It seems almost impossible to define clearly the period of onset of latak. In nature it is essentially chronic, so that, without tragic complications it may last for many years. When the typical symptoms of the fit are developed there is no difficulty in recognising the disease. Those who are affected always present the curious exhibition of creatures who are unnaturally susceptible to the influence of subjective suggestion. There are at least two remarkable characteristics—(1) the induction of an attack by means of a sudden surprise, a startling appeal, or a direct command, and (2) the sequel of an extraordinary servile imitation of that which may appear indicated. In women an involuntary use of indecorous language is often a primary symptom of their temporary loss of volition. The provocation, whether accidental or wilful, physical or by word of mouth, must be sudden. It appears to be the effect of shock which finally overbears the balance of an unstable nervous system.

It would be difficult to classify the varieties of latak; variation in degree must obviously occur. In different individuals there may be a variation in mental tone during the attack and a greater or less degree of incapacity following its decline. Often at the close of an exhibition the patient, as if overcome by excitement or tremulous ecstasy, falls into a swoon. On recovery he is quite well, and is able to follow his occupation like any ordinary person. It seems that, for the time being, an advanced case of latak might be completely in the hands of an unprincipled operator. Then, on the impulse of the moment, any unreasonable act might unconsciously, as it were, be performed. Examples in which latak has been shown to play any part in the production of a crime are however, I believe, happily unknown. Although it may be generally evident that the power of self-control is absent, yet that this depends upon a definite and recognised disease may be far more difficult to prove. The medico-legal aspect of latak might consequently be of great importance. From the more or less constant grouping of symptoms it is evidently a distinct disease. It ought, therefore, to depend upon the abnormal condition of one or more organs. There can be no doubt that the mind is affected, but it is difficult to say whether this is the sole cause of the disease. There is no reason to suppose that it, any more than the Malay amok, is a modern disease. An exact reproduction of the original form does not now probably exist. It would be therefore unreasonable to surmise that the enforced burden of a complex civilisation has caused its development. It does not seem to have been increased in any way by the influence of recent education of boys under Government direction. In fact it is less common among men than in Malay women, who, as a class, are still uneducated in a modern sense. The gradual removal of ignorant superstition by means of a lucid education may indeed prove to be the best prophylactic of the disease.

How far the influence of morbid impulse may go in causing both the state of latak and the blind passion of amok merits special attention. In both cases—self-control being lost for the time being—the attention is mainly occupied by a single idea—in the latak woman, by an uncontrollable desire to imitate, in which the servile portion of human nature is unconsciously displayed; in the amok man, by a reckless idea to persist in killing, in which the wild beast part of man comes uppermost.

Latak is necessarily paroxysmal in its manifestation. A gamut, if I may be allowed the expression, of such high-wrought feelings as surprise, amusement, vexation, indignation, rage, dismay, and furious frantic jealousy, which must have occurred in the case reported by Mr. Swettenham,⁴ could not remain long in the same tone. This element of intermission is of significance. It may be inferred from it that no structural change affects the nervous system, especially as the general health remains unaffected. There is no indication of a progressive lesion; it is never fatal. Self-hypnotisation is clearly depicted in the clinical picture. In the words of Mr. Ernest Hart, as applied to hypnotism,⁵ the latak person during her fit, is "but a marvellous and God-created machine abused and degraded by the abolition of intelligence and self-restraint." Anyone or anything can reduce her to this abnormal condition.

It would appear, then, to be an obscure psychical condition, having its pathogenic origin perchance with both

hysteria and hypnotism in a neurosis which lowers nerve force and brings about an abnormal reflex discharge of it. Bearing in mind, however, that the bias of the eccentricity inclines in one direction only, it might with amok be more practically viewed as a variety of monomania. At the same time, it is well to note that in the clinical cases there are no indications of degeneracy such as anatomical or physiological stigmata, unless the morbid emotional condition may be regarded as a physiological stigma.

The Malays themselves appear satisfied with the simple knowledge that a person is latak. They do not look upon it as being an illness in any way, but in general magnanimously refrain from influencing the sufferers to any extent. They are, however, ready to excuse even the most extravagant demonstration. Any proposal to treat the patient in an asylum would be good-humouredly rejected.

