g.*, typhoid, scarlet fever, malaria, diphtheria and appendicitis. A slight glycosuria is not uncommon in the ailments of stout and wealthy elderly persons, but it is rare among the poor and badly nourished.

Next comes a long chapter on the etiology. The possibility of infection is discussed but deemed improbable. Diabetes frequently occurs in the obese, but it is usually of a mild form, and the prognosis, with suitable dieting, is favorable. Great beer drinkers are often affected; spirit drinkers less frequently. The development of diabetic symptoms directly after the drinking of cold fluids whilst perspiring is noted. He does not think that excess of carbo-hydrate food or a special form of diet will cause diabetes.

There is, he says, no clear evidence from pathological anatomy alone that diabetes is related to hepatic changes. The curious fact that diabetes sometimes occurs quite suddenly, so that the patient can tell the exact hour at which the symptoms commence (*e.g.*, after fright or mental anxiety) is suggestive of a lesion of the nervous system in some cases. Emotional disturbances apparently played some part, as exciting causes in sixteen per cent. of the cases at the Manchester Royal Infirmary. He considers it quite possible that some slight functional change in the nerve cells of the nuclei of the medulla oblongata may be the cause, or may play some important part in the causation of certain cases of diabetes.

The relation of diabetes to lesions of the pancreas, which has excited so much attention of late years, is next taken up. The frequent connection of the two makes it almost certain that, in some cases, diabetes is directly due to pancreatic disease. Even in cases where there are no lesions of the organ, it is easy to conceive of nervous influences so altering the internal secretion as to produce glycosuria.

The author concludes that diabetes is produced in various ways, just as fever is; that, in fact, glycosuria and the accompanying symptoms of diabetes mellitus are produced by several pathological conditions.

The chapter on Symptomology is excellent. There is often a characteristic fæces. Marked wasting in a young person, or great obesity

in an old person should always lead to an examination of the urine for sugar. Several cases of sudden onset are mentioned. In any urine which is clear and not high colored, if the sp. gr. is over 1025, there is strong probability that sugar will be present. The morning urine should never be used for testing, as it may be free from sugar in mild cases. Sugar excretion may be diminished or arrested by various intercurrent affections, especially febrile affections.

Pneumaturia is an occasional though very rare result of decomposition of sugar in the bladder: gases are formed in the bladder and sugar may disappear from the urine. The diminution of thirst diuresis and sugar excretion is sometimes of bad omen in the most severe forms of the disease. The appearance of casts in the urine in severe or advanced diabetes is usually a sign of approaching coma.

Too rigid exclusion of carbo-hydrates from the diet may be a cause of acetonuria. Symptoms of approaching coma have sometimes been arrested by the addition of a small quantity of carbo hydrates to the diet.

The curious fact that dyspeptic individuals often lose all their dyspeptic troubles after the onset of diabetes is noted. When phthisis complicates diabetes often the sugar diminishes in quantity or even disappears shortly before death.

The complications and pathological changes in the various organs are discussed fully, especially those of the eye, brain, and spinal cord. He has found total absence of the knee jerks in about fifty per cent. of the cases at the Manchester Royal Infirmary, and regards this symptom of unfavorable prognostic significance.

One of the best chapters is that on diabetic coma. Some albumen and numerous casts are usually found in the urine in this condition, and he thinks it probable that the coma is due to failure of the renal function and consequent retention of some poisonous materials in the blood. The presence of acetone is probably not the cause of the coma, and the exact cause still remains to be determined. Death usually occurs within forty-eight hours after diabetic coma sets in.

In summing up regarding the pathogenesis the author states that the true nature of the disease is still very obscure, and will probably long remain so.

The opinion that diabetes is not a pathological entity but a group of symptoms which may be produced by various morbid changes in the system is commended. "Sometimes the starting point of the disease is in the nervous system, sometimes in the pancreas, occasionally in diseases of the arteries (arterio-sclerosis), possibly in the muscles sometimes, and possibly it is due to various other causes and to endogenous or inherited morbid conditions." The forms of diabetes and the favorable and unfavorable prognostic indications are briefly discussed.

The rest of the work is devoted to the treatment of the disease. The management of the various forms and stages is fully entered into, but space forbids even a synopsis of the author's views in this review.

The work as a whole has impressed us very favorably, and the physician who wishes to be thoroughly conversant with the subject ought to have a copy.

