of the ammonia co-efficient curve. He has been passing ammoniacal urine, and an infected bladder is suspected.

The third patient gave frequent acetone reactions, the total acidity and ammonia coefficient being usually higher than the normal. The patient is a voluntary boarder suffering from neurasthenia with insomnia, but with medinal gr. x *nocte* usually gets six to seven hours sleep. Twice, a very weak solution of quinine sulphate was substituted for the medinal; the results are rather amazingly shown on the graph, but here again it was not appreciated to what extent the total acidity and the ammonia coefficients had fallen until their curves had been plotted, and acetone on these two occasions was absent.

From these few observations the relationship between the taking of medinal and the presence in the urine of acetone bodies and the disturbance of the ammonia coefficient must be taken as *not proven*. However, I hope later to arrive at some definite conclusions. Another important factor which has not been overlooked but not yet investigated is that of the question of liver function.

Two other patients, both of whom were moderately acute confusional cases resulting from, or aggravated by, bacterial intoxication from infection of the urinary tract, gave high ammonia coefficients, and one of these had marked acetonuria. The coefficients fell as the confusion cleared up.

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*Surgical Emergencies in Psychiatry.** By G. W. B. JAMES, *M.C.*, M.D.Lond., D.P.M., Resident Physician, Moorcroft House, Hillingdon, Uxbridge.

I MUST crave your indulgence for this ambitious title to a very short communication. My aim is to stimulate a discussion and to probe the experiences of others.

In mental hospitals emergencies fall naturally into two groups:

(*a*) Those produced by attempts at self-destruction or self-mutilation—for example, the cut throat.

(*b*) Emergencies which arise in practice among the sane and insane alike—for example, the acute appendix.

I wish to devote a few minutes to this latter class, and to consider a few points which make these emergencies more difficult to recognize and meet when the subject is insane.

Let me begin by describing briefly how a surgical operation is dealt with at the group of hospitals you are visiting to-day. Our

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proximity to London makes it a simple matter. A surgeon is summoned by telephone, and a second message starts a car containing a most helpful travelling unit, consisting of a sister, a nurse, an orderly, a table and a complete outfit of instruments and dressings. This unit is always ready to proceed and arrives in less than an hour. After the operation the unit packs up and returns to its base in London.

Diagnosis.

There is often little evidence of the onset of an acute surgical condition in patients from whom one is accustomed to hear day by day a reiteration of delusional and hallucinatory experience. A few years ago a medical man, aged 57, was in residence here three months, during which time he complained bitterly of infernal machines which tortured him at night, and of a widespread conspiracy to do away with him and injure his wife and family. He had twice attempted suicide as a means of escaping from his persecutors. One morning he begged me to change his attendant, who he felt was hypnotizing him and causing him great pain in the perinæum by an "electric ray." After discussion his man was changed for the day, and when I visited him at night he was easier in his mind and said the pain had gone. The following day he informed me that he knew I was directing a ray upon him, probably under orders, and that the pain had returned. It seemed to me that he looked ill, and he was put to bed. His temperature was normal, his pulse was 90. A medical friend of the patient's was called in, but a joint examination was negative. On the third day he was obviously ill, temperature 99·6° in the morning, pulse 110, the abdomen rigid, and the patient complained again of intense perinæal pain.

Acute appendicitis was suspected and a surgeon called in. Unfortunately an incision revealed a general peritonitis from a perforated and gangrenous appendix.

The importance of the perinæal pain, the malaise and rising pulse were completely overshadowed by his customary complaints of electrical interference, and valuable time was lost, with fatal result.

A change in the habits, speech or even appetite of chronic patients may be the first indication given of illness.

A paraphrenic of many years' standing, æt. 68, recently asked that bullseyes be supplied to him. A month later a marked loss of weight was noticed. Examination revealed nothing. He then began to ask for snipe for dinner, and a little later he insisted on ice cream at every meal! It was his desire for cold drinks and

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ice cream that suggested malignant trouble of the stomach. Before surgical opinion could be obtained the old gentleman sent for a doctor and begged him to give him something to stop the "jiggers" which were consuming his inside. He was put to bed in a collapsed state and died. Post-mortem examination revealed an extensive carcinomatous mass in the stomach with a small perforation as the immediate cause of his death.

One could quote many examples of patients who express pain and discomfort in neologisms or fantastic delusional terms. A patient who is still with us used to be tube-fed and believed that snakes were introduced into his body by way of the tube. One day he refused to get up, giving as his reason that "our snakes" were biting him. Later in the day vomiting became severe and it was discovered that his hernia was strangulated.

I may, perhaps, be allowed to refer to a medical case which has caused some comment in a neighbouring town. A man was admitted to hospital in a state of acute excitement. The certificate stated that he was restless and excited, shouting that the fires of hell were in his chest. He died in twenty-four hours and the *post-mortem* confirmed the diagnosis of lobar pneumonia. His loud complaint was surely justified!

The cases quoted are sufficient to illustrate the importance of considering carefully all complaints which may conceivably arise from pain, however fantastically expressed.

The help of the surgeon is very urgently required when an acute surgical emergency arises in mental hospitals. The acute abdomen in the insane will always be found to be twenty-four hours ahead of the diagnostician. Delay is dangerous enough in the sane, but may be fatal in psychiatric practice. A patient who had eaten a large meal at 2 p.m. arrived at the table at 5 p.m. in an attitude of flexion. He was sent to bed, and an hour later a diagnosis of acute appendicitis was made. At eight a gangrenous appendix, which had already perforated, was removed. Another example of the necessity for speed was provided by a male patient with a strangulated hernia. No evidence of trouble was forthcoming until he suffered from continuous vomiting. Operation was carried out as soon as possible, and the hernial gut was gangrenous and had to be removed.

The Wound.

Post-operative care is obviously more difficult in the insane than the sane. There is one point I would raise in this connection. Restlessness and interference with the dressings are so common that it is of the first importance to make the wound as secure as possible. One or two unfortunate experiences have impressed

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upon me that catgut is not suitable for suturing in mental hospital surgery. Deep stitches are best made of silk, and the skin stitching should be done with silk-worm gut. Moreover it is advisable to introduce wide sutures of silkworm gut, piercing all the layers of the abdominal wall which can be tied when the layer stitching has been completed.

The Anæsthetic.

A skilled anæsthetist once told me that "no anæsthetic ever hurt a soldier or a lunatic." I think you will all probably agree with me in disputing his statement.

Ethyl chloride does not agree with mental patients. The administration of closed ether seems unsuitable, and intrathecal anæsthesia is impossible for obvious reasons for the majority of cases. The routine method at this hospital is to give a generous dose of morphine and hyoscine half an hour before the operation, to induce with chloroform on an open mask, and continue with C2–E3 mixture.

Prognosis.

The question of prognosis is an uncertain one in the surgical emergencies among the insane. The unexpected often happens. In several of the cases I have cited I was able to do a blood-count before the operation. In two there was a well-marked leucocytosis —both of them being cases of appendicectomy, and both of them doing well. Another case of appendicitis which died showed a leucopenia.

A leucocytic count is a useful guide to the defensive strength of the tissues, and this is well illustrated in lobar pneumonia, in which cases with high counts do much better than cases showing a low count.

I would suggest that when there is no leucocytosis before an operation for an infective condition, a provocative injection of sodium nucleinate might be given. Gardner-Medwin reports good results in cases of pneumonia where there is a low white count. The drug provokes a leucocytosis, and an injection could not do harm.

A surgeon who has operated extensively among the insane considers the outlook unfavourable if the patient becomes sane after recovery from the anæsthesia. In twelve surgical emergencies I have collected only one patient had a sane interval. It was a lady who made a good recovery, but relapsed into her usual mental state after two or three days.

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Conclusions.

I will conclude with a summary of the points I have raised concerning surgical emergencies in psychiatry:

(1) That the onset of symptoms is often obscured by the language of insanity.

(2) That surgical aid is doubly urgent in mental cases.

(3) That security of the wound is of special importance.

(4) That ethyl chloride should not be used in inducing anæsthesia.

(5) That the presence or absence of leucocytosis is a useful guide to prognosis in acute infective emergencies.

A Series of Cases of Encephalitis Lethargica at Whittingham Mental Hospital. By B. Reid, M.B., Ch.B., Senior Assistant Medical Officer, County Mental Hospital, Whittingham.

Epidemic encephalitis has become an increasingly important cause of insanity among the population, and during the past few years this disease has been seen more and more among the new admissions of mental hospitals. The various forms in which this disease may manifest itself in the chronic stage are now well known, and can be intimately studied in any large institution. Up till the present, however, no account has yet been reported, so far as I am aware, of the appearance of encephalitis lethargica among patients already resident in a mental hospital.

A small outbreak of encephalitis lethargica has occurred in this institution, affecting six patients admitted some considerable time previously and limited to two adjoining wards. The patients affected were all suffering from insanity with epilepsy, except one case, a mental defective, who, however, was stated to have had fits as a child.

The differential diagnosis from such conditions as epileptic stupor and from the changes in character associated with mental disease was extremely difficult, and will always present a problem when, as in this instance, encephalitis lethargica attacks the insane.

The first case of illness occurred in May, 1924. The patient, æt. 41, complained of not feeling well, with headache and a slight evening rise of temperature. Three days later the patient began to have painful spasms of the upper abdominal walls. There was also slight nystagmus present, but no ptosis, squint or diplopia, and no other cranial nerve lesion. The patient by this time was drowsy in the day-time and sleepless at night. The lethargy became gradually more deep and profound. The painful contractions of the upper abdominal muscles were at a rate of about 30 per minute

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