

these, to hepatic suppuration. In certain other endemic areas of dysentery, this tendency is but slightly marked.

Even in the endemic area the tendency for dysentery to produce hepatic abscess is greater at one time than at another. It is almost always more common in the "cold weather" than during the "hot." There are no clinical points to guide one as to what kind of cases of dysentery will be followed by hepatic abscess. In the same endemic area in all cases where the dysenteric symptoms have lasted over a fortnight, there is greater risk of hepatic suppuration supervening, although a dysentery lasting only a week is not free from danger in this respect, still the longer it lasts the greater the peril. The greater the severity of ulceration, the more putrid the stools, the greater the tendency to suppuration as above remarked.

Dysentery and malarial diseases and hepatic abscess occur endemically in the same area; on this point several questions crop up. Do they depend upon a common poison? Is there a malarial dysentery? Are they correlated etiologically? In regard to these questions I would express my opinion as follows:—(1) That all cases of dysentery do not depend upon the same cause. (2) That certain cases of dysentery are of malarial origin (for an unequivocal case of this kind, *vide Indian Medical Record* for 1891) and that in the separate forms of dysentery the poison gains access to the bowels, through drinking water, whereas in ordinary malarial poisoning as manifested in ague or remittent fever, the poison has found its way to the blood through the respiratory tract. This poison I believe to be the polymorphic infusorian of Laveran. It is but fair to write that although I have searched for years I have not been able to support this opinion by finding the malarial parasite in dysenteric stools. (3) The ordinary cases of malarial fever and dysentery have their origin in the putrefying organic soils surrounding the inhabitants of the country in ordinary bustees and bazaars. (4) As to other causes of dysentery it is well known that some people cannot partake of a meal rich in condiments, especially chillies, without suffering from severe dysenteric symptoms. In another set of cases we find amœba coli abound in the bloody mucous discharges. Sometimes it is associated with the cercomonas intestinalis. I have searched in vain for this protozoon in the air, soil, and drainage fluids in and around our "dysentery centres" of Hyderabad. I hope however, on some future occasion, to express my views in regard to the etiology of dysentery.

Dysentery is under certain circumstances a communicable disease. I remember an instance in which one whole line of patients in a ward was consecutively attacked with it. In one of these cases the patient suffered from the most

malignant form of the disease for nine days; at the *post-mortem* five small abscesses, one, however, the size of a tennis ball, were situated in the right lobe of the liver. No signs of these abscesses were manifest during life. That case taught me to examine the liver in every case of dysentery that comes under my observation. I have found this a most valuable rule to follow. In the case of a female who has recently been under my treatment for chronic dysentery for three months, the dysenteric symptoms subsided, a marasmic state supervened with chronic diarrhoea. She became dreadfully emaciated and complained of severe pain about the region of the navel. The mesenteric glands were all matted together in one large irregular pulsating mass, and the peritoneum around was inflamed and thickened. At the *post-mortem* it was found that the mesenteric glands were disorganised, all lymphatic structure had disappeared, all a mixture of caseous and calcareous material had taken its place. The liver contained one large mass of semi-pultaceous material in one place, and a calcareous concretion about the size of a tennis ball in another. During life no symptoms of hepatic suppuration were complained of. The liver was dry, and of a pale drab colour throughout.

From the preceding statements one might formulate a pathological classification of cases of hepatic abscess as follows:—

1. By far the most common are cases occurring consecutive to dysentery, and arising from a secondary infective process affecting the liver through the portal circulation. These cases arise from:—

(a) The action of septic organisms, such as the streptococci, staphylococci, micrococci; or

(b) The irritation of the products of such septic organisms—ptomaines, conveyed to the liver from the ulcerated bowels and acting primarily on the liver, which plays the part of a filter upon the blood conveyed to it by the portal vein, or to the irritation of the amœba coli or cercomonas intestinalis, or both combined. Cases due to malarial poisoning, the blocking up of the radicles of the portal vein by the plasmodia of Laveran, these organisms acting as irritants and lighting up the suppurative process.

(2) Acute sthenic parenchymatous inflammation resulting from climatic causes, over-crowding, alcoholic excesses, excessive heat, or chill, acting upon a liver already in a partial state of disorganisation.

(3) Idiopathic cases in which no assignable cause can be traced.

THE CHEST MEASUREMENT OF RECRUITS.

By SURGEON-MAJOR G. J. KELLIE, I.M.S.,
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THE article under the above heading by Surgeon Captain Ronald Ross has induced me

to give the results of my observations on the same subject before I had intended, as I did not think I had sufficient data from which to form a decided opinion.

