fore, often associated with any chronic discharge such as leucorrhœa, and it is not uncommon to find anæmia and indigestion closely allied. Atonic dyspepsia is seldom attended with acute pain, although there are exceptions. As a rule, the disease develops very gradually, about the first symptom observed being more or less flatulence associated with a feeling of distention after eating. The distended stomach may also interfere with the action of the diaphragm and occasion more or less dyspnoea.

Eructations are common and annoying, but vomiting is seldom observed. The appetite in this disease may finally become greatly deficient, and sometimes there is an absolute aversion to food. Impaired digestion, long continued, is often associated with marked functional disturbance of the heart, that manifests itself most violently at night. The pulse is often slow and feeble, and the extremities cold.

Constipation is a pretty constant symptom, and loss of flesh and strength almost necessarily follows. Organic diseases are, as a rule, readily distinguished from this functional disturbance, but it becomes more difficult to differentiate between atonic dyspepsia and certain inflammatory affections of the mucous membrane. A diagnostic point of importance is the epigastric tenderness which is almost invariably associated with inflamed conditions of the gastric mucous membrane; while, in cases of indigestion due to atony, pressure causes no pain. Neither acidity, heartburn or vomiting are common in atonic dyspepsia as in gastritis. While in inflamed conditions of the stomach, the urine is high-colored and loaded with lithates, in atonic conditions it is rather pale in color and deposits oxalates or phosphates.

Although electricity is only one of many remedies that may be indicated in atony of the stomach, yet an abundant experience in the treatment of this condition, justifies me in placing it in the front rank of our therapeutic resources. Manifestly the indication of primary importance is to remove, so far as possible, the causes of the disease. Whatever is injudicious in the quantity and quality of the food or the frequency with which it is taken, should be corrected, and the patient instructed as to proper methods of living. If he continues to masticate his food imperfectly, eating too much or too little, or persists in indolence or luxurious methods of living, neither drugs nor electricity will avail. In connection with proper hygienic methods I have known electricity to help on rapidly to a greatly improved condition of health. Whether the defects of digestion depend upon an exhausted condition of the nervous system, interfering with the normal activity of the processes of excretion and secretion, or whether the blood-supply is deficient in quantity or abnormal in quality, the well-attested action of electricity in modifying the physiological functions of the body, renders it the most efficient of remedies. The tendency of electricity is both to increase secretory processes and to modify their quality. The secretion of the gastric juice and of the intestinal fluid has been shown to be increased by external electrization alone.

Even without demonstration, analogy shows that these fluids ought to be secreted in greater abundance under the influence of the current, and the results of the treatment in pathological cases give this probability the force of certainty. Appetite is sharpened, digestion is quickened, and constipation relieved both by local and general treatment, so rapidly and so decidedly

as to make it evident that the gastric and intestinal fluids are made to secrete more liberally by the action of the current on the nerves that supply these organs, than on the tissues of the organs themselves. An excellent means of studying the variations in the nutrition through electrization is found in the elimination of urine. This is believed to be a result of oxidation-processes, that may take place either in the kidney or in the tissues, or in both.

Animal nutrition is a process of enormous complications. There is no single chemical change at which one can point and declare, that this explains the growth and sustenance of the body; but there are nameless and numberless phenomena every moment going on in the living tissue, and as a result of these in their infinite play and combination, the body lives, moves and has its being. Electricity in passing through the body modifies many or all of these processes, and thus modifies nutrition.

As a resultant of the complex, physical, chemical and physiological action of electricity on the tissue, there is increased development and growth. The faradic current of rapid interruption and high tension yields results superior to the galvanic in the treatment of atonic dyspepsia. In the use of the faradic current, the treatment must be both general and local. General faradization is pre-eminently indicated in this affection, not only for its direct but for its reflex effect upon the nerve-supply of the stomach. While in dilatation of the stomach internal applications are of the greatest service and often indispensable, in atony they are seldom, if ever, indicated. In the use of the faradic current, the electrodes should be sufficiently large to prevent any undue concentration of current, and instead of being stationary, the pole over the region of the stomach should be kept in almost constant motion. In this way and by the exercise of care, it is quite easy to avoid those painful muscular contractions that so frequently occur.

