beyond all expectations. All these cases were operated upon under very adverse conditions; there were no nurses or trained attendants to help, and there was great difficulty in obtaining fresh food and milk.

The immediate results were excellent, but it became obvious that lavage had to be persisted in for prolonged periods to maintain these results, and great care had to be taken with regard to diet. Any indiscretion in diet brought on a recurrence of the symptoms. In practically all cases ensoi was used until the washings were clean, and then ordinary saline solution. The main factor was the quantity used, several pints at each lavage being essential. I found that the introduction of a rectal tube for the evacuations was a great relief to the patient.

I regret that I am unable to give the after-history of these patients as they were transferred to other hospitals, and in those days, owing to the scarcity of medical staff, no accurate records could be kept. The immediate results in all cases were excellent, and this method of treatment impressed me as being the only rational procedure.

Later on I had an opportunity, while surgeon to the Bowring Hospital, Bangalore, of observing and treating a case in more advantageous circumstances.

Nallandi, aged 34, was admitted to hospital on June 26th, 1920, suffering from chronic dysentery. He had had an attack of dysentery in February, 1920, from which he recovered; in April, 1920, he was operated upon for haemorrhoids at another hospital.

Condition on Admission.—He was extremely emaciated and anaemic, with sunken abdominal walls. There was extreme tenderness over the left iliac region. The liver and spleen were normal in size. The motions numbered about fifty daily; they consisted of blood-stained mucus and little faecal material. Microscopical examination showed *Entamoeba histolytica* and cysts to be present.

On June 28th an ippecacuanha bolus was divided into two parts—one was given at 5 a.m. and the other at 2 p.m., preceded by an opium draught. Stools during the twenty-four hours numbered thirty-five. The next day emetine, grain 1/2 bis in die, was given, and the stools became less frequent and less bloody.

On July 1st the patient was examined, under chloroform, with the sigmoidoscope. Several small ulcers were seen high up, and two large ulcers, oval in shape with well defined edges, the bases covered with mucus-pus; the intervening mucous surface was reddish and granular in appearance and was covered with mucus-pus. The emetine injections were continued up to July 6th. By this time the stools were less frequent, but the general condition of the patient was much worse.

On July 7th he was operated upon with a view of doing an appendicostomy. The appendix was found to be atrophied and useless for this purpose, so a valvular caecostomy was done, a No. 12 rubber catheter being introduced and the bowel washed out with saline solution at the conclusion of the operation.

On July 12th the patient was doing well: the stools numbered two daily; there was no blood or mucus; temperature normal. On July 19th the general condition began to improve, the septic appearance vanishing and diet being gradually increased with solids—oatmeal and biscuits. Injections of emetine, grain 1, were commenced on July 30th and given for five days as a precaution, the bowel being still washed out twice daily.

The bowel was washed out twice daily until November 13th, and by this time the patient was practically on a full diet. Three days after the irrigation ceased the fistula was almost closed, and the patient was discharged cured on December 28th, 1920, having increased over 2 st. in weight. A final sigmoidoscopic examination showed all the ulcers healed.

CONCLUSIONS.

Cases of colitis persisting over two or three months without intermission and with profound emaciation and anaemia which do not respond to medical treatment should be handed over to the surgeon. When they reach this stage they are invariably examples of mixed infection, whatever the organism that caused the primary infection may have been. In severe cases the large intestine may be likened to an abscess or bag of pus.

In all chronic cases a sigmoidoscopic examination should be made. In the case recorded above sigmoidoscopic examination showed the existence of extensive ulceration of the lower bowel and confirmed the diagnosis of chronic ulcerative colitis.

The only rational treatment, when the diagnosis is confirmed, is frequent irrigation of the large intestine, either through an appendicostomy or a valvular caecostomy, with ensoi solution until the washings are clean; after that, with large quantities of warm saline for prolonged periods.

Valvular caecostomy is particularly mentioned, as the closing of an ordinary caecostomy may be difficult later, besides being unpleasant for the patient and for those associated with him.

ENTAMOEBAE AS AN ETIOLOGICAL FACTOR IN MULTIPLE ABSCESES.

BY

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MULTIPLE deep abscesses are of frequent occurrence in Nigeria. There are two main clinical types: (a) those which affect the muscles of the limbs, and (b) those which affect the ilio-psoas muscle in particular; this type is usually single.

Although infection with *Filaria bancrofti*, *Dracunculus medinensis*, and pyogenic organisms may explain the minority, the etiology of the majority remains a problem.¹

Entamoebae are frequently the causative factor in hepatic abscess; they have also been reported as occurring in abscesses of the jaw, the brain,² the spleen, and salivary glands.³ Still more recently Captain S. Smith⁴ has recorded their appearance in the left knee-joint; the patient in whom this occurred was given emetine and made an uninterrupted recovery.

