tal is apt to look askance at a method which tends to increase and complicate the work in the ward in ways which it is not necessary to elaborate.

There is one feature in particular of the English system of clinical teaching, which has always seemed to the writer most admirable. Each student must serve a fixed number of months in the ward as clinical clerk, with certain cases for the care of which he is responsible under supervision, and with all the details and course of which he necessarily becomes familiar. It is thus impossible for him to enter practice without any practical experience whatever; and, what is more important, he is forced to exercise his powers of observation for himself. The identity of school and hospital make this system easily possible. And yet it has not been attempted in European schools to any extent, as far as I know. Anatomy can not be learned without dissection; chemistry, without laboratory work. Nor can clinical medicine be learned in the best way without work in a hospital ward and out-patient room.

It is possible that much use could be made of the sick poor at their homes under the charge of dispensary physicians, though there are practical difficulties in the way. I believe that along this line lies the first present necessity and opportunity for development. The recognition of the necessity is the first step toward the provision and utilization of the means.

There should, again, be primary as well as advanced clinical instruction. In the new schedule of studies under the four years' course now in operation in the Harvard school, this principle receives full recognition. The course in the second year is entirely separate from that in the third; that in the third will be more or less independent of that in the fourth year. Each student will have in his second year four hours a week, partly clinical lectures and demonstrations of semeiology and diagnostic methods; partly drill in small divisions in physical diagnosis; partly ward visits in the hospital. The general scheme for the third year is to provide more advanced instruction in the wards and amphitheater, including therapeutics, as illustrated by the case or cases in hand. In the fourth year it will be the aim to make the work as practical as possible, and give the student opportunities to apply and fix the knowledge which he has already gained, at the same time that he increases his stock by more intimate contact with disease.

Many years ago my father introduced an exercise in clinical medicine which has become popular and been adopted by other departments in the Harvard school, to which it is still, as far as I know, peculiar. It is called the clinical conference. Each student in his final year is provided with a selected case, usually in a hospital ward, though sometimes in a dispensary district. He is expected to visit and follow up this patient, and write a practical paper on the diagnosis, prognosis and treatment. A month or six weeks is allowed for the preparation of the paper, which is then handed in and which counts a fraction toward the examination for the degree. From these papers a selection is made, according to character and subject, and every week one is read by its author before the class and a number of instructors in the department. The reader is then subjected to criticism and question by his fellow students and teachers. On the preparation of these cases much pains is

bestowed, and I think there can be no question that the exercise is a useful one. It is a matter of honor that the work on the case should be really that of the student himself. Under the four years' course, instead of one, I hope that each student may receive a number of cases to look up in this way.

I believe that the future is bright with promise. The progress in a century has been enormous. At first we depended almost wholly on Europe or Great Britain for a first-rate medical education. Then students crossed the water for clinical advantages in hospitals, as these were non-existent or small in this country. Then a prime inducement was the chance for laboratory work,—physiological, pathological, histological, biological. Just as our hospitals have become second to none, so will our scientific laboratories. It will always be enlarging to the mind to visit foreign schools and study their methods. But it is no longer necessary for the attainment of an excellent equipment, alike in practical and scientific medicine. We should bear in mind the fact that we have many possessors of large fortunes, who will quickly see that in no way can they so usefully and with so much credit to themselves dispose of their surplus, as by promoting medical education within, as well as outside of hospitals. But the matter must be laid before them, as it can not be expected that they should be familiar with the requirements of clinical teaching. Who is so fit to explain the matter, and who can exert more influence, than the family physician? Even if a teacher himself, he can not be considered a specially interested party if he is an officer of a university, which goes on forever, and the management of which can be depended on to administer funds intrusted to it, strictly within the purposes and wishes of the donor.

RARE FORMS OF GOUT AND RHEUMATISM.

Read before the New York State Medical Association, Oct. 11, 1893,

BY SIR JAMES GRANT, M.D., K.C.M.G.

OTTAWA, CANADA.

Mr. President and Gentlemen:—This I consider "a red letter day" in my professional life's work, and more particularly from the very fact of having received so generous an invitation, through the Secretary of your Association, to read a paper on this auspicious occasion. We Canadians, as a whole, delight in noting the advance of our American neighbors, in almost every line of thought in medical and surgical science. The assembled wisdom of this Association from the great State of New York, almost a kingdom in itself, is only an index to the intellectual power to-day at work in almost every State of your prosperous republic. How gratifying it must be to con over such names as Rush, Mott, McDowell, Sims, Gross, Pancoast, Flint, Sayre, Thomas, Emmett, DaCosta, Bowditch, Goodell, Pepper, Weir Mitchell, Bull, McBurney and a host of others equally great, but too numerous to mention, who by their skill and ability have added luster to the name of America.