Through inattention to this simple precaution, I have on more than one occasion seen the most violent and prolonged spasm excited, exhausting the patient and discouraging him from further attempts in this direction. The continuous or unbroken action of the galvanic current, notwithstanding its usually good effects in the promotion of nutrition, when used in this way, seems to be of little use in atony of the stomach. The direct mechanical action, and the indirect reflex effects of a mild galvanic current rapidly interrupted is undoubtedly of service, although inferior in its therapeutic effects to the induced current of high tension.

A TRANSIENT OR EPHEMERAL FORM OF HIP-DISEASE, WITH A REPORT OF CASES.

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THE following investigation was undertaken to ascertain if there is, as there appears to be at times, a short-lived and ephemeral form of hip-disease which presents at first the characteristics of common hip-disease, but the symptoms of which disappear in a few months instead of continuing for years. These symptoms are in many cases, of course, due to the existence

of a simple, acute synovitis; but in others, as will be seen, they present characteristics of true bone disease.

Attention was called to these cases chiefly by the fact that a certain number of patients came to the Children's Hospital for advice in cases of early hip-disease but never returned. As there is no other hospital in the city where these cases are treated to any extent, it seemed probable that a proportion of them recovered and needed no further treatment. This state of affairs is so thoroughly different from what one expects in ordinary hip-disease, that as many as possible of these cases were investigated at their homes last February, some years after their visit at the hospital, and the investigation not only showed some interesting points in connection with acute synovitis of the hip in children, but also seemed to establish the existence of a short-lived and transient form of hip-disease which occurs at times. This point is of such importance practically that it seems worth while to consider these uncommon cases somewhat in detail.

In general, the cases which proved afterward to be synovitis, came to the hospital with a limp and pain following injury; often night-cries were present, and there was a certain amount of resistance to passive motion of the hip induced by the pain of such manipulation. Here, then, was a symptom group identical with early hip-disease. The chief points of difference being that in synovitis the pain was out of proportion to the muscular rigidity in most cases, and was a voluntary restriction rather than a true reflex spasm. But these are very slight matters and quite insufficient to establish a differential diagnosis. The fact that the symptoms follow closely upon injury can be allowed very little weight because it is found among hospital patients that a certain proportion of children with hip-disease come with exactly this history, the fall being the occurrence which calls the attention of the parents to the child's disability, which may have been of many weeks' standing.

The years 1888 and 1889 were selected for investigation; and of 156 new cases of hip-disease coming to the hospital for advice in that time, it was found that 38 either did not return or only came once or twice, not receiving continuous treatment. It was among these cases that we were to look for cases of transient hip-disease, if it occurred.

It was possible to find or hear from 24 of these 38 cases in February, 1892; 11 of them had developed undoubted hip-disease of the ordinary type, and had gone from bad to worse, but for some reason had not returned to the clinic. The remaining 13 cases had made a rapid recovery, and had remained well, although from two to four years had elapsed since their visit to the hospital.

ACUTE SYNOVITIS.

Of these 13 cases eight seem to have been a simple acute synovitis of the hip. A typical case of simple acute synovitis is the following:

CASE I. Flossy S., five years old, fell while playing, in May, 1888. Motion at hip was painful and the child limped, the pain becoming less while the limp remained. Night-cries were frequent. Two weeks later she was brought to the hospital, where the following condition was found: No shortening, atrophy or trochanteric thickening. Motion was limited in all directions by muscular spasm, flexion being possible to only 90°. The diagnosis of hip-disease was made, and the child directed to return in a week for a Thomas splint. She became so much better

during this time that she did not come back, and was entirely well in three weeks. She has had no recurrence of symptoms. Now, three years and eight months later, she has perfectly free motion in all directions, with no atrophy or shortening.

