

septum. The patient rallied from the operation, but died some days later from septic peritonitis.

This case, like that reported by Dr. Gordon Taylor in your issue of December 6th, 1924, emphasizes the necessity of ascertaining the cause of delay before resorting to forceps. With an anaesthetized patient one may easily invoke the catastrophe of Dr. Gordon Taylor's and my own case.

Penrhyn Bay, Llandudno.

NORMAN PORRITT.

## British Medical Association.

### CLINICAL AND SCIENTIFIC PROCEEDINGS.

#### CAMBRIDGE AND HUNTINGDON BRANCH.

##### AN APPARENT CASE OF HOUR-GLASS STOMACH.

At a combined meeting of the Cambridge Medical Society and the Cambridge and Huntingdon Branch of the British Medical Association, held at Addenbrooke's Hospital on December 5th, 1924, the following notes on a case of apparent hour-glass stomach were contributed by the President, Dr. J. R. GARROOD.

The congenital form of hour-glass stomach, which this case resembles, is referred to in the textbooks, but on examining the literature it appears to be a vanishing condition, due, I think, to more accurate diagnosis.

Saake (1896),<sup>1</sup> in the case of a female aged 67, states that the hour-glass contraction was obviously of congenital origin, while in the pyloric portion a large cancerous growth was discovered.

Rokitanski (1859)<sup>2</sup> mentions rare congenital malformations in which an annular contraction divides the stomach into a cardiac and pyloric portion or into three or four sacculated divisions.

C. F. Martin (1908)<sup>3</sup> thinks that in the specimen in McGill Museum from an infant the condition is so marked as to leave no room for any conclusion but that it is congenital; but, speaking of pylorospasm, he states that fixation in the contracted condition may take place at death in one phase of digestion.

Adami and McCrae (1914)<sup>4</sup> mention occasional cases of congenital hypertrophy of the mid zone of muscle, but Moynihan denies the existence of the condition.

The specimen here described was taken from the body of a male child which lived seven weeks. The mother was 47 years old; the labour was uncomplicated. The patient was the eighth child (the other children are normal); he weighed 7 lb. at birth and was breast-fed; he cried a good deal and vomited from the first; no treatment benefited him. The amount of vomit was estimated to be about as much as he took; it was yellow or brown; he also brought up wind which was offensive.

After the meconium but little faeces was passed, and that which came was described as looking like a worm; not much urine was passed. The upper abdomen was rather swollen. The patient wasted and died in seven weeks. On opening the abdomen a reversed S (2) shaped organ appeared, and apparently consisted of a double stomach. The upper and right limb of the S was directed backwards, its plane being nearly at right angles to the lower curve.

I removed the stomach and intestines, and wish now I had taken the liver and pancreas as well. On opening the organ both cavities were found to contain milk. The opening between the two admitted a wooden match. The cavities were of about the same size, and I thought I had a perfectly good hour-glass stomach. I removed a small piece of tissue from the junction piece, sections from which were examined under the microscope.

On further consideration I have come to the conclusion that the second sac is really the first and second parts of the duodenum, for the entrance to the common bile duct is found in it. The microscopical structure at the point of junction of the two sacs is similar to that at the pylorus, as is the macroscopic appearance, while the lower end of the second sac has no resemblance to it. If this is so, we have a dilated and hypertrophied duodenum brought about by an almost complete occlusion just below the entrance of the bile duct. This could not have been complete, for the infant lived seven weeks, but was very nearly so, as the patient starved to death, and the intestines are nearly empty; presumably seven weeks, even under bad conditions of nourishment, was sufficient time for the enlargement to take place.

In Green's *Encyclopaedia*<sup>5</sup> it is stated that duodenal occlusion

occurs just above the entrance to the bile duct, and is due either to a membrane or to gradual narrowing. The vomit is not bile-stained, the bowels act several times after birth, and death occurs in one to eleven days. Obviously the occlusion in my case does not quite correspond with this account.

The specimen shows a stomach 14 cm. along its greatest curvature, with walls from 2 to 3 mm. thick, and, I believe, a normal pylorus—at all events it was patent, and the second cavity contained milk. This is followed by a sac 8.5 cm. along its greatest curvature, with walls of the same thickness as the stomach. They show plicae circulares within, and there is no mesentery; a bristle has been passed through a short piece of the portal vein behind. At the intestinal end of this sac is a transverse partition, and on the upper surface of this is a small opening, which on passing a bristle is found to lead to a vessel which I believe to be the common bile duct. The first part of the duct passes in the wall of the septum, and was so thin that it broke away, but the track can be seen in its substance beneath the bristle. A narrow opening can be made out in the septum near the posterior and inner wall. The intestine which immediately succeeds this partition appears quite normal. The sections show the thickened portion at the pylorus followed by the thinner first part of the second sac or duodenum. There is a gradual transition from pyloric glands to Brunner's glands and villi; the difference between these is never very marked, and I suppose would be even less obvious in an infant.