We would suggest that in view of the various organs of the body in which entamoebae have been found, there is reason to believe that amoebic pyaemia is more than a possibility.

Jonah, an African male aged 26, cook in a European household, was admitted into hospital on May 26th, 1924, with a history of fever and pains which had lasted for three days. He looked extremely ill; the eyes were sunken and the tongue furred. On admission the temperature was 104° and the pulse 100. He gave no history of diarrhoea or dysentery, and stated that there had been no dysentery among the other boys in the household.

The temperature for the first two weeks after admission fluctuated between 100° and 104°. On May 31st a swelling in the left arm was opened and pus evacuated. Following this there were remissions of the temperature to normal, but it still rose to 104° in the evenings. On June 11th three more abscesses were opened—one in the right upper arm, one in the right thigh, one in the left buttock. The temperature remained high until June 30th, when a large abscess in the muscles of the back was opened. Entamoebae were present in this pus, and 8 grains of emetine were given in daily doses of 1 grain—commencing on July 2nd. On July 1st the temperature was normal, and so remained until July 9th, when the final dose of emetine was given. On the evening of this day it rose to 101°, and again to this level on July 15th. All the abscesses healed rapidly, and there is now (July 21st) only a very little watery discharge from the wound in the back.

Pathological Report.

On June 30th the following facts were recorded:

Examination of Urine.—Nothing pathological detected.

Examination of Faeces.—The ova of *Ascaris lumbricoides* were present in small numbers. No ova of *Ancylostoma duodenale* were seen. No cysts or free living amoebae were noticed.

Examination of Blood.—Blood smear: No parasites found. Blood count: Red corpuscles 2,244,000 per cubic millimetre, white corpuscles 4,375 per cubic millimetre. Differential count: Polymorphonuclear 54 per cent., eosinophil 5 per cent., lymphocyte 34 per cent., large mononuclear 7 per cent.

Examination of Pus.—This was collected in the operating theatre under aseptic conditions during the incision of the abscess situated in the muscles of the back. The following points were noted: (a) The pus contained more red cells than one was led to expect from a macroscopic examination; (b) a large number of phagocytic leucocytes and endothelial cells of considerable size were seen; (c) the pus was sterile; but (d) entamoebae were seen. The pus from the same abscess was again examined on July 2nd and was found to show the same characters as on the previous occasion. Fresh pus was on this occasion examined in warm normal saline and also in warm Weigert's iodine, and the following facts were noted: Entamoebae were present; they showed active amoeboid movements, but less active than those exhibited by similar entamoebae in faeces; they were definitely phagocytic and were seen to ingest red corpuscles as well as pus cells. There was a distinct differentiation between the ectoplasm and the endoplasm. The endoplasm was vacuolated and contained in some instances six red cells. In the iodine preparation a distinct nucleus could be seen. Stained preparations showed the same histological characteristics. On July 3rd entamoebae were again found. On this occasion the pus was taken from another abscess located in the right upper arm. Entamoebae were again found in the pus on July 4th.

The serious illness of the patient, the condition of the blood, the physical peculiarities and the sterility of the pus,

the rapidity of the healing of the abscesses, point to a peculiar cause.

The presence of amoebae in sterile pus suggests: (1) That amoebae may play an important part in the production of deep abscesses found in this country. (2) That the pus from such abscesses should as a routine be examined for protozoa, with a view to establishing a causal relationship should such exist.

This case is published by the courtesy of Mr. W. R. Parkinson, F.R.C.S., surgical specialist, Lagos Hospital, Nigeria.

REFERENCES.
¹ Castellani and Chalmers (1919), p. 1836. ² Manson's *Tropical Diseases* (seventh edition), p. 466. ³ Castellani and Chalmers (1919), p. 1828. ⁴ *Journal of the R.A.M.C.*, June, 1924.

THE NATURAL DURATION OF CANCER.

BY

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IN August, 1924, Lazarus-Barlow and Leeming¹ published statistics of the natural duration of cancer, based upon the experience of the Middlesex Hospital. They stated that similar data were being obtained from other hospitals, and the following are the results of an examination of the records of the Cancer Hospital for the years 1900-24. The figures in the two series agree very closely, and it would appear, therefore, that they are in all probability approximately accurate. What deviation there may be from the true value cannot be estimated on account of two errors which, of necessity, enter into the calculation. First, in all cases there is a latent period, of unknown duration and certainly varying from case to case within very wide limits, wherein the developing cancer produces neither symptoms nor signs. Secondly, the date of onset is that stated by the patient, whose memory is not always reliable and observation not always accurate. The former will entail an underestimate of the cancer's duration; the latter may introduce an error in either direction.