This seems to have been a typical case of simple traumatic synovitis; but the beginning was so much like that of true hip-disease that the diagnosis of synovitis could not have been made with any certainty at the time. In fact, the diagnosis of acute synovitis of the hip in childhood, is one which should be made only with the greatest caution and the symptoms in general accredited to probable hip-disease.

There was another type of synovitis, not induced by injury, where the symptoms seemed to be of rheumatic character. Such was the following:

CASE II. Frank B., nineteen months old, was brought to the hospital in February, 1888. He had then been ill for six weeks, the last three in bed. The hip was very sensitive, and the slightest motion extremely painful. Night-cries were continual, and he had lost flesh rapidly. He had been treated for rheumatism for some time, but the diagnosis of hip-disease was finally made by the family physician. Examination showed much tenderness about the hip, the thigh was held flexed at 45°, there was no motion, and much trochanteric thickening. The diagnosis of hip-disease was confirmed, and the child measured for a Cabot frame. He improved so rapidly, however, that he did not return, and was well in ten days. He had no abscesses, and has not been lame since. Is now, four years later, perfectly well and strong.

OSTITIS OF THE HIP.

But, as already noted, certain of these cases which recover so quickly, show characteristics which cannot be accounted for by a simple synovitis and one must assume that an affection of bone has been present. Such is the following:

CASE III. Frank F., eight years old, came to the hospital in September, 1889, six weeks after a slight fall. His symptoms were lameness, pain and night-cries. Examination showed trochanteric thickening. Rotation was not free when the thigh was flexed at a right angle and flexion and hyperextension were limited. He walked with a slight limp. A probable diagnosis of hip-disease was made. The boy was much better in two weeks, and in three months, motions were normal. Now, two years and six months later, there is no limitation in motion, but some trochanteric thickening; a shortening of one inch, but no atrophy.

The fact that, two years and a half after the cessation of symptoms, there remained a shortening of one inch in the affected leg along with trochanteric thickening, would point clearly to an affection of bone. A similar case was:

CASE IV. William H., six years old, came to the hospital in April, 1889. He had been troubled by pain and lameness for some weeks, and the diagnosis of hip-disease had been made by the family physician. There was no history of injury, and at the time of examination at the hospital he presented the following symptoms: The right leg was half an inch shorter than the left. Flexion was resisted by marked spasm at a right angle, and rotation and hyperextension were much limited. The diagnosis of hip-disease was naturally made, and a traction-splint was advised. For some good reason the parents could not return, and the boy never had any treatment. He limped for about six weeks, then recovered, and has never had any further trouble. Three years later the motion in the right hip was not so good as in the left, and there was half an inch shortening of the right leg.

It hardly seems worth while to report in detail the other three cases, which differ but little from these. One recovered in five months from the beginning of her symptoms; one in eight months; and one in a few months, the exact time of which cannot be stated.

Enough, however, has probably been said to demonstrate the existence of this short-lived form of hip-disease. With regard to its pathology, all must be conjectural. It is probable that in these cases the focus of tuberculous disease is situated in a part of the epiphysis remote from the joint, and that in its growth it causes enough disturbance in its neighborhood to give rise to symptoms of joint irritation. The fact that joint irritation may be caused by a focus of disease which has not ruptured into the synovial cavity, was clearly demonstrated by the autopsies of Lannelongue.¹ Having caused these symptoms of joint irritation, it seems probable that the focus of disease either becomes quiescent or grows away from the joint if it continues active, and after a brief time the symptoms subside.

It will be seen that these cases do not present any early symptoms different from those of hip-disease of the common type, so that their recognition seems impossible; moreover, hip-disease is characterized by such marked remissions of symptoms that this type of disease is easily simulated in that way. But the fact remains that, even if one leaves out of consideration cases of acute synovitis, certain cases presenting all the symptoms of true hip-disease run their course to a favorable termination within a few weeks or months, and the matter is one of such practical importance that it deserves recognition.

Medical Progress.

RECENT PROGRESS IN THORACIC DISEASE.