## Reports of Societies.

### RHEUMATOID ARTHRITIS.

At meetings of the Royal Medico-Chirurgical Society of Glasgow on December 5th and 12th, 1924, the President, Professor ARCHIBALD YOUNG, in the chair, a discussion was held on rheumatoid arthritis.

Professor R. STOCKMAN described rheumatoid arthritis as being probably a group of closely allied microbic diseases, such as chronic articular rheumatism, chronic rheumatic arthritis, chronic fibrous rheumatism, chronic villous polyarthritis, nodose rheumatism, rheumatic gout, atrophic arthritis, Still's disease, and chronic infectious arthritis. The clinical course and morbid anatomy marked it as a bacterial infection of low virulence, but of extreme chronicity. As a rule, no organism could be found in the areas affected or in the blood, but in a very small number of cases bacilli, diplobacilli, cocci, diplococci, and streptococci had been isolated from the joints. There were probably several different causal organisms, and this belief was supported by the considerable clinical and anatomical differences in individual cases. Whether all cases were due to the same organism or to various different organisms the broad results for the patient were the same. The white fibrous tissues of the locomotory system of the body were the sites of attack, and essentially and in the beginning the disease was a fibrositis, with proliferation and increase of the affected fibrous tissue structures. There was never any suppurative or local emigration of polymorphous leucocytes. Chronic hydrarthrosis of one joint was probably its mildest form, and from this there were all grades of severity up to polyarthritis with high fever. The disease usually began insidiously in the small joints and progressed with little constitutional disturbance; less often it began in the large joints with more acute systemic symptoms. Ultimately in all cases it presented the general clinical aspect of a low chronic septic infection. It must be regarded as a very general infection and not merely as an arthritis. In all cases the fibrous tissue of the muscle, aponeuroses, fasciae, and panniculus adiposus were more or less deeply involved and inflamed. In the joints the fibrous tissue of the synovial membrane and capsule were primarily affected. The cartilage and bone were not primarily involved, but as the influence of disease, muscular contractures, and other changes came into play the bone became thinned and atrophied, the cartilage rough or ulcerated, the fibrous capsule contracted and hardened, and ultimately a fibrous or a bony ankylosis might result.

The focus of infection could only very rarely be identified with certainty. It was possible that in many cases the original focus had disappeared before the patient came under observation, and one joint might remain as a reservoir

<sup>1</sup> Saake (1896): *Med. Annual*, 1896, p. 539.

<sup>2</sup> Rokitanski (1859): *Path. Anat.*, Syd. Soc., p. 23.

<sup>3</sup> C. F. Martin (1908): *Osler's Modern Medicine*, vol. v, pp. 203 and 304.

<sup>4</sup> Adami and McCrae (1914): *Textbook of Pathology*, p. 626.

<sup>5</sup> Green's *Encyclopaedia of Medicine and Surgery*, vol. 4, p. 513.

of infection after others had ceased to show active signs. Tonsillitis, boils, septic sores, pyorrhoea, chronic pulmonary or intestinal conditions, and so on, had been blamed, and the association of various skin conditions, such as psoriasis, had been noted. The various methods of treatment, both local and general, were then described. In speaking of the protein shock treatment, Professor Stockman believed that in most early cases the method was capable of cutting short the infection. The later symptoms and changes which followed as a result of the fibrositis were referred to, and the necessity for vigorous treatment by massage, movements, baths, and appropriate exercises was urged—anything rather than rest. Treatment must be directed (1) to restore movement in the joints by elongating the contracted muscles and shortening the elongated ones so that they might regain their normal action; (2) to get rid of the fibrositis in and around the joints, and to stretch and render more pliable their ligamentous tissues and adhesions; and (3) to increase the bulk and strength of the muscles. For the most part the stretching and movements could be done manually, but the assistance of splints was desirable in many cases. Forcible extension under an anaesthetic was to be avoided, but in certain instances the mobility or otherwise of a joint could be more easily tested under chloroform. The fixation of a joint in plaster or splints for more than a few days was very inadvisable owing to the risk of immobility occurring.