DUDLEY'S GYNÆCOLOGY: A Treatise on the Principles and Practice of Gynæcology. By E. C. Dudley, A.M., M.D., Professor of Gynæcology in the Chicago Medical College, Chicago. In one very handsome octavo volume of 632 pages, with 422 engravings, of which 47 are in colors and two colored plates. Just ready. Cloth $5 net. Leather, $6 net.

ON CARDIAC FAILURE AND ITS TREATMENT: With especial reference to the uses of bath and exercises. By Alexander Morrison, M.D. Edin., F.R.C.P. Ed., Physician to outpatients to the Great Northern Central Hospital and the Paddington Green Children's Hospital, Physician to the Saint Marylebone General Dispensary. 256 pages, illustrated. Price $2.50. London: The Rebman Publishing Co., Ltd., 11 Adam street, Strand, W.C.

DISEASES OF WOMEN: A Text-book for Students and Practitioners. By J. C. Webster, B.A., M.D. (Edin.), F.R.C.P.Ed., Demonstrator of Gynæcology, McGill University; Assistant Gynæcologist, Royal Victoria Hospital; Fellow Royal Society of Edinburgh, etc., etc. Illustrated with 241 figures. Crown 8vo., 650 pp. London and Edinburgh: Young J. Pentland. Montreal: Wm. Drysdale & Co.

CONSERVATIVE GYNÆCOLOGY AND ELECTRO-THERAPEUTICS. A Practical Treatise on the Diseases of Women and Their Treatment by Electricity. Third edition, revised, re-written, and greatly enlarged. By G. Betton Massey, M.D., physician to the Gynecic Department of Howard Hospital, Philadelphia; late Electro-Therapeutist to the Infirmary for Nervous Diseases, Philadelphia; Fellow and ex-President of the American Electro-Therapeutic Association, of the Société d'Electrotherapie, of the American Medical Association, etc. Illustrated with twelve full-page original chromo-lithographic plates in twelve colors, numerous full-page original half-tone plates of photographs taken from nature, and many other engravings in the text. Royal octavo. 400 pages. Extra cloth, beveled edges, $3.50 net. The F. A. Davis Co., Publishers, 1914-16 Cherry street, Philadelphia; 117 W. Forty-second street, New York City; 9 Lakeside Building, 218-220 S. Clark street, Chicago, Ill.

Medical Items.

DR. J. N. E. BROWN left Toronto for the Yukon August 2nd.

DR. R. J. DWYER has gone to Johns Hopkins, Baltimore, for a few weeks.

DR. J. G. M. SLOAN has been made an associate coroner for the County of Bruce.

DR. J. D. WEBSTER, Tor. '98, is located at 193 Massachusetts avenue, Buffalo, N.Y.

DR. B. E. THOMPSON has been appointed an associate coroner for the County of Wentworth.

DR. R. A. LEONARD, of Napanee, has been made an associate coroner of the Counties of Lennox and Addington.

A CONGRESS of the Italian Medical Association of Hydrology and Climatology was held at Parma on April 3rd, 4th and 5th.

DR. W. F. MAYBURRY (Tor. '97), one of the resident staff of the Toronto General Hospital in 1897-98, has been appointed superintendent of the County of Carleton Protestant Hospital, Ottawa.

THE treasurer of St. Thomas' Hospital states that during 1897 the Roentgen rays were used in 416 cases, and that it has been found necessary to appoint an assistant to the officer in charge.

DR. L. S. MCMURTRY, of Louisville, Ky., Dr. E. D. Fisher, of New York, and Dr. Adam H. Wright, are the guests of Dr. J. F. W. Ross, in Muskoka. The party will return about August 25th.

DR. H. S. THOMPSON (Trin. '92), who has been practising for some years in Albion, Michigan, has gone to Cuba to act as regimental surgeon, with the rank of major, in the Thirty-third Michigan Volunteers.

ERRATA.—In the section on Laryngology and Rhinology in the July number of this journal, correct as follows: For Lemon, wherever found, Semon. For Sir Felix Lemon, wherever found, Sir Felix Semon. On page 420, for Trudenthal, read Frudenthal; and for Heeyngs read Heryng.

DR. MITCHELL BRUCE has undertaken to write a short biography of the late Sir Richard Quain for early publication. The Queen has sent a letter of condolence to the relatives of Sir Richard Quain, who was one of the Physicians-Extraordinary to Her Majesty.

