

to the ordinary phenomena of Raynaud's disease but in addition she had three attacks of aphasia with partial right hemiplegia occurring with the attacks of Raynaud's disease and one of left-sided weakness. These were transient and in each case followed by perfect recovery. That the retinal artery may be narrowed with impairment of vision is also known to occur in Raynaud's disease. Such phenomena strongly favour the view that the cerebral arteries, like those in other situations, are subject to variations in their calibre. It is very interesting, moreover, to note that Raynaud's disease is apt to be associated with epileptic fits and, indeed, Monro¹⁰ states that 5 per cent. of cases of Raynaud's disease have suffered from convulsions at some time or other and several very striking cases of the association are on record. Thomas and Osler¹¹ record the case of a man whose attacks of Raynaud's disease were associated with severe epileptic attacks. The sequence of events was as follows. Firstly, the fingers became cold, white and dead, and the nails blue, associated with considerable pain. Then followed general chilliness with cold feet. These premonitory symptoms lasted for five minutes and were succeeded by unconsciousness and convulsions lasting for half an hour. In this case there was, firstly, the arterial spasm leading to the local syncope of the fingers; and secondly, general chilliness probably to be attributed to a general cutaneous vaso-constriction. The resulting rise of blood pressure on Hare's hypothesis would be the factor determining the vagus inhibition of the heart. The convulsions might also be explained by a vaso-constriction affecting the cerebral vessels, the occurrence of which in cases of Raynaud's disease has been suggested above. Other cases illustrating the association of epilepsy and Raynaud's disease are also on record. Harvey Cushing¹² notes that, "contrary to the positive statements of many, substances like epinephrin will blanch the pial vessels over the area of its application, as will occasionally a jet of cold water against the brain or the faradic current used for cortical stimulation."

This short paper has been written to point out that cardiac arrest does occur in some cases of epilepsy and to suggest that such arrest may be far commoner than is suspected. If observations were made on the pulse at the onset of fits by those whose work brings them into contact with epileptic patients in considerable numbers it would soon be established whether such cardiac arrest be of occasional or of frequent occurrence. Sudden cerebral anæmia due to cardiac inhibition (or to cerebral vaso-motor spasm) would account for most of the symptoms of an epileptic fit and it is suggested that the recovery from the fits finds adequate explanation in the well-known physiological fact—the vagus escape of the heart. Certain morbid changes have been described in the brains of epileptics but it is at least possible that they may be secondary to the repeated attacks of transient cerebral anæmia which must follow cardiac arrest and to the extreme congestion of the brain that the convulsive movements give rise to. Even if cardiac arrest can be proved to have no etiological influence in the mechanism of an attack it is worthy of study and is a symptom of great clinical importance, but it would be singular if a condition which in itself is competent to produce an epileptic fit were merely a side issue in the course of an attack.

Wimpole-street, W.

¹⁰ Raynaud's Disease, 1899, p. 151.

¹¹ A Case of Raynaud's Disease associated with Convulsions and Hæmoglobinuria, Johns Hopkins Hospital Reports, 1891, p. 114.

¹² Some Experimental and Clinical Observations concerning States of Increased Intracranial Tension, American Journal of Medical Sciences, 1902, p. 400.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.—The following scholarships, medals, and prizes have been awarded at St. Bartholomew's Medical School: The Lawrence scholarship and gold medal in medicine, surgery, and midwifery (value £45) to G. C. E. Simpson. The Brackenbury scholarship in medicine (value £39) to P. L. Giuseppe and J. K. Willis (equal). The Brackenbury scholarship in surgery (value £39) to R. H. Bott. The Matthews Duncan prize in midwifery to D. W. Hume. The Burrows prize in pathology to P. L. Giuseppe. The Skynner prize in morbid anatomy in reference to scarlet and rheumatic fevers to E. E. Cockayne. The Willett medal for operative surgery to J. C. Mead. The Wix prize for an essay on the Life and Works of Sir William Savory to K. Macfarlane Walker. The Shuter scholarship in anatomy and physiology (value £50) to H. T. H. Butt of Christ's College, Cambridge

NOTES OF TWO CASES OF AMPUTATION OF THE SHOULDER-GIRDLE.¹

BY J. CRAWFORD RENTON, M.D. EDIN.,
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CASE 1—The patient, a man, aged 40 years, was sent to me by Dr. A. N. Montgomery and was admitted to the Western Infirmary in December, 1900, suffering from an ulcer over the right forearm. There was a history of syphilis and the patient stated that he had had a nodule on the arm for 14 years. A portion of the ulcer was removed and was found on examination by Dr. A. R. Ferguson to be an epithelioma. His arm was amputated in the middle of the upper arm. In April, 1903, the disease recurred in the stump. The rest of the arm was disarticulated at the shoulder-joint and the growth was then found to look like a spindle-celled sarcoma, which is a point of considerable interest and which will be referred to later. On Feb. 10th, 1906, the patient returned with a recurrence, the whole stump and axilla being occupied by a very large tumour. Removal of the tumour was recommended and on the 19th the clavicle was divided at its inner third, the subclavian artery and vein were tied, and the tumour along with the scapula and two-thirds of the clavicle and an additional growth on the side of the chest were removed. By adopting this method, recommended by Berger, there was practically almost no bleeding, a few intercostal branches being easily secured as they were divided. The patient suffered from very little shock and made an excellent recovery. Stereoscopic photographs showed the condition previously to, and after, operation, as also the appearance of the patient with an artificial arm applied.