Dr. DAVID CAMPBELL related the results of the treatment of rheumatoid arthritis, and described the technique he had employed in the treatment of 100 cases from 1921 to the present date. Of 70 cases treated up to November, 1923, 58 derived great benefit, both directly from diminution of pain and tenderness in the joints, and also indirectly from the consequent greater facility with which more effective local treatment by heat and massage could be carried out. The maximum benefit was obtained in those cases which had started acutely and with involvement of many joints. Of the 12 cases which showed no improvement, 4 were of long standing in which the disease process had become inactive. Seven patients reacted to each injection, but the infection remained active. Of the 50 patients improved by the treatment, 40 had, during periods varying from one to three and a half years, been able to perform all their ordinary duties; with no exacerbation of the joint conditions or spread of the disease to other joints. In 16 cases in which relapse had taken place a fairly advanced stage of the disease had been reached before treatment was started, while in several the treatment had been discontinued after two or three injections, owing to the great improvement shown. The advisability was considered of continuing the injections after the active process had apparently ceased. In conclusion, Dr. Campbell expressed the opinion that, while protein shock therapy could not be regarded as ideal, it offered greater probability of success than any other known methods.

Mr. JAMES RUSSELL, discussing the surgical treatment of arthritic conditions, referred to the various deformities which might result from these diseases. He strongly deprecated operative treatment based on x-ray appearances alone, and insisted that surgical interference could be justified only where improved functional value of the limb was likely to be attained thereby. The fundamental question was function, and mere deformity as such should not be allowed to assume undue importance. The commoner deformities of the various joints were then described and the methods employed for their prevention discussed. Various splints were shown and the method of their use demonstrated. It was pointed out that the splints should be such that they could easily be removed for massage and other local treatment. In the acute stage of the disease there was a limit to the patient's tolerance of treatment, and in such cases the skill and judgement of the surgeon might be taxed to the utmost. Once deformity had developed, any forcible movement was sure to be harmful, but gradual stretching by weights or splints could overcome many of these early contractures. In conclusion, Mr. Russell urged the necessity of physicians and surgeons appreciating the value of posture during the acute stage

of the illness, and splintage in the prevention and control of deformity.

Dr. W. S. SYME referred to the difficulty of finding a focus of infection, and urged that the examination of the throat and nose should be more strict than was commonly the case. For example, it was often the most innocent-looking tonsil which showed the greatest degree of infection in the crypts when a thorough examination was made by pressing forwards the pillars and projecting the tonsil towards the observer. With nasal infection even more care was required to demonstrate the freedom from infection of the various sinuses. In some cases where generalized infection had occurred removal of the primary focus did not afford relief, probably because secondary foci were then equally fertile as sources of infection.

Dr. J. N. CRUICKSHANK referred to the herpes occasionally observed after protein shock therapy. He described six cases in which severe herpes of the mouth and lips and surrounding area of skin had occurred. Subsequent injection of a fresh vaccine from the same stock was again followed by herpes. One patient had been treated by a vaccine from a different stock without the appearance of herpes. When treated by the vaccine which produced herpes in the other patients he also suffered in the same way. These facts suggested the need for care in selecting a suitable stock vaccine.

Dr. HOWIE mentioned the importance of focal infection in rheumatoid arthritis and allied conditions.

Dr. MARION GILCHRIST referred to the difficulties in the treatment of rheumatoid arthritis and the problem of individual resistance to such infections. Vigorous application of all measures calculated to raise the patient's general resistance was essential. In the prevention of deformities and limited function movement was important. Pain was a difficult symptom to treat, and in several instances she had found local x-ray treatment of much benefit in its relief. She wished particularly to emphasize the importance of treating the mental attitude of the patient.

Dr. G. H. CLARK had found that a dressing of methyl salicylate and carbolic oil with the application of heat gave in some cases a much better effect than heat alone. He had also obtained better results in some cases with the Greville bath than with ordinary radiant heat.

#### HEADACHE.

A DISCUSSION on headache took place at the meeting of the Hunterian Society on December 15th, 1924. Mr. H. W. CARSON presided.