After having examined recruits for many years, and having found that the method of chest measurement was very defective, I made up my mind I would note against every recruit examined for my regiment, the expansion of the chest. I began this on the 14th January 1890, and since then I have measured 338 recruits. My custom is to ask the recruit first to inflate his chest to the utmost and then to measure with the chest at rest.

Out of these 338 recruits, the maximum expansion was $3\frac{1}{2}$ inches reached in one case only. The minimum was $\frac{1}{2}$ inch in two cases.

No.	Expansion.	No.	Expansion.
2	... $\frac{1}{2}$ "	6	... $2\frac{1}{4}$ "
16	... 1"	31	... $2\frac{1}{2}$ "
22	... $1\frac{1}{4}$ "	4	... $2\frac{3}{4}$ "
107	... $1\frac{1}{2}$ "	11	... 3"
27	... $1\frac{3}{4}$ "	1	... $3\frac{1}{2}$ "
111	... 2"		

This gives an average expansion of 1.81 inches, and the average chest was 33.56. As the minimum chest has been fixed at 32, except for growing lads, it would save a great deal of trouble if a minimum expansion was fixed, and it would appear that 1.50 inches is a fair allowance. This is a little lower than the average expansion as found from examining 338 recruits. But if it were fixed at 1.75 out of the 338 recruits examined six men would have passed, who were under 32 inches round chest measurement, and 21 men who were 32 inches and over, would not have passed—a loss of 15 recruits.

If 1.5 was taken, 13 men who were a little under 32 would pass and only two men who were over 32 would be rejected—a gain of 11 recruits.

As every recruit when he comes for examination inflates his chest to the utmost, and the medical officer examining has to expend a great deal of his time before he can get him in to a state to arrive at his real measure, which he must do in order to protect himself in the event of the recruit's secondary examination, it would save time and be no loss of recruits if a minimum expansion were fixed at $1\frac{1}{2}$ inch, and this deducted from the full expansion of the chest. There would be an error in less than 4 per hundred of recruits examined as regards chest measure, and in those cases of abnormal chest expansion the medical officer would take into consideration the physique of the man before passing him, also only .6 per hundred would be rejected who were 32 inches.

MEDICO-LEGAL WORK IN THE DISTRICT OF BACKERGUNGE FROM JANUARY TO JUNE 1892.

BY SURGEON-LT.-COL. K. P. GUPTA, M.B., F.R.C.S. (EDIN.) AND D.P.H. (CAMB.).

The district of Backergunge is notorious for its riots, resulting in fearful wounds and murders. The average number of Police *post-mortem* examinations which the Civil Surgeon has to perform is considerably in excess of that of other districts. In the first half-year of 1892, that is, from January to June, there were 103 cases. The number varies according to the season; thus in the cultivating and sowing months, when the people are busy with cultivation, the cases decrease; while in the ploughing and crop-cutting season the number rises considerably. Another peculiarity is that cases come in a rush—after a few days lull or rest—so much so that the Civil Surgeon has to perform two, three, or even four cases in a single day.

The number, 103 cases, were made up thus: suicidal (hanging) 42; drowning 5; murders by gunshot wounds 8; poisoning 5; murders by cut or stab wounds and fractures of skull, &c., &c., 32; 4 from natural causes, and in 5 the cause of death could not be ascertained from the advanced state of decomposition of the corpses. I should add here that in this district every corpse has to be brought to the Sudder Station for *post-mortem* examination, as the three sub-divisions are in charge of Hospital Assistants only. While smaller and less important districts have some Assistant-Surgeons in charge of sub-divisions, Backergunge, which shews the largest number of police and *post-mortem* cases, has not one in the remote sub-divisions who could conduct the examination of bodies while yet fresh, and tell the cause of death. A proposal to this effect has been made to Government with the concurrence of the District Magistrate.

Suicidal hanging.—There were 42 cases, viz., 26 females and 16 males, in the six months. Young women generally commit suicide by hanging themselves after ill-treatment from husbands and mothers-in-law. The ages of the women varied from 11 to 40 years, and of men from 11 to 45. The means of suspension were rope, cloth, and cane, and the place of suspension is the bamboo ceiling of huts; but in many cases from trees in the jungle, which affords concealment.

External signs of death by hanging.—The mark of ligature around the neck was more or less present in the majority of the cases; where soft cloth was used the mark was very faint. In highly decomposed bodies with the skin peeling off, the mark is not clearly recognizable. When the mark is distinct, the skin on dissection presented a parchment-like appearance. The tongue was protruded and compressed in most of the cases, and the eyes blood-shot and pro-