The cure of latak in the individual seems to be impossible until a precise knowledge of its pathology is obtained and verified, if possible, by means of *post-mortem* examination. Up till now this disease has not been affected by any remedy. The extraordinary mimetic tendency of monkeys might perhaps by experiment be developed into a condition identical with latak, and so afford knowledge which would lead to its cure. The aim of general treatment would appear to be to promote the *mens sana in corpore sano* by keeping both digestion and strength as perfect as possible, and at the same time, in order to make the patient's life happier, to shelter him as much as possible from the sportive suggestions of casual bystanders. Displays of this kind for the purpose of amusement cannot be too strongly deprecated, for one cannot but suppose the march of this peculiar disease to be influenced by the number of fits induced, and to be fostered by a lack of moral control.

REFERENCES.

¹Bristowe, *Theory and Practice of Medicine*. ²*Journal of Mental Science*, 1896. ³*Die Krankheiten der warmen Länder*. ⁴F. A. Swettenham, *Malay Sketches*. ⁵*Ecstasy*. ⁶*La Géographie Médicale*. ⁷Described in Quain's *Dictionary of Medicine*. ⁸*Hypnotism, Mesmerism, and the New Witchcraft*.

EXCISION OF SCAPULA FOR SARCOMA IN THE INFRASPINATUS MUSCLE, OCCURRING IN A GIRL AGED 8 YEARS: RECOVERY WITH USEFUL LIMB.

By GEORGE HENRY EDINGTON, M.D., C.M.GLASG.,
M.R.C.S.ENG.,

Surgeon to the Glasgow Central Dispensary; late Senior Demonstrator of Anatomy, Anderson's College Medical School, Glasgow.

[With pathological note by L. R. SUTHERLAND, M.B., C.M.GLASG., Senior Assistant to the Professor of Pathology in the University of Glasgow, and Pathologist to the Royal Hospital for Sick Children Glasgow.]

I PUBLISH the following as a contribution to the already not inconsiderable literature of similar cases.

A. M., aged 8 years and 9 months, consulted me at the Central Dispensary on December 9th, 1896, with complaint of swelling at the back of the left shoulder, painful in certain positions of the arm.

The mother stated that four days previously the child, while playing with her brothers and sisters, got a "pull" on the left shoulder. On the following day some pain was complained of when at drill in school, being elicited when the hands were placed behind her with rotation inwards of the upper limb. The swelling was first observed this morning (December 9th, 1896), when the girl was stripped for washing, and she was brought to the dispensary on this account.

FAMILY HISTORY.

On the mother's side there have been thirteen deaths from consumption and other tuberculous affections. The father's side of the house is strong and healthy. Of present family two died young, one of "pleurisy" and the other of "tabes" (mesenterica). Some months ago the patient herself suffered from "inflammation of the lungs," followed by a cold from which she has but recently recovered.

CONDITION.

When seen on December 9th, 1896, the girl was pale and somewhat thin, but did not look as if unwell. On inspection an oval swelling, well marked, but somewhat diffuse and ill-defined at the margin was observed at the back of the left scapula in the lower half. This was fully the size of a duck's egg, and on palpation was found to be semifluctuant, and apparently lobulated. It was situated in the infraspinous fossa, but overlapped the axillary border of the bone, and while not definitely fixed to the underlying bone was not freely movable on it. On making passive movements the mass moved with the scapula. There was no tenderness on palpation, but she complained when the limb was rotated internally and the hand placed in the lumbar region, the discomfort being evidently caused by the infraspinatus being put on the stretch. A rapid examination of the lungs had a negative result, and the urine appeared normal, and was non-albuminous.

DIAGNOSIS AND TREATMENT.