Dr. C. O. HAWTHORNE, in opening the subject from the medical side, said that headache was a symptom which demanded a large exercise of care and judgement in the field of differential diagnosis. It existed as a clinical expression of numerous and varied pathological states, and it differed widely in different cases both in its degree and its significance. Nothing could be worse in practice than to regard the complaint of headache as an opportunity of prescribing one or other of the various remedies which had therapeutic value in this direction. To rest content with the temporary benefits which many of these remedies were able to afford might be to relieve the pain, but it would be essentially to neglect the patient. Among conditions of which headache might be an early or the earliest symptom, he mentioned chronic renal disease and also what was commonly spoken of as high blood pressure. He would suggest that the most prompt and efficacious remedial measure to apply in these cases was blood-letting, either by venesection or the application of leeches to the temple. Again, everyone would admit that headache might be the sole symptom of tumour of the brain. He urged that every patient with headache should be examined by the ophthalmoscope for changes in the fundus oculi. This examination should be repeated at frequent intervals to secure diagnostic safety. He believed the ophthalmoscope to be a necessary part of the equipment for every clinical examination. There were other intracranial changes which might be manifested by headache, prominent among them the various forms of intracranial syphilis, and again of meningitis. In each of these conditions there were other symptoms, but headache

might be early and predominating. It was therefore necessary to stress another method of examination—that of lumbar puncture and examination of the cerebro-spinal fluid. In obstinate and severe headache for which no obvious explanation could be obtained it was just as necessary to examine the cerebro-spinal fluid as to examine the fundus oculi. As local causes of headache—occurring, he admitted, rarely, but not to be neglected—he mentioned suppuration in the intranasal sinus, and tabes dorsalis. He then went on to speak of eye-strain as one of the causes of headache. Whether migraine was always due to ocular defects, and was capable of being cured by correction of those defects, he could not say, but no one having a patient suffering from migraine would think of leaving any refractive defect uncorrected. He wondered whether anyone had had the courage to treat an acute attack of migraine by lumbar puncture. It was certain that post-epileptic headache could be relieved by this method, and he would like to see what would happen if the puncture were made at the earliest possible moment in migraine. There still remained headaches for which an explanation had to be found, some of them due to anaemia, some to calcium defect. Another group was associated with gastro-intestinal disturbances. The headache due to bad temper had to be reckoned with, and also the “diplomatic” headache, which was of such great value both in politics and society.

Mr. WILFRED TROTTER spoke on the surgical aspect. There were certain varieties of pain in the head which could by a little inquiry be dismissed from the category of headache. In the headache complained of by the neurotic patient there was a quality which placed it apart; the patient, if questioned, would say that it was not pain but a queer and indescribable sensation. In another class of headache the sensation was like that produced in characteristic trigeminal neuralgia—bouts of pain of agonizing intensity, which the patient invariably compared to puncture with a red-hot needle. A third group was the headache associated with disease of the nasal sinuses. One of the characteristics of the pain under these conditions was its liability to come on at the same time on successive days. Then there was headache associated with definite cranial abnormality, the characteristic of which was severe pain more often in the anterior part of the head than the posterior, particularly behind the eyes, of a throbbing character, and intensified by anything which stimulated the circulation or altered the intracranial tension. Finally there were headaches in connexion with injury to the head. A patient who had received a severe injury to the head was particularly liable to develop severe and disabling headaches, brought on by slight mental anxiety, bright lights, or loud noises. In this headache one must not expect to get any neurological signs whatever. All the signs that Dr. Hawthorne had mentioned would probably be negative. The characteristic feature was the clinical aspect of the case. With regard to the surgical treatment of these cases, it was only necessary to realize that they were due to the bruising of the brain, which was the only organ of the body to have any serious difficulty in recovering from a simple bruise. The one great means of relief was rest in bed, and afterwards, on any sign of relapse or recurrence, the patient should be sent back to bed again. If the headache was persistent and recurrent a simple decompression operation would bring it to an end.

Dr. BERNARD HART dealt with the psychological aspects of headache. He referred to the surprising variability in localization and quality of the headaches in the psychoneuroses. There was no question that a great many conditions which these patients described as headache were not headache in the real sense of the word, but it was necessary to distinguish three types—actual pain headaches, paraesthesia, and the type of headache which denoted not so much pain as great mental disturbance, or, as the patient sometimes expressed it, the feeling that he was standing on his head. A certain number of headaches which occurred in neurasthenic conditions were produced by a mechanism identical with that which produced ordinary headaches, save that the initial link in the chain of causation was a psychological factor. Other headaches, however, might be produced entirely psychogenetically. Of these the first subgroup

would be those produced by suggestion. When patients described themselves as suffering from “helmet” and other classical headaches it might be taken for granted that they had been assiduously studying the literature of the subject. There was also “preoccupation headache,” cases in which at one time a general headache occurred which had subsequently become the subject of a psychological preoccupation. Another form was the “projection of incapacity headache,” in which the patient, suffering from the typical disability of many neurasthenics, projected his feeling of incapacity into his head, and expressed it as a headache. These distinctions were of practical importance if treatment was to be reasonably founded.