To-day I propose offering some observations on rare forms of gout and rheumatism, conditions not by any means frequent as to their occurrence.

PNEUMONIC GOUT.

The following brief notes are of a pneumonic form of gout, associated with slight hepatic complication.

Case 1.—H. V., age 78 years, stout habit of body, not plethoric, but generally vigorous and accustomed to long hours of arduous official duty; can not trace gout to his ancestors and always lived well and liberally. Feb. 10, 1893, he was suddenly seized with acute pain in the right side of the chest, opposite the middle lobe of lung, with general malaise and rather severe cough. No excessive flushes in the cheeks; the breathing was somewhat hurried, about 30 per minute, temperature $101\frac{1}{2}$ to 103 degrees, and the pulse for several days ranged from 100 to 114. The cough, after the first day, was associated with the expectoration of a thick, tenacious mucus and rusty colored; not uniform, however, in its character, but somewhat patchy as to the distribution of the blood through the tough sputum. The left side moved more freely during the respiratory process than the right, and over and about the seat of pain in right side there was an evident area of dullness on percussion and yet the breath sounds were heard with a degree of almost unexpected clearness, with an occasional slight mucous rle. The posterior aspect of the right lung held its ground, kept moderately clear and, in fact, the pulmonic trouble was chiefly confined to the lateral and anterior aspect of middle lobe and right lung. Throughout, the sputa presented an unusually tenacious character, and up to the 21st of February exhibited a patchy, rusty and most peculiar appearance, after which date it became clear, but retained the sticky, glutinous peculiarity up to the 27th of February, when it subsided. During the entire illness the pain in the side was not of the usual pleuritic type, but more of the burning, throbbing, aching and piercing pain, and out of all proportion to the ordinary defined pulmonic condition. From this well-known gouty diathesis, I was led to believe that the attack was really gouty in character, and informed the friends that metastasis to the feet of the lung condition, was not unlikely. On the 22d both feet became very painful and swollen, a condition of system (as to his feet) he had experienced several times during the past ten years. Almost immediately the lung improved in every particular, which quite settled the point as to the gouty character of this attack in the lung tissue as a primary development. Throughout, the usual course of treatment was adopted, with the free use of elixir salicylate or lithia, and lithia water as well. During the entire attack I saw no special indications of hepatic trouble beyond a degree of uneasiness about the liver generally. Four years ago he had a well defined attack of jaundice, unattended by any anatomical lesion to account for its development; it was of short duration and passed off quickly.

PERITYPHLITIC GOUT.

The same individual whose case I have just cited was the subject of the following data:

Case 2.—Sept. 10, 1892; age 77 years. Almost up to the present attack he had been enjoying apparently good health; retired to bed this same evening, and in the middle of the night was suddenly seized with a severe pain in about the region of the appendix vermiformis, attended with a sensation of throbbing, together with a degree of tension in this particular region, and which radiated more or less over the entire abdominal walls; considerable heat of skin with a degree of restlessness, general febrile disturbance, and a sense of uneasiness about the stomach with occasional vomiting. Temperature 102 degrees; pulse 116, full and regular. The pain and sensibility of the abdominal wall were chiefly over the ileo-cecal region. The bowels were constipated and the tongue moderately coated with a moist white fur, pointing to evident gastric derangement. Knowing the gouty history of this patient for some years, although not of an hereditary type, I suspected from the character of the pain—boring and gnawing, such as I had observed more than once in his feet—that it might prove a case of gout, of which there were well-defined results, such as tissue thickening about the tarsus and heels of both feet, owing to the deposition of gouty material during past years. The fingers on both hands showed also evidences of disturbed chemistry in the system, resulting in gouty thickening in and about various joints. The bowels, though at once relieved by an enema, still continued painful. Linseed poultices were freely applied, sprinkled with chloroform liniment, and tablets of sulphate of morphia freely administered, to relieve the intense suffering, which was so acute as to almost prohibit the most moderate bed clothing. Salicylate of lithia and lithia water were freely given so soon as admissible; and the bowels were frequently washed out with warm water, which almost played the part of an inter-

nal poultice. The pulse and temperature continued high for fully five days, when both gradually lessened in intensity, and about the sixth day pain was complained of in both feet, particularly about the toes, but not by any means as severe as in the marked metastasis after the attack of pneumonic gout.

