laid up for a week. When I saw him he was the subject of chronic indigestion of the appendical type. He was taking bromide regularly to control his epilepsy.

Operation was advised (1) for relief of the indigestion, (2) in the hope that it might benefit the epilepsy. A large, distended, adherent appendix was removed from the ileo-caecal angle.

He made an uneventful recovery. He had no epileptic attack for six months after operation, and since that time the attacks have been much less frequent and less severe.

It seems reasonable to infer that if this appendix had been removed at a much earlier stage, before the epileptic habit had become confirmed, the result would have been much better, and possibly the disease might have been cured.

CASE VII.—*Petit Mal*.

In May, 1922, I saw a boy, aged 10, a doctor's nephew, who had for some years suffered from attacks of petit mal, which were increasing in frequency. I was asked to see him owing to an attack of abdominal pain. We regarded the case as one of appendicitis, and advised operation. His mother at once pointed out that he had these nervous attacks, and asked whether there would be any chance of the operation making them worse. Our reply was that there was every reason to hope it would make them better.

At operation we found a distended, obstructed appendix.

He made an uneventful recovery. The attacks of petit mal disappeared, and he is now a boarder at a public school, in excellent health.

Let it be clearly understood: I do not propose that every case of migraine, cyclical vomiting, or epilepsy should be submitted to an appendicectomy.

I do wish to point out that this group of cases, which may be classed with hysteria, neurasthenia, and certain cases of mental disease, have one feature in common—that is, a nervous system so unstable that it is liable to be upset by some slight reflex stimulus which would not disturb a normal individual.

A thorough examination for an abdominal focus should be carried out in every instance. A misplaced uterus, or a movable kidney, will often afford an explanation, but I venture to suggest that a diseased appendix will prove to be the exciting cause much more frequently than we have hitherto suspected.

When there is good reason for suspicion of that organ, appendicectomy should be seriously considered.

THE TREATMENT OF RODENT ULCERS NEAR THE EYE.

BY

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THE satisfactory treatment of rodent ulcers in the region of the eye and nose is sometimes a little difficult. For very small lesions the application of carbon dioxide snow may be efficient, in other cases the application of radium or treatment by x rays may be recommended, but none of these methods is quite so speedy or efficient as excision, if that can be practised without causing deformity of the face.

If surgical measures are undertaken it is wise to remove the ulcer with a margin of at least half an inch surrounding it. If the ulcer is but the size of a threepenny-bit its removal may leave a space necessitating a skin graft, for to bring the edges of the skin together will distort the eyelids or nose. The difficulty of applying a skin graft in the region of the inner canthus and ala nasi is readily understood. It is almost useless to apply grafts by the Thiersch method unless firm and equable pressure is maintained, and the difficulty of maintaining such pressure in this region is easily appreciable. Following the lines of the well known work of Esser, which has been so skilfully developed by Gillies and others, I at first applied grafts moulded upon Stent's composition. This gave fairly satisfactory results, but the material upon which the grafts were moulded was rather hard to press against the bony root of the nose, and if the mould was not absolutely perfect equable pressure over the whole area was not maintained. In searching for a suitable moulding material I thought of a substance which would be less hard when cold, but would enable pressure to be applied over

the whole grafted area. Plasticine was therefore tried and proved suitable. This material was used because it was most readily obtainable, but ordinary artist's modelling clay would, I think, serve equally well, if not better.

The technique of the method is as follows. Under a general anaesthetic the ulcer is excised with half an inch of apparently healthy skin all round. Any bleeding vessel is seized by artery clips and oozing from smaller vessels checked by gauze pressure. Fine catgut may be used to ligature any larger vessel if necessary, but it is better to do without ligatures if torsion and forcipressure will suffice. Whilst the raw area is being made dry by pressure the surgeon takes up a piece of modelling clay which has been boiled in order to sterilize it, and breaks off a portion of a suitable size for the graft. It is then carefully moulded over the raw surface and contiguous surface of the root of the nose and upper or lower eyelid, and put aside whilst the outer aspect of the thigh is exposed for the purpose of cutting the grafts. The grafts are cut in the usual way by a razor or special knife, and are placed on the area of the clay previously moulded on to the raw surface, with their deep or raw surface outwards, so that when the mould is applied to the part of the face operated upon raw surface of graft meets raw surface of face. The grafts should more than cover the actual part of the clay which fitted the ulcer. The clay with grafts on it is carefully fitted on to the place from which the growth was removed and pressure is maintained by strips of strapping. A simple dressing is applied over this. The parts are not touched for about ten days; at the end of which time the dressing and clay can be removed. The grafts should then be firmly adherent and no raw surface be seen. A simple dressing may be applied and maintained in position by strapping for a week or two. The superficial scab of epithelium will gradually separate and leave a healthy depressed and firm scar. In the course of a few months this scar rises and restores an almost normal appearance to the site from which the rodent ulcer has been removed.