Dr. FIELDEN BRIGGS discussed the dental aspects of the question. He mentioned that the late Sir Lauder Brunton never approached a case of headache without first examining the teeth. Headaches caused by the teeth came under two heads—reflex and toxic. Sir J. DUNDAS-GRANT, while supporting Dr. Hawthorne's view as to the necessity of ophthalmoscopic examination, thought that Dr. Hawthorne had rather underrated the difficulties of the practitioner who was not specially skilled in this form of examination in interpreting properly what he saw. Dr. SYMONDS spoke of headaches due to neuritis of the scalp and—a much rarer cause—disease of the cranium. The former was usually distinguishable from other headaches by the hyperaesthesia of the scalp. Mr. PHILIP FRANKLIN said that most of the headaches which they met with in practice were not really very serious, and those which were serious had usually other symptoms associated with them which gave a clue. The nose specialist had frequently to observe post-operative headaches. Interference with the bone of the nose was a very important factor in causation. Dr. W. H. KELSON advocated the use of the post-nasal mirror in dealing with headaches arising possibly from nasal trouble. Dr. F. HOWARD HUMPHRIS said that high blood pressure and low blood pressure headache were both amenable to electrical treatment. Migraine was amenable to diathermy, and calcium deficiency headache to artificial sunlight.

Dr. HAWTHORNE replied on the matter of the ophthalmoscope. He granted that interpretation was difficult, but observation must necessarily precede interpretation, and the persons who accustomed themselves to regular observation were the persons, after all, who would make themselves expert in interpretation.

#### MULTIPLE POLYPOSIS OF THE COLON.

At a meeting of the Surgical Section of the Royal Academy of Medicine in Ireland, held on December 12th, 1924, Mr. R. C. B. MAUNSELL in the chair, Sir WILLIAM I. DE COURCY WHEELER read a paper on a case of multiple polyposis of the colon, the specimen and lantern slides of it being shown by Dr. O'FARRELL.

Sir William Wheeler referred to the literature on the subject which connected the condition with chronic ulcerative colitis. The ulcerative process was of such a character that portions of the mucosa and submucosa adjacent to the primary arterial branches were preserved, and these portions remained as ragged tags scattered over the surface of the colon. In a later stage of the disease the orifices of certain of the tubules between the polypi became occluded and retention cysts were formed, which gave rise to the name—colitis polyposa cystica. He thought that the distinction made between adenomata, papillomata, and true polypi in the class of case under review was unnecessary; one condition was probably only a stage in the development of the other. Multiple polypi in the stomach were not very rare, and they were not infrequently found in the caecum and the rectum. A few isolated cases of polypi of the small intestine had been described, and all authorities were agreed that multiple polyposis of the colon was potentially extremely malignant.

The patient in this case was a woman, aged 26, who had been admitted to hospital with a long history of constipation, followed more recently by diarrhoea with the passage of blood and pus. Her temperature ranged from 99° to 101° F. A tumour was detected in the line of the descending colon, and hyperirritability and hypermotility of the colon were observed by the radiologist. When the abdomen was opened in the first instance, the wall of the colon from the caecum to the pelvic colon was found to be rigid, infiltrated, and hyperaemic: it gave the impression that if it were bent

unduly it would break. The condition of the colon recalled the condition found in cases of "leather-bottle" stomach: septic inflammation of the mucous membrane was found. A short circuit between the ileum and the rectum was made, and the operation completed by an appendicostomy. Six months later she was again admitted to hospital: she had been free from haemorrhage for four months, but it had then recurred and the tumour could still be felt. The abdomen was again opened and the entire colon removed to the line of the original anastomosis; a tube was passed through the rectum into the small intestine. The patient died on the third day, apparently from peritonitis, but an autopsy was refused. An hour before death there was copious drainage through the tube, with a cessation of vomiting, but this appeared to come just too late for recovery in a case which was a bad surgical risk. The colon weighed 2½ lb., and was covered with myriads of polypi from the caecum to the pelvic colon. The caecum itself was free from polypi, as was the pelvic colon, which was thought to be an unusual line of demarcation.

Mr. MACAULEY referred to the help obtained in these cases by means of a barium enema. He had recently had a patient, a woman aged about 53, who complained of bleeding from the rectum; he had suspected malignant disease. The bleeding was too severe to make a satisfactory sigmoidoscope examination, and no information was obtained from a rectal examination. A barium enema was given, and the radiologist reported that the signs were characteristic of colitis, evidence of obstruction being absent. At operation the wall of the colon felt indurated, friable, and stiff, as described by Sir W. Wheeler. The abdomen was then closed, and the patient had since reported herself as doing well.

