of abnormal persistence of eruption than of recurrence, since