Report by Dr. M. LOGAN TAYLOR.—On dissection of the stump, which was removed along with the scapula and the outer half of the clavicle, a large tumour mass is found occupying the original position of the head of the humerus and extending down the axillary border of the scapula to its inferior angle. In this tumour mass are involved practically all the muscles about the shoulder-joint, the deltoid especially being inseparable from it. The cut ends of the axillary vessels and of the brachial plexus of nerves run right into the centre of the growth. Microscopical examination of this second recurrence shows it to be a carcinoma. At first sight it has not got just the typical appearance of a squamous-celled epithelioma, but closer examination of the tumour cells shows them to be undoubtedly epithelial cells of the squamous type. The stroma is very well developed; alveoli are numerous and are filled with epithelial cells which in many instances are undergoing mucoid degeneration.

The primary growth was reported by Dr. Ferguson as being a squamous epithelioma, the first recurrence by Dr. J. H. Teacher (April, 1903) as being a spindle-celled sarcoma, though he was aware at the time of the primary growth being a cancer, and now this second recurrence turns out to be epithelioma. Unfortunately the sections of the previous growths have not been kept, so it is impossible to refer to them now. Dr. Teacher thinks that the first recurrence may have been a cancer after all but closely simulating a sarcoma.

CASE 2—The patient, a woman, aged 60 years, was sent to me by Dr. M. T. Mackenzie of Scolpaig and was admitted to the Western Infirmary on Feb. 23rd, 1906. Two years ago she had hysterectomy performed for uterine fibroid by Professor Murdoch Cameron. She now suffered from a large tumour involving the upper part of the right humerus which was broken. The circumference of the arm was 14½ inches, as compared with 12 inches on the opposite side. The tumour had extended so much into the axilla and had pushed up the supraclavicular space that anything short of a shoulder girdle amputation was impossible. This was carried out exactly as is above described. There was very little shock and the patient went home on March 19th.

Report by Dr. TAYLOR.—The growth in the humerus is a large one, measuring 6 × 3½ × 3 inches. It extends from the anatomical neck of the humerus to the middle of the shaft. It is now impossible to say whether it has been originally a

¹ A paper read before the Glasgow Pathological and Clinical Society.

central or a periosteal growth for the tumour has completely replaced the shaft in the part affected. The articular surface of the head of the bone is seen at the upper end of the tumour but it is comparatively loose and could be easily torn away from the growth. The distal half of the humerus after removal of all the muscles was found to be attached to the lower end of the growth quite loosely by some tumour tissue. The muscles about the shoulder were adherent to the growth but were involved to a slight degree only. Microscopical examination shows the growth to be a sarcoma of the mixed-cell type, the majority of the cells being small round ones; the others are short spindles.

Remarks.—The two cases above described were operated on within ten days of each other and they illustrate the great value of Berger's amputation. By carrying out his method the mortality is practically the same as amputation at the shoulder-joint, which is extremely small. There was no special difficulty with either operation except in the woman, where it was a little more troublesome to expose the subclavian artery and vein owing to her stoutness and the size of the tumour. I have great pleasure in strongly recommending the operation.

Glasgow.

THE OPERATIVE TREATMENT OF LARYNGEAL PAPILOMATA IN CHILDREN.

BY D. R. PATERSON, M.D. EDIN.,

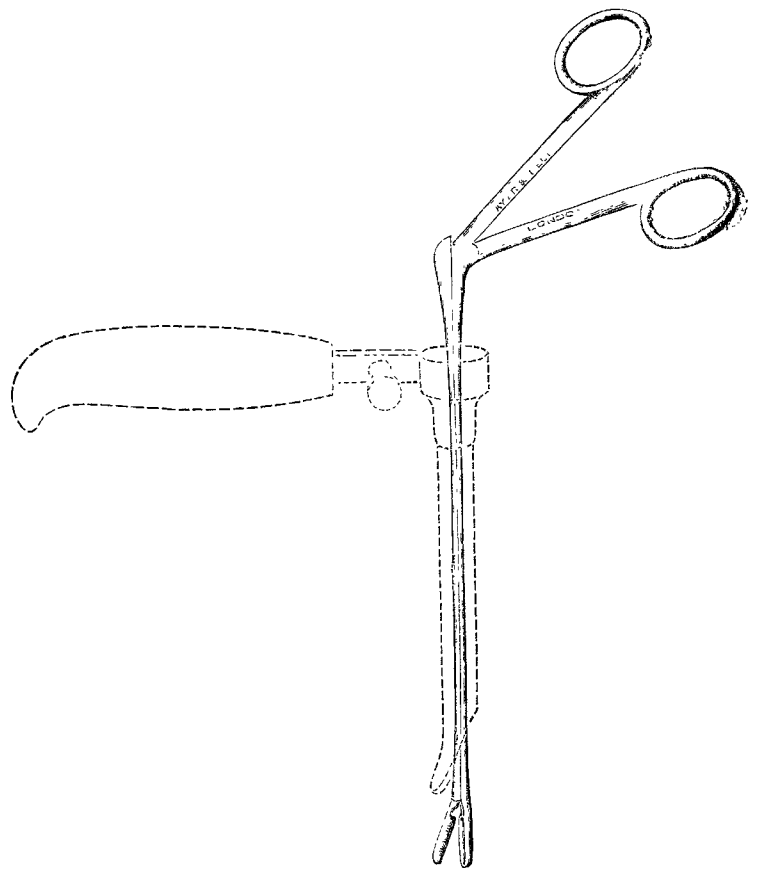
SURGEON TO THE EAR, NOSE, AND THROAT DEPARTMENT, CARDIFF INFIRMARY.