The PRESIDENT and Mr. A. CHANCE joined in the discussion.

#### *Perthes's Disease.*

Mr. H. F. MACAULEY read a paper on Perthes's disease, and showed lantern slides. He demonstrated the radiographic appearances of the upper femoral epiphysis, and showed the persistent progress of this disease, even under prolonged treatment by immobilization and traction. In some cases there was a very definite traumatic history; in others there had been a spontaneous onset, attributable to bacterial or toxic causes. He then discussed briefly the symptoms of the disease in the acute phase, when it was likely to be mistaken for tuberculosis of the hip, and in the latter quiescent stage. The remainder of the paper was mainly concerned with a discussion of the prevalent views on the etiology of the condition, with particular reference to Jansen's theory. Mr. MacAuley believed all the theories were partly true, some applying to some cases and others to the remainder; he did not believe any one theory accounted for all the cases of this malady, which might be due to very different causes. He endeavoured to show how the theories could be corrected, and how trauma, infection, and want of joint balance could all be used to explain the epiphyseal changes. Regarding treatment, he advised immobilization and traction with the limb abducted during the acute phase, and the subsequent use of a walking calliper until the fragments became reunited, which would be about one year later. Though he believed treatment was without effect on the evolution of the epiphyseal changes, he thought it prevented prolongation of the acute stage, and possibly subsequent abduction deformity.

Mr. H. STOKES referred to a case of Perthes's disease, associated with Schlatter's and Köhler's diseases, and he believed that this condition suggested a nutritional cause. Dr. T. J. D. LANE thought it possible that there was some connexion between Perthes's and Köhler's diseases. The condition was, radiologically, very similar, and the prognosis in both diseases was the same—namely, the condition generally healed up with or without treatment. Dr. T. T. O'FARRELL said that it was a matter of great importance in connexion with child hygiene to know what symptoms of Perthes's disease should be looked for first, also to know what could be done by way of prevention. He did not think that the disease could be due to injury. Dr. P. DE BURGH thought that a bacteriological examination of the urine should be made as a routine measure, since it would thus be possible to find out whether the child was suffering from bacterial poisoning or not. He also suggested a complete investigation of the endocrine secretions. Dr. W. STEVENSON believed the deformity of the head of the bone in these cases was caused by the pressure of the muscles, and he thought that, in addition to rest in bed and weight bearing, traction might lessen the fragmentation.

## DISEASES OF ADOLESCENCE.

A MEETING of the Chelsea Clinical Society was held on December 16th, 1924, Dr. GORDON LANE in the chair.

Dr. THEODORE THOMPSON discussed the subject of disease in adolescence, and drew attention to the mental, bodily, and sexual changes which occurred at this period of life. The chief mental abnormalities were epilepsy and hysteria, and he also mentioned dementia praecox. On the physical side he also drew attention to the influence of heredity, climate, and the surrounding temperature. He gave an interesting account of the supposed functions of the ductless glands. With reference to the questions of vice and masturbation, he insisted on the duty of parents and schoolmasters to deal boldly with them. As regards actual disease Dr. Thompson remarked that growing organs were apparently more liable to disease than parts which were not growing. He instanced the effect of rheumatism upon the growing heart, and the incidence of phthisis upon the developing areas of the lungs.

Mr. IVOR BACK emphasized the surgical aspect of disease in the adolescent. He believed that much surgical tuberculosis was bovine in origin, and stated that the cows in one European country were all tuberculous. Tuberculous lymphatic glands in the neck were always more numerous than could actually be felt, and he advocated their treatment by artificial sunlight. He thought that it was dangerous to attempt the surgical removal of tuberculous mesenteric glands. He also laid stress upon the hopelessness of trying to remove sarcoma of bones even by amputation.

Dr. CREWDSON THOMAS believed the path of infection of tuberculous cervical glands lay through the tonsils. Dr. ERIC PRITCHARD drew attention to the prevalence of sub-acute appendicitis and enteritis in adolescents, and to the good effect which ultra-violet rays had upon the general health at this period. Dr. ERNEST YOUNG, Mr. GAYMER JONES, and Mr. A. T. ROGERS spoke favourably of the results of sunlight and of deep x rays in the treatment of certain bone lesions. Dr. GORDON LANE referred to the hereditary tendencies which might be first manifested at the period under discussion. He was a firm believer in the treatment of malignant disease with radium and deep x rays.