MICROSCOPICAL AND CHEMICAL EXAMINATION OF STOOLS IN YOUNG CHILDREN.

BY

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In order to ascertain what information might be gained by systematic examinations of stools in young children, careful observations were made during 1924 and 1925 on patients in the observation ward at the Carnegie Institute, Birmingham. As there was some variation in method and nomenclature during the early period, these notes deal exclusively with the cases of 1925, when a more definite system had been instituted.

Chemical examinations have been made with the object of ascertaining the reaction, and the presence or absence, of occult blood; the microscopic examination has included Gram-stained films for the bacterial flora, and examination for pus, fat, etc.

Stools have been examined from cases of subacute and chronic enteritis; convalescents from enteritis; children with no intestinal disorder and with normal stools; cases of constipation; and breast-fed infants. All the patients were children under the age of 5.

(A) Chemical Examination.

In the cases suffering from enteritis, 54 per cent. of the stools were acid, including all the more acute cases. Blood was found in 83 per cent. of the cases. Pus and epithelial cells were frequently found on microscopical examination of the wet preparation. As the patients improved the stools became alkaline, only 22 per cent. remaining or becoming acid. Blood was still found in 50 per cent. of the patients who had clinically quite recovered. Of the normal stools, 90 per cent. were alkaline, and blood was

found in 20 per cent., although the patients showed no sign of gastro-intestinal disorder. Most of these cases, however, had a history of previous intestinal disorder. Constipated stools were always alkaline, and blood was present in 33 per cent. All the breast-fed infants whose stools were examined were suffering from enteritis, all the stools were acid, and 80 per cent. contained blood.

The high percentage of stools containing occult blood in the subacute and chronic intestinal disorders of infancy is a fact which has not apparently attracted attention. The test used was the benzidine test, which is very delicate. The persistence of a positive reaction after convalescence and even recovery are established is also a point of some interest.

(B) Bacteriological Examination.

It has been found impossible to ascertain the causal agent of bowel irritation from the examination of the Gram-stained films. They showed a very mixed flora which might exhibit a preponderance of Gram-negative or Gram-positive organisms. In many cases of enteritis, particularly the acute cases, the Gram-stained film showed a large number of Gram-positive cocci (staphylococci and, more rarely, streptococci); with recovery the film tended to become more Gram-negative. This may have some significance. There is no such thing as a "normal" Gram film. Cocci, however, are rarely a prominent feature. The Gram-stained films in the breast-fed infants showed almost in every instance a uniform picture of slender Gram-positive rods, which may be taken as the normal flora of the breast-fed infant's stool.

In cases of enteritis treated with lactic acid milk (culture) the change in the flora was interesting; it was to a higher percentage of Gram-negative organisms.

The following are the tabulated figures:

	Number.	Alkaline.	Acid.	Neutral.	Blood.	Mixed Film.	Gram + Pre-dominance.	Gram - Pre-dominance.	Cocci +.
Enteritis stools ...	46	44%	54%	2%	83%	—	28%	18%	54%
Convalescent stools	31	68%	22%	10%	50%	13%	32%	42%	13%
Normal stools ...	20	90%	10%	—	20%	90%	—	—	10%
Constipated stools ...	6	100%	—	—	33%	100%	—	—	—
Breast-fed infants' stools	5	100%	—	—	80%	20%	80%	—	—

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TAPEWORMS AND MEAT INSPECTION.

THE following account may be of interest partly because human cases of tapeworm infection are nowadays supposed to be comparatively rare in England, and partly because it raises a doubt whether even fairly close routine meat inspection is likely to detect the small cysts of *Taenia saginata*.

The three patients all came to consult me within a week, and it would be best, perhaps, to give a short history of each.

CASE I.