At this date there was a marked amelioration in the entire character of the symptoms, the abdomen became more flaccid and much less painful on pressure, and the decidedly *cakey* area in the ileo-cecal region gradually parted with its suspicious outlook. McBurney's appendix point was for days an interesting and instructive outlook, until rendered less attractive by the evident outcome of metastatic gouty action. Undoubtedly there was well marked and circumscribed induration in the ileo-cecal area. The precise condition or character of this induration was difficult to define, and yet the rapid change consequent on metastatic action, pointed to gouty deposition in or about the region of the appendix, so peculiar and transitory in its manifestations. At the end of three weeks an excellent recovery was made, and since that date there has been no recurrence of intestinal trouble.

RHEUMATIC PERITYPHLITIS.

Case 3.—Miss T., age 12 years, vigorous and robust habit of body, conformation regular and organs, as a whole, normal prior to present attack; of a highly nervous temperament, but has usually enjoyed excellent health and spirits. June 1, 1893, complained of pain and a sense of uneasiness in her feet, with a general feeling of systemic irritability. June 3 was suddenly seized with severe pain in the bowels, but more particularly in and about the ileo-cecal region, where tenderness on pressure was most marked. Fully two days prior to June 1 a sense of heat and feverishness were experienced, and prior to being under my care. Temperature $102\frac{1}{2}$ and pulse 120. The bowels were at once washed out by a warm water enema, which afforded much relief. Hot linseed poultices applied, and placed on milk diet and an aconite mixture. From June 2 to June 8 the pain experienced over the bowels was very considerable, and the tenderness so severe that coughing or stretching of the legs increased the pain in a most marked manner. Turpentine enemata also afforded considerable relief. June 4 there was a decided hardness, on moderate pressure, over the ileo-cecal region, which gave me the impression that some tissue change had taken place, and the fact that rigidity in the abdominal walls was more marked on the affected side than on the other, led me to view the condition with a degree of suspicion, although the actual position of hardness was a little lower down than McBurney's point. For fully three days the temperature was over 102 degrees, on which account suppuration would not be an unlikely result. June 7 the right shoulder, elbow and wrist joints exhibited well-defined symptoms of acute articular rheumatism, these parts being painful on pressure, swollen and moved with difficulty. Just in proportion as these, almost outside rheumatic conditions developed, the abdominal symptoms actually lessened in intensity, and on the tenth day the entire features of the case evidenced a marked change for the better, no relapse being experienced whatever. The question very naturally arises, What was the attack, and how developed? True, the recognition of appendicitis is not all that is needed. In this case, almost from the first, there was localized pain associated with tenderness over the region of the right iliac fossa and ascending colon, with well-defined swelling, and for days the pain was so severe that it was increased at once by coughing or deep inspiration, and the almost constant desire was to elevate both knees to relieve suffering. For days also there was entire inability to take nourishment, owing to attacks of vomiting. The bowels were frequently injected with warm linseed tea, which afforded a degree of nourishment, as well as clearing the contents of the canal.

In the last case I concluded there was lodgment of undigested material in the cecum, and most likely induced by inability to assimilate the food, owing to deflected *nerve power from over mental strain*, as is frequently the case in our schools and universities at the present day. In the ordinary avocations of life we can trace the operations of like results, interfering seriously with the very principles of sanguinification and blood change.

The next question is, How is rheumatism associ-

ated with perityphlitis? True, the essential cause of rheumatism is still a doubted point. Errors in diet, as an etiological factor, have much to do with the production of both gout and rheumatism, and such strengthens the metabolic theory that rheumatism depends on a morbid material, produced within the system, the result of defective processes of assimilation. True, Prout, Latham, Richardson, Mitchell and Dr. William H. Porter of New York, have thrown much light on the subject of rheumatism, and certainly the present case points to rheumatic complications as the outcome of defective assimilation, an important factor in its production. Thus the chemical laboratory of the human system becomes disturbed, resulting in false products, enabling us to establish a connecting link between even perityphlitis and rheumatism. In the structure of the intestinal walls there is undoubtedly a large amount of fibrous tissue, just as in the fascia and the tendons of the joints, and it is reasonable to suppose that these structures should be influenced in the same manner. Assuming that the case under consideration was even quasi-rheumatic in its character, it affords one more illustration as to the importance of giving due consideration to the line of action embraced in medical or surgical treatment under like circumstances.