## THE PATHOLOGY OF DISEASE OF THE THYROID.

At a meeting of the Liverpool Medical Institution on December 18th, 1924, Dr. G. SCOTT WILLIAMSON discussed the pathological basis of symptoms in thyroid disease.

Dr. Williamson first described the new conception of the anatomy of the thyroid apparatus, and then proceeded to detail the two cycles of function, colloid storage and true secretion. The process of the storage of colloid was discussed in detail, and the typical disorders affecting this function were considered. The most significant fact in this connexion was the existence of two distinct types of endemic goitre, of which the vesicular goitre alone represented a pure disturbance of the "colloid" function. This goitre occurred as a sporadic affection, and it was noted that in the sporadic variety thirty-two out of thirty-eight cases occurred in males at puberty. McCarrison was cited as having succeeded in producing this form of goitre by overfeeding with calcium. This was contrasted with the results of iodine and protein experiments, which resulted in a true hypertrophic enlargement. Attention was called to the necessity of further study being given to the endemic goitres before adopting a wholesale treatment in goitrous zones. A therapeutic suggestion was that calcium medication might be used to supplement iodine treatment in dealing with goitres. Secretory disturbances were shown to have a very clear-cut histopathology. The so-called hyperthyroidisms were disturbances of the secretory function, and were essentially dystrophic states. Thus in this connexion two types of dysthyroidism arose—Graves's disease at one extreme, and myxoedema at the other, or alternating with each other. Graves's disease was shown to arise as a primary condition with a definite histopathology, of which the additional factor was

A-colloidism. Secondary Graves's disease usually presented an intoxication symptom first, which was followed by an exophthalmic train of symptoms. Though the gland in secondary Graves's disease contained colloid, the colloid was ineffective in that it was encysted. Toxic goitre, so called, was a simple dysthyroidism and had the same basic pathology as secondary Graves's disease, except that the colloid was still circulating while secretory activity in some areas was producing stored secretion which was viciously absorbed. Clinically the disturbance was best brought out in the history, and if Plummer's therapeutic iodine test was applied; primary Graves's disease was peculiar in manifesting a need for iodine, whereas simple dysthyroidism (toxic goitre) and secondary Graves's disease were made worse by this administration. This distinction was demanded by the histopathology of the condition. Myxoedema was shown to have a very definite histopathology. It was clearly not a simple atrophy, but a disease *sui generis*, and essentially a dysthyroidism of a distinct order. Perhaps the insufficiency of thyroid medication in myxoedema might be explained in this way. Dr. Scott Williamson emphasized the need of remembering that each individual was a law unto himself as to the amount of thyroid activity needed by his physiology. Such goitres as those occurring during puberty, menstruation, and pregnancy were not to be looked on as pathological, since they all exhibited only a simple hypertrophy. Disease also gave rise to hypertrophy, and of the greatest importance was the hypertrophy associated with status lymphaticus. This association accounted for nearly all the sudden deaths in goitre. Since secondary Graves's disease or simple dysthyroidism arose as a sequel of hypertrophy, it became necessary for the surgeon to exclude carefully status lymphaticus in all cases of goitre, no matter what were the train of symptoms; this was emphatically necessary up to the age of 25 years in men and women. Primary Graves's disease was shown to have a peculiar thymus condition, differing from that of status lymphaticus.

Dr. A. C. WILSON was not satisfied that surgery was the only remedy for exophthalmic goitre. For twelve years he had used *B. coli* vaccines in shock doses with good results; he had treated eighteen cases of exophthalmic goitre, including two or three desperate cases, with success. In his experience the vaccine had not the same value in simple goitre. Two recent cases were of interest: a lady with exophthalmic goitre who had tried several other treatments, including x rays, was cured by six injections, and in twelve months gained two stone in weight. A spaniel dog with a simple goitre the size of a lemon was cured by two injections, all signs clearing up in eight weeks. The dose of *B. coli* used was 500 million.

Dr. N. B. CAPON described three cases of congenital goitre in newly born infants. Severe dyspnoea was a prominent symptom in two of the cases.