BY GEORGE G. BEARS, M.D.

TRACHEAL TUGGING AS A DIAGNOSTIC SIGN OF THORACIC ANEURISM.¹

GRIMSDALE questions the value of tracheal tugging as a sign of thoracic aneurism, as out of one hundred and eighteen cases taken at random from the medical and surgical wards of St. Bartholomew's Hospital, it was present in fifty-one, being found in the most varied conditions of heart and arteries. In four cases it was classed as "marked," two being cases of aneurism, one a case of emphysema and bronchitis, in which it was most apparent in the position of expiration, and one a case of chlorosis, in which it was usually slight, but became marked on excitement; in seventeen it was "moderate"; in twenty "slight"; in the remainder it was very slight, doubtfully present, or occurred only on excitement.

The tug therefore occurs in sixteen per cent. of all cases taken at random, and is in all respects indistinguishable from that occurring in such cases of aneurism as have fallen under his notice.

As a purely negative sign tracheal tugging may be useful, but its presence without any corroborating evidence is so far from being diagnostic as to be of no computable value.

¹ Practitioner, February, 1892, p. 96.

² Coxotuberculose, Paris, 1883.

A METHOD OF INCREASING THE INTENSITY OF HEART SOUNDS.²

Azouley³ describes a method of procedure which allows of the more easy detection of cardiac bruits when they are only slightly marked, and which is capable of bringing them into evidence when they are absent during our examination of the patient. It consists in making the patient lie as horizontally as possible, with the arms stretched above the head, and the head and legs raised as high as possible on cushions. Cardiac tension is thus increased and the physical signs accentuated.

A CASE OF RUPTURED HEART.⁴

The following case is reported by Rouse. A stout and plethoric looking man of fifty-two, while playing foot-ball, suddenly fell down in a sort of faint, but soon recovered and continued to play till the end of the game, never, however, really over-exerting himself. After the game he was again seized by a somewhat more severe fainting fit, which was accompanied by severe pain in the cardiac region and later by vomiting. He was kept in bed for two days; then, as his symptoms had subsided, he was allowed to be up and walk about. His condition remained the same up to the seventh day after the original attack, when he had another fainting fit and died in less than five minutes. At the necropsy a complete rupture of the left ventricle was found half an inch in diameter. The pericardium contained twelve ounces of blood clot beside some blood mixed with serous fluid. The heart substance was very friable and fatty degenerated, as were also most of the other organs. It is presumed that on the date of his first violent symptoms an incomplete rupture occurred, or one so small as not to allow the escape of blood into the pericardium, while on the day of his death some sudden exertion or additional blood-pressure increased the previous injury and as a consequence the immediate rush of blood stopped the heart's action and was the cause of death.

THE PRESYSTOLIC MURMUR WITHOUT ORGANIC DISEASE OF THE MITRAL VALVE.⁵

In the *Medical Chronicle*, Vol. xii, No. 3, Maguire gives a *résumé* of nine cases, collected from English literature, of presystolic murmur without organic mitral stenosis, in which there was usually aortic insufficiency, and adds two cases of his own. In both of these beside a systolic souffle at the apex and a diastolic in the aortic area, a marked presystolic murmur could be heard terminating with the first sound. The autopsy showed in both cases aortic insufficiency, but no obstruction at the mitral valves. As a complication in the second case, an aneurism of the anterior coronary artery with rigid walls bulged into the left auricle, and very possibly was the cause of a relative narrowing of the mitral orifice. Maguire believes that these murmurs are produced by the floating out of the anterior mitral flap by the simultaneous entrance of two blood streams, one from the aorta and one from the auricle, producing eddies which are still further increased at the moment of the systole of the auricles.

At all events the sound does not seem to be propagated from the aorta, but is produced at the valve

² Supplement to British Medical Journal, June 4, 1892.

³ Gaz. des Hôp., May 12, 1892.

⁴ Lancet, February 6, 1892.

⁵ Contribut. f. klin. Med., No. 13, 1892.