THE frequency with which papers appear upon this subject is an indication of the difficulties which surround it and of the unsatisfactory nature of the results. Its importance, however, should not be underestimated as the frequent recurrence of these growths, even after what appears to be complete removal, is a constant menace to the life of the child. Of the three methods of treatment generally practised the operation of thyrotomy has been advocated on the ground that it permits of a more thorough clearance of the larynx. It exposes the parts completely and enables the operator to curette away all the affected tissue. Many objections have, however, been urged against it. Apart from the ordinary risks incidental to external cutting operations on the air passages, which are by no means insignificant, injury to the voice has resulted in not a few instances. Moreover, it does not guard against recurrence, however completely it may be done, and repetition of the operation may be necessary. Many cases are recorded of recurrence after thyrotomy and in one instance this operation was performed on a child as many as 17 times within two years.

Another mode of treatment—the performance of tracheotomy—is often a matter of urgency. Some authorities advise postponing any operation until the patient is older, unless, of course, obstruction of breathing supervenes. Insertion of a cannula in the trachea insures rest to the glottis for a prolonged period and has been followed by good results in many cases. It is necessary, however, to retain the tube for a considerable time, from 18 months to two years, and this cannot be regarded as a measure without some risk. I have on one occasion seen disappearance of the papillomata after a tube had been worn for that period but in others it had to be supplemented by the third or endolaryngeal method. This procedure, which is the one usually adopted by laryngologists, is an attempt to remove the growths by the natural passages. In order to control it, the use of the laryngoscope is necessary but the difficulties with this instrument in young children are so great that it is sometimes impossible even to get a satisfactory view of the larynx. For some years I used this method in the manner generally adopted, with the child under a general anæsthetic combined with local anæsthesia. The little patient, placed sitting in the nurse's lap, has chloroform administered in that position. Several assistants are required. A solution of cocaine brushed on the pharynx and larynx enables the instruments to be used without exciting reflex action, but great difficulty is experienced in keeping the part free from the copious secretion of mucus. I generally employed Mackenzie's spoon-blade forceps and for the smaller pieces Schroeter's instrument which could be moulded to fit into recesses.

This procedure is of course very difficult to carry out in young children and in many cases it is impossible to thoroughly clear the larynx. Still, in a few cases excellent results were obtained, but the difficulty of clearing the anterior commissure and subglottic space is so great that recurrence is frequent and the operation has to be repeated. Some operators abandon the laryngoscope and are content to be guided solely by the sense of touch. Here the patient is placed on the back on a table under a general anæsthetic, but even with guarded instruments this procedure is not without risk of damaging the larynx. I have several times adopted it but have rarely succeeded in effecting a good clearance. Though these difficulties stand in the way of the general adoption of the endolaryngeal method there is no question that it should be tried in the first instance as it involves less risk to life and to the voice. This can be more strongly urged at the present time as the drawbacks I have enumerated are almost entirely got rid of by employing the direct method of examining the larynx. The ease with which the larynx can now be brought under inspection and the excellent view of the field of operation which may be obtained have much simplified endolaryngeal procedure and rendered it more effective. The advantages of this method are great and it is the purpose of this short paper to draw attention to them as illustrated by my own experience.

The introduction in 1895 by Kirstein of the autoscope marked a real advance in the direct examination of the larynx. His "universal spatula" I found very serviceable for inspection of the larynx though the amount of pressure that had to be exerted in order to depress the tongue made it in certain cases difficult to manipulate. To overcome this



Killian employed a tube spatula and this improvement has greatly simplified the procedure and rendered it easier to carry out.

The instruments required for the removal of papillomata by the direct method are a fish-tail tube spatula with handle attached and a straight forceps. The best form of illumination is the Kirstein electric head lamp which has very good illuminating power. The operating table should be of sufficient height to enable the operator when seated on a low chair to work conveniently. If the table be too low he has to assume a cramped uncomfortable position in which the light is uncertain and the instruments are difficult to manage with ease and precision. The patient should be placed on the back with the head hanging over the end of the table and a low pillow under the shoulders. Chloroform is the most suitable anæsthetic to administer and full anæsthesia can be easily kept up from a Junker's inhaler with the mouth-tube hooked round the angle of the mouth. The