THE MODERN CITATION.—"Here," roared the old judge to his son, studying law with him, "you told me you had read this work on evidence, and the leaves are not cut." "Used X-rays," yawned the versatile son; and the judge chuckled with delight as he thought what a lawyer the boy would make.—*Richmond Despatch.*

THE MEDICAL LOG OF THE "MAINE."—Among the things recovered by the divers from the ill-fated *Maine*, now lying at the bottom of the harbor of Havana, was the journal of the medical officers. Surgeon Heneberger, the medical officer of the ship, had brought the record up to the last moment before the catastrophe, the last entry being dated February 15th.

A ROMAN DOCTOR.—In *The Spectator* of August 28th, 1897, A.C. has the following "after Ausonius":

Wise Arruns asked, "How long will Caius live?"
Replied, "Three days the fatal sisters give":
And Arruns knew the prophet's art. But lo!
Stronger than gods above or gods below,
Euschemon comes; his healing arts he tries,
And in a single day poor Caius dies.

—*The Bristol Medico-Chirurgical Journal.*

CONGRESS FOR THE STUDY OF HUMAN AND ANIMAL TUBERCULOSIS.—The Congress for the Study of Human and Animal Tuberculosis held its fourth meeting in Paris from July 27th to August 2nd, 1898. The questions proposed for discussion were: (1) Sanatoria as a means of prophylaxis and treatment of tuberculosis; (2) Serums and antitoxins in the treatment of tuberculosis; (3) The X-rays (Radioscopy and Radiography) in the diagnosis of tubercle; (4) The X-rays in the treatment of tuberculosis; (5) The struggle against animal tuberculosis by prophylaxis; (6) The struggle against human tuberculosis by disinfection of places inhabited by tuberculous patients; (7) The diffusion of tuberculosis in the army and its prophylaxis.

FIRM RESOLUTION.—"Dave" Saddler was a brave Confederate soldier who was in the hospital at Richmond, and who, in spite of his sufferings, always took a cheerful view of the situation. One day, when he was recovering, a visiting minister approached his cot and tendered him a pair of home-made socks.

"Accept these," said he. "I only wish the dear woman who knit them could present them to you in person."

"Thank you, very much," said David, gravely, "but I have decided that I never shall wear another pair of socks while I live."

The preacher protested, but to no purpose; and finally he sought out the boy's sister to tell her how foolishly the invalid had behaved.

"Why," exclaimed she, "both his feet have been shot off!"—*Youth's Companion.*

RICHARD HARDING DAVIS took his pen in hand awhile ago and wrote for *The New York Herald* an article describing a laparatomy performed on the cruiser *New York*. It was thrilling to the lay mind; it was bloody; it was a lurid picture, painted by a fleeting pen in the hands of an accomplished but over-enthusiastic and highly imaginative novelist. Mr. Davis said, in describing events after the operation, that the patient, lying on a cot, opened his eyes and saw the surgeons standing about him with arms covered with blood up to the elbows. Then he added that the operating table "dripped with blood." Surely these be bleeding war times, but we hope the *New York* recovered.—*Buffalo Medical Journal.*

DR. JOHN N. E. BROWN.—Dr. Brown left Toronto, July 29th, for the Yukon District, where he expects to remain for some time, having received an important appointment on the staff of Mr. Ogilvie, the administrator of that territory. He graduated in the University of Toronto in 1892, and during the following year was one of the resident staff of the Toronto General Hospital. Since 1893 he has practised in this city, and during these years has made for himself a host of friends, who, while they are ready to congratulate him on his appointment, regret exceedingly his departure from their midst. Before leaving several entertainments were held to do him honor and bid him God-speed. Among these probably the most memorable was that given by Dr. W. H. B. Aikins at his residence, July 27th, a large number of Dr. Brown's friends being present. We desire, on behalf of THE CANADIAN PRACTITIONER staff, to thank Dr. Brown for many acts of kindness and courtesy, and much valuable assistance rendered during his residence in Toronto, and, at the same time, we offer him our kindest wishes, and hope that health, happiness and prosperity may attend him in his new sphere.

THE ROYAL ARMY MEDICAL CORPS.—The following is the text of the Royal Warrant forming the Royal Army Medical Corps, which the Secretary of State for War has courteously sent us for publication:

VICTORIA, R.I.