In a recent paper by A. Haig, M.A., M.D., Metropolitan Hospital, London, on "Gout of the Intestines," he states "that his chemical and experimental experience had led him to believe that a very large number of cases of colic, enteralgia, and enteritis, and cases which are clinically indistinguishable from typhlitis, are neither more nor less than a gout of the walls of the intestinal tube, or a rheumatism, as has just been defined." In Canada, as a whole, gout is almost an *unknown quantity*, except in occasional cases of an hereditary type. Our people, in the midst of life's pursuits, live in a moderate way, which contributes greatly to the promotion of health. On the other hand, rheumatism is of frequent occurrence. The coldness of our winter climate, the occasional absence of flannel, and excessive exposure contribute to develop rheumatism.

After noting the life history of many thousands of our lumbermen, I have been amazed at the few attacked by rheumatism. Bread, pork and strong tea constitute their chief articles of diet, and the general experience is that the tea enables them to digest the pork with remarkable comfort, and certainly after a hard winter's work they return home well-nourished and healthy in every particular. These facts point to the importance of simplicity as to diet. Our progenitors frequently attained the age of "three-score and ten," nourished by grain ground between two stones. As a rule, the present generation *live too fast*, resulting in mental strain and the absence of simplicity. With greater attention to diet, simple in its character, in conformity with the normal functions of the alimentary canal, and the avoidance of alcoholic beverages, as a whole, I feel confident perityphlitic and appendix troubles, even unconnected with gout and rheumatism, would become less troublesome factors in the line of disease.

To avert various irregularities in the alimentary canal, which if neglected, would undoubtedly lead to trouble in time, is as important as subsequent treatment, when the stage is passed in which the efforts of nature are powerless to afford relief. What

active agent in the system is more frequently tampered with than gastric juice, which requires a normal temperature to perform its part in the economy. Ice water at the commencement, and ice cream at the end of a meal may be fashionable, but certainly not life preserving. Unassimilated food makes its way to parts not designed by nature to transform and absorb; as the result, how frequently on percussion we find extensive portions of *bowel ballooned* by abnormal efforts to accomplish the digestive process. Such conditions result from irregularities in living. No portion of the alimentary canal is more liable to diseased manifestations than in and about the appendix, which is a species of loop-line to the digestive tract.

Insurance associations can not note too carefully the probabilities of life in this connection. There is still much to be accomplished, and let our medical education be so directed as to bring about simplicity in living, as near as possible, to the normal functions of our organs, and our generation will be greatly benefited.

RIPENING OF IMMATURE CATARACTS BY DIRECT TRITURATION.

Read in the Section on Ophthalmology, at the Forty-fourth Annual Meeting of the American Medical Association.

BY BOERNE BETTMAN, M.D.

CHICAGO.

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Six years have elapsed since I first called the attention of the profession to my operation for ripening immature cataract. During this time I have had excellent opportunities to study the indications for this procedure and to note its immediate and later effects. I have made known my observations in three papers, and my main object in presenting another to-day is to call attention to a few more features and to elicit a discussion from a representative body of specialists.

The most important question, the *raison d'être* of the operation will first occupy our attention. Is the operation justifiable? Knapp in his paper on cataracts read before this section last year says: "Preliminary ripening operations are, in my opinion, almost always superfluous. I prefer the risk of extracting an unripe cataract to that of any ripening method with which I have become acquainted. The leaving of remnants behind has, in the manner in which I operate, very little to signify. Locked up in the capsule they produce no iritis, and can easily and successfully be dealt with by the secondary division of the capsule."

"I avoid operating on cataracts swollen by inhibition. They render the section difficult and rarely come out cleanly, whereas the immature cataracts, known under the name of nuclear sclerosis, if the anterior chamber is deep mostly, not always, come out entire."

Hirschberg denounces all procedures for maturing lenses in even stronger terms. In a review of his paper, "Ueber Kernstar Ausziehung," he says: "I operate on all senile, nuclear cataracts past the age of fifty, as soon as the vision is decidedly diminished (erheblich beschränkt), that is to say, as soon as the