The diagnosis rested between a tumour or an abscess under the aponeurosis over the infraspinatus muscle. The consistence, the lobulation, and the feeling as of a certain amount of connection with the bone pointed to a new growth. The tuberculous family history and the semifluctuant nature of the swelling pointed to the probability of one having to deal with a deep abscess. With a view to settle this she was put under chloroform at the dispensary on December 12th, 1896, by Dr. E. Arthur Gibson, when I punctured the swelling. This was followed by the escape of blood. A vertical incision over the middle of the mass showed it to be evidently a new formation of hard, grey, translucent material, situated under the fascia of the infraspinatus. The mass was scooped out as widely as possible with the finger, when it was found to be very brittle. This procedure was accompanied by some hæmorrhage. Between the cavity which remained and the bone there was a thin layer of muscle. The skin wound was closely stitched and dressings applied. The pieces of growth were submitted for pathological examination to Dr. L. R. Sutherland, and found by him to be sarcomatous (*vide infra*). It was determined, therefore, to remove the entire scapula, and this was done on December 27th, with the assistance of Drs. L. R. Sutherland and Wylie Nicol. The original incision being too near the middle line of the scapula to be of service in exposing the bone, a vertical cut was made from the acromial end of the clavicle to the lower angle of the scapula, and, at right angles from the upper third of this, a second extending to the vertebral border near the root of spine. The flaps of skin and subcutaneous tissue thus marked out were turned up and down, and the bone, with muscles attached, exposed. The original exploratory incision had united by first intention, and there was a slightly depressed line of union in the deep parts marking the site of the former operation.

The muscles were then divided in the following order: Trapezius and deltoid, those at the vertebral border, those inserted into the humerus, and those connected with the coracoid process. The latissimus dorsi was pushed down clear of the inferior angle of the bone. The hæmorrhage, which was at no time serious, was controlled by pressure forceps applied to the vessels immediately they were cut. The incisions were closely sutured, a drainage tube being inserted at the lower end of the vertical one, and cyanide dressings applied. At the close of the operation she was in a condition of great shock, but in the evening she had rallied and felt very well.

The subsequent course of the case was uneventful, and beyond some ulceration, with gaping of edges of wound here and there which took a little time to heal, the progress was quite satisfactory. The cicatrix from the first operation gave way and healed by granulation.

For some time after she was troubled with a cough, apparently the result of exposure at the time of the operation, but this ultimately left her, and she now (June, 1897) has no signs of any chest trouble. She has good use of the limb, but abduction and flexion of shoulder are limited.

There have been occasional complaints of tenderness in the scar, but these are no longer made. There appeared, however, a bluish, slightly swollen condition of skin between the parallel vertical incisions. This was thought to be due to the fact that it was in this neighbourhood that gaping of the skin

edges with ulceration had been most marked. At present-time this has disappeared.

Her mother states that of late the girl has been a little nervous and self-conscious. Also about a month ago she complained of some weakness of the back on running upstairs. No signs of disease were made out in the spine, and she is in pretty fair condition now, there being complaints of her punishing a younger brother.

PATHOLOGICAL NOTE BY DR. L. R. SUTHERLAND.

The left scapula with attached muscles is submitted for examination. Occupying the substance of the infraspinatus muscle is a mass of tumour tissue measuring roughly 4 cm. from above downwards, 3 cm. from side to side, and 1 cm. from before backwards. Its relations are readily made out in the vertical sections shown. The well-demarcated upper limit of the mass is 1.5 cm. below the lower edge of the spine of the scapula, the less clearly defined lower limit is about 4 cm. above the angle of the bone. It is separated from the periosteum by a layer of muscular tissue varying in thickness from 0.5 to 1 cm. About its middle it is seen to be continuous with the deep surface of the aponeurosis covering the infraspinatus muscle. There is no extension beyond the aponeurosis. The tissue of the tumour is moderately soft, and has a uniform whitish appearance. There is no evidence of hæmorrhage into the tumour substance except centrally, where a dark, brownish area is visible. This probably has resulted from the first operation. Immediately in front of the main tumour and abutting on the periosteum is a small well-defined nodule 4 mm. in diameter. Its tissue resembles that of the larger mass.

MICROSCOPIC EXAMINATION.