Whereas We have deemed it expedient to alter in certain respects the conditions under which the officers employed upon the medical duties of Our Army are at present serving;

Our will and pleasure is that the officers below the rank of surgeon-major-general serving in Our Army Medical Staff shall be formed into a corps, together with the warrant officers, non-commissioned officers, and men of Our Medical Staff Corps;

It is Our further will and pleasure that the designation "Medical Staff Corps" shall be abolished, and that the corps formed as above-mentioned shall be styled "The Royal Army Medical Corps."

The following alterations will consequently be made in the ranks of the medical officers of Our Army:

Present Ranks.	New Ranks.
Surgeon-colonel.	Colonel.
Brigade-surgeon-lieutenant-colonel.	Lieutenant-colonel.
Surgeon-lieutenant-colonel.	
Surgeon-major.	Major.
Surgeon-captain.	Captain.
Surgeon-lieutenant.	Lieutenant.

The medical staff of Our Army shall in future consist of surgeon-generals (ranking as major-generals), and the title of surgeon-major-generals now serving shall be altered accordingly.

Officers of Our Royal Army Medical Corps holding appointments in Our household troops shall be borne as seconded officers on the establishment of Our Royal Army Medical Corps, and shall be dealt with as regards pay and promotion in accordance with the rules laid down in Articles 384, 385, and 387 of Our Warrant for the Pay, Appointment, Promotion, and Non-effective Pay of Our Army, dated the 26th April, 1897.

Given at Our Court at Windsor, this 23rd day of June, 1898, in the 62nd year of Our Reign.

By Her Majesty's Command,

LANSDOWNE.

OBITUARY.

DR. JAMES BROWNE.—Dr. Browne died at his late residence, Toronto, July 16th, ten days after an attack of apoplexy, aged 82. He practised medicine for several years in Millbrook and Peterboro', but retired from active work many years ago. He had lived in Toronto for twenty-two years.

ROBERT DICKIE MOFFATT, M.D., C.M.—The many friends of Dr. R. D. Moffatt, of Toronto, were inexpressibly shocked when they heard, July 19th, that he had expired in a dentist's chair. He had suffered for some time from dental caries, and decided to have a number of teeth removed. Choloroform was administered by a competent physician, who noticed signs of failing strength after a comparatively small amount of chloroform had been inhaled. All efforts on the part of Drs. O'Reilly, Bray, Riordan, Elliott, Noble, and Gordon failed to resucitate him. He was 33 years of age, and had been prrctising in Toronto for several years. He graduated in McGill in 1888, and passed his final before the Ontario Medical Council the same year.

JOHN BEATTY, M.D.—Dr. Beatty was one of the oldest physicians in Canada, having commenced practice in the town of Cobourg in 1833. He was very successful as a practitioner, and also took a prominent part in matters outside his profession, especially politics. He was for many years one of the most influential men in Eastern Ontario. He gave up practice so many years ago that he was unknown to the present generation as an active physician. After retiring from active work he lived for many years in Cobourg, the scene of his earlier labors, highly respected by all classes. He enjoyed good health up to the morning of July 17th, when he was seized with faintness while sitting in his arm-chair, and died without a struggle in a few minutes.

CUB SAWBONES.

When we marched away with the starry flag,
Cub Sawbones carried his surgeon's bag.
But for me—I wanted "no rear" in mine—
I handled a gun in the fighting line.

So, when we had charged up the deadly glade,
Where the dons were lying in ambuscade,
I was there to take what the others got—
And the Spaniards gave it, plenty and hot.

There fell of our crowd in the Mauser hail
A third—and yet never a man did quail;
But—well, we went back—then came again,
And settled right down to our work like men.

In open order and firing at will
We crawled through a very rough skirmish drill—
From the trees to the rocks, from the rocks to the trees—
Just as close to the ground as we could freeze.

When I noted the tangled thicket sway
In front about twenty-five yards away,
I drew bead ready to loosen a storm
Till I caught a whiff of iodoform.

* * * * *

Cub Sawbones alone with the wounded folk
Was cobbling the limbs that the bullets broke.
He bent to his task with the tenderest care
Though the war bolts were hissing everywhere.

I hailed with our old-time college yell,
And he grinned as he watched a bursting shell.
"You have a great cheek to be here," he said,
"When you're not a doctor—or wounded—or dead!"

—*New York Sun.*