The cases dealt with in this paper include only a few sites—namely, rectum, breast, cervix, oesophagus, larynx, thyroid, and neck. The numbers of the first four are sufficient to make them of some value in themselves; those of the last three cannot do so, but may be of service if correlated with the figures from other institutions. In every case the duration is estimated from the reputed date of onset, and in most cases to the known date of death, but in a few instances where the patient left the hospital the length of life after discharge has been estimated by a careful consideration of the general condition of the patient and the extent of the disease when last seen, and I am convinced that no material error is introduced in this way.

None of the cases included received any but palliative treatment, which, as regards the rectum, includes colostomy. The impression gained by watching cases of rectal cancer in which colostomy has been performed is that the operation definitely prolongs life; if this were so the figures in Table II would contain an error accordingly. But when an attempt is made to estimate the increase of life no such increase is discovered (Table I).

TABLE I.—Cases of Rectal Cancer.

	Males.		Females.	
	No. of Cases.	Duration in Months.	No. of Cases.	Duration in Months.
Colostomy...	187	28	132	29
No colostomy ...	69	28	62	29

A number of the cases of cancer of the cervix received applications of radium, and are shown separately in Table II. Although the stomach is one of the organs most frequently affected by cancer, I have not included figures in relation to it because determination of the date of onset

TABLE II.—Duration of Life in Cases which received Palliative Treatment only.

Site and Age.	No. of Cases.	Natural Duration in Months.			Per-centage of Cases below Mean.
		Mean.	Maximum.	Minimum.	
BREAST.					
Under 25	1	72	—	—	—
25-34	28	28	240	5	85
35-44	56	60	372	4	75
45-54	89	31	210	2	70
55-64	68	31	120	3	58
65-74	53	40	144	4	62
75 and over ...	16	30	78	5	70
Total	311	37	372	2	—
RECTUM.					
Under 25	10	36	216	6	80
25-34	29	46	372	6	69
35-44	56	27	156	4	67
45-54	125	28	180	3	62
55-64	136	29	211	2	62
65-74	81	24	90	3	52
75 and over ...	13	26	60	2	54
Total	450	29	372	2	—
OESOPHAGUS.					
Under 25	1	23	—	—	—
25-34	2	45	75	16	50
35-44	24	16	72	2	66
45-54	70	10	38	3	45
55-64	80	9	46	2	43
65-74	28	6	27	3	36
75 and over ...	5	14	40	2	40
Total	210	10	75	2	—
LARYNX.					
25-34	2	8	10	6	50
35-44	6	8	10	3	50
45-54	17	16	62	5	60
55-64	25	14	43	6	52
65-74	2	15	15	13	50
Total	52	14	62	3	—
THYROID.					
Under 25	1 (2)	6 (183)	—	—	—
25-34	—	—	—	—	—
35-44	1	9	—	—	—
45-54	5	16	48	4	60
55-64	2	4	5	3	50
65-74	3	9	27	5	66
75 and over ...	1	3	—	—	—
Total	13 (14)	10 (34)	48	3	—
CERVIX.					
Palliative—					
Under 25	3	15	20	9	66
25-34	29	14	90	4	62
35-44	112	15	78	2	64
45-54	171	16	168	2	59
55-64	86	17	96	2	66
65-74	36	18	108	3	61
75 and over ...	3	12	27	2	66
Total	440	17	168	2	—
Radium—					
Under 25	—	—	—	—	—
25-34	10	38	202	5	80
35-44	22	18	76	7	60
45-54	33	20	66	5	54
55-64	18	22	84	6	78
65-74	10	17	41	5	60
75 and over ...	1	28	—	—	—
Total	94	23	202	5	—
Totals (cervix)—					
Under 25	3	15	20	9	66
25-34	41	20	202	4	63
35-44	139	15	78	2	62
45-54	222	17	168	2	58
55-64	109	18	96	2	69
65-74	46	18	108	3	60
75 and over ...	4	16	27	2	50
Total	554	18	202	2	—
NECK.					
Under 25	1	9	—	—	—
25-34	1	12	—	—	—
35-44	1	48	—	—	—
45-54	7	8	12	4	43
55-64	5	17	36	5	80
65-74	3	20	31	12	30
Total	18	15	36	4	—

is so extremely difficult as to give rise, probably, to great error; because it is commonly treated by gastro-enterostomy, which again in a considerable proportion of cases materially prolongs the life of the patient; and because no great number of such patients actually die in the hospital. Carcinoma of any particular site other than those mentioned

¹ BRITISH MEDICAL JOURNAL, 1924, ii, p. 266.