Professor BLAIR BELL said that his own interest in the thyroid had been both philosophical and practical. His experimental work had shown that the thyroid, in association with the rest of the hormonopoietic system, was directly related, not only with the individual metabolism, but also with the reproductive. He laid stress on the necessity of a considerable knowledge of comparative anatomy and physiology in interpreting the nature, variations, and disorders of organs of internal secretion. He referred to the fact that removal of the thyroid-parathyroid apparatus in the cat caused death within forty-eight hours, unless the animal was pregnant and the thyroid of the foetus was so far developed that secretion was generated and passed into the circulation of the mother, in which circumstances she remained well until after parturition, when she died. This was comparable with the improvement seen in hypothyroidic patients during pregnancy. Reference was also made to the evolutionary aspect of the disease as demonstrated by the normal condition of exophthalmos in association with epithelial hyperplasia, as seen in Graves's disease, which he had described in the lemur, and the phenomena of acromegaly which were seen normally in the higher apes, as suggested by Keith. Professor Blair Bell believed that the hypertrophy of the thyroid to which Dr. Williamson referred was not quantitative but qualitative. In the rabbit, ordinarily there was but little colloid secretion, but during pregnancy there was often an enormous quantity.

### POST-ENCEPHALITIC PARALYSIS AGITANS.

A MEETING of the Devon and Exeter Medico-Chirurgical Society was held on December 18th, 1924, the President, Dr. VINCENT SMITH, being in the chair.

Dr. WILLIAM GORDON read notes on two cases of post-encephalitic paralysis agitans. The first patient, a boy aged 15½, had been seen in association with Dr. Foulkes. The initial symptoms had been characterized by fidgeting, with bouts of sleepiness, and the resulting effects were hemiplegia of the left side of a mild degree—as regards loss of power in the limbs—and with very slight paresis of the facial muscles. Nystagmus had been noted occasionally. At the present time, in addition to the hemiplegic signs, the facies, attitude, and tremors of paralysis agitans had developed, the typical position of the arms when at rest and the "cigarette-rolling" movements of thumb and index finger being also noted during observation in hospital. The second case was that of a man, aged 34, in whom there was mental cloudiness, fixed expression, rigidity, and the general attitude of Parkinson's disease, without tremor. There was also a dry scaly condition of the skin. There were no abnormal reflexes, but there was slight weakness of one external rectus. The patient was unable to walk without support. There was a definite history of encephalitis some four and a half years ago; cerebral symptoms lasted about four weeks, and from that time onwards there had been progressive deterioration to the condition described above. Dr. Gordon discussed the treatment in these cases, with special reference to Steinach's operation, which did not appear to be applicable to either of the cases. On the other hand, he considered that there was every justification for Letter's treatment, which aimed at bringing about an artificial leucocytosis by means of local irritants applied externally, as, for instance, in the region of the hip. Dr. Gordon had faith also in the use of iodides with arsenic.

Dr. G. L. THORNTON recounted the case of a young man, now aged 29, in whom symptoms of paralysis agitans had showed themselves definitely some three years ago, and who had already reached the paralytic stage of the disease. This patient had served in the navy, and there was a history of a short illness in 1918, in which the cerebral symptoms at that time were not sufficiently pronounced to substantiate a diagnosis of encephalitis. Vague neurological manifestations followed, but were considered to be functional at the time of his discharge, and for a year subsequent to that date. It had been noted, however, that in spite of his complaint of weakness in the legs, he was able to jump over low obstacles and to run upstairs, which was, of course, easily explained in the light of the now clearly established diagnosis. The interest of the case lay in the contrast between it and those shown by Dr. Gordon, in that, although without doubt a sequela of encephalitis, the Parkinsonian syndrome was uncomplicated, whereby it might be assumed that the original lesion had been confined strictly to the tracts now associated with paralysis agitans.

Dr. F. A. ROPER discussed the question of the apparent interval which elapsed between encephalitis and the onset of paralysis agitans, mentioning the case of a woman who had seemed free from symptoms for one year after an attack of encephalitis lethargica. Dr. G. P. HAWKER warned the meeting not to be deceived by a spurious nystagmus in cases where the ocular muscles might easily show fatigue.

#### *Tuberculosis following Injury.*

Mr. R. WAYLAND SMITH showed a youth with a tuberculous lesion of the forehead which had occurred on the site of an abrasion set up by a piece of falling timber. The original wound failed to heal, and tubercle bacilli had been found locally. The family history was healthy and the previous health excellent. The case was one of great medico-legal interest.

Mr. DYBALL mentioned two similar instances: (1) In a butcher who had received an abrasion of a finger when cutting up an ox, and subsequently developed tuberculosis of the finger and forearm. The disease became generalized and proved fatal. (2) In a servant girl in whom tubercle occurred on the site of a scald which, although of the second degree, had remained unhealed for three months, sinuses recurring, as in the case shown by Mr. Wayland Smith.