The growth is highly cellular, the cells being mainly of the spindle type. The size of the spindle varies within wide limits. In addition there are also round cells which in some parts of the growth form collections of considerable size. The striking feature of the section, however, is the presence of numbers of protoplasmic masses of very varied size and form. The majority of these masses show prominent nuclei scattered, often in large numbers, throughout. Some of the masses contain single nuclei, while in other cases nuclei are absent. These masses occur most abundantly at the peripheral portions of the growth. They are seen with difficulty in the small detached nodule mentioned. Under a high power their protoplasm shows a faint longitudinal fibrillation, and in a few instances indications of slight transverse markings are obtained.

REMARKS.

The growth is a sarcoma, which has probably originated from the deep surface of the aponeurosis covering the infraspinatus muscle, and has been in process of extension to the periosteum and bone. Histologically it may, perhaps, be best included in the category of the mixed-celled sarcomata, although, as mentioned, the spindle form of cell predominates. The large, often multinucleated, protoplasmic masses, some of which so closely resemble the giant cells seen in the "myeloid" sarcomata arising in, or in direct connection with bone, are possibly to be regarded as altered muscular tissue. At the growing edge of the mass there are evidences of fragmentation, occasionally by transverse cleavage, of the muscular bundles, and the muscle nuclei are increased in number.

REMARKS BY DR. EDINGTON.

One might have had some misgivings as to operating in consideration of the history of chest affection, both remote and recent, but the facts, mentioned above, which introduced the possibility of the swelling being tuberculous, led me to the view that the lung condition was probably not related to the sarcomatous tumour.

After the first operation (exploratory) she had catarrhal symptoms in the chest, and these were worse after the second, but they seem to have arisen from her susceptibility to cold. The complaint of "weakness in the spine," which was made some four months after the operation, was suggestive of affection of the vertebræ, but on examination there was no pain complained of on pressure applied to the spinal column, directly or by percussion of the skull, and it was probably due to muscular weakness.

As regards the incisions, access was attained to the axillary border of the bone very easily, and if it had been necessary the axilla could have been cleared out without much trouble. (At the same time, the cicatrix in the length of the posterior axillary fold is liable to fretting by the clothes.)

The giving way of the apparently soundly healed cicatrix of the primary operation was unexpected, the more so as the limb was kept bandaged to the side for at least a fortnight after the secondary measures, and the tension must have been very slight. The bleeding was comparatively trifling, a fact probably due to early stage at which the operation was performed.

■ The result as regards subsequent usefulness of the limb is only what is to be expected from a consideration of the records of similar cases.

In conclusion I have to express my thanks to my friends Drs. Gibson, Sutherland, and Wyllie Nicol for their kindly help, and also to Mr. James Gilmour, to whom I am indebted for the execution of the accompanying illustration :

The specimen has been divided vertically about midway between the vertebral and axillary borders of the bone, and the cut surfaces are turned towards the observer. The naked eye appearances described in the pathological note are taken from this view.

The patient and specimen were shown at the Glasgow Medico-Chirurgical Society's meeting on May 7th.

DR. LORANS, Medical Inspector of Immigrants at Mauritius, has been deputed by the Government of Mauritius to visit Bombay and other parts of India to study the plague, with a view to devising the best means of preserving Mauritius against the introduction of plague, and to acquire a thorough knowledge of the sanitary measures and precautions taken by the Government of India.

ON MECKEL'S DIVERTICULUM.

By T. N. KELYNACK, M.D., M.R.C.P.,

Pathologist to the Manchester Royal Infirmary; Demonstrator and Assistant Lecturer in Pathology, Owens College.

MECKEL'S diverticulum forms the remnant of the omphalo-mesenteric duct. A few years since the Anatomical Society of Great Britain and Ireland published the results of a collective investigation as to the occurrence of this diverticulum ilei.¹ As a supplement to this research an analysis of the cases which have been met with recently in the pathological department of the Manchester Royal Infirmary may not be without interest.²

Photograph of Meckel's diverticulum after moderate distension with plaster of paris.

Number and Proportion of Cases.—Among 1,446 subjects examined, 18 examples of Meckel's diverticulum have been met with. This gives a proportion of 1 in 80, or not quite 1 per cent.

Sex.—This embryonic vestige seems to occur more frequently in the male.³ In our cases the proportion was 11 males to 7 females.

Age.—This is merely of interest in so far as it shows that this foetal remnant does not greatly predispose to serious