On January 12th, 1927, Miss A. came to me because for about eighteen months she had been passing some whitish things like vermicelli in her motions. I found them to be segments of *Taenia saginata*; on treatment with extract of *filix mas*, the tapeworm, many feet in length, was evacuated. The patient had suffered from severe nervous depression and "biliousness."

CASE II.

On January 18th, 1927, Mrs. B. told me that she was passing some flat, whitish objects. On examination of the stools, segments of *Taenia saginata* were seen, some well over an inch long. Treatment with extract of *filix mas* resulted again in the evacuation of a tapeworm several feet in length. The patient had suffered since 1924 from backache and depression, and is now feeling much better; curiously, she had been putting on weight, a rather surprising symptom for a tapeworm to produce.

CASE III.

On January 17th, 1927, Mr. C. consulted me, bringing with him a pot containing about six feet of tapeworm that he had

just passed. This again proved to be *Taenia saginata*, and the rest of the tapeworm (quite six feet more) was evacuated by means of extract of *filix mas*. He looked rather thin and anaemic, and felt depressed.

It has, I think, been absolutely proved that *Taenia saginata* in man is due to the eating of infested beef. Yet Cases I and II are both religious Jewesses and have never been out of England; they take their meat from different butchers, but this, of course, does not exclude the possibility of the infection having come from the same animal. Their meat is always examined both by the British meat inspectors and by the Jewish trained slaughter officials, and at home, as well, during the process of "koshering" any abnormalities are likely to be detected. Case III has never been further away from England than France; he states that he ate a great deal of partially cooked meat in France about two years ago.

The specimens from the above cases were identified by Professor R. T. Leiper, F.R.S.

London, N.5. J. VICTOR LANDAU, M.D.Lond., D.P.H.

ULTRA-VIOLET RAYS IN THE TREATMENT OF RICKETS.

SINCE the curative properties of artificial ultra-violet rays in rickets were demonstrated, eight years ago, there has been difference of opinion as to the most suitable source of the rays. During the past eighteen months we have attempted to ascertain the relative curative value of different types of lamps.

All the patients selected suffered from severe active rickets, as shown in radiograms of the wrist; radiograms taken at frequent intervals formed the criterion of the progress of healing and of ultimate cure. All the patients were kept in the same environment and were given a standard antirachitic diet rich in fats and poor in carbohydrates; in addition they were all given cod-liver oil. The ages of the patients ranged from 1 to 4 years.

Group A.—Fifteen patients were given the standard diet and cod-liver oil, but no ultra-violet radiations. It was found that on an average a severe case of rickets was cured in fifteen weeks. These cases are included for comparative purposes.

Group B.—Eleven patients were exposed on alternate days, at a distance of 30 inches, to the rays of an open-flamed carbon arc lamp consuming 35 amperes, for periods of ten minutes increasing to one hour. It was found that these patients were not more rapidly cured than those in the first group, the average time being fifteen weeks.

Group C.—Eight patients were exposed on alternate days to the rays of an arc lamp burning electrodes of carbon cored with tungsten-molybdeno powder, at a distance of 32 inches. The initial exposure of two minutes was slowly increased to five minutes. It was found that the average time necessary to effect a cure was eight weeks.

Group D.—Four patients were exposed twice a week to the rays of a K-B-B mercury vapour atmospheric lamp, at a distance of 20 inches. They were cured in approximately five weeks.

The radiological evidence of cure does not apparently synchronize with the clinical evidence, for the square head, beading of the ribs, and deformities of the limbs may persist long after the radiogram of the wrist presents a normal picture. The antirachitic properties of ultra-violet rays seem to be due to those having a wave-length of 3,000 Angström units or less. It is probable that these rays, being absorbed by the deeper layers of the skin, there activate a vitamin precursor, converting it into a potent antirachitic vitamin, which is liberated into the circulation.

The mercury vapour lamp, giving as it does an abundance of rays around 3,000 Angström units and beyond it, proved the most potent in the treatment of rickets. The rays emanating from the carbons cored with tungsten-molybdeno powder, while not being so powerful, were still definitely antirachitic; whereas the carbon arc lamp with its wealth of "near" ultra-violet rays does not apparently possess any marked antirachitic properties.

We wish to thank Dr. P. Macdiarmid, the medical superintendent of Alder Hey Hospital, for his permission to make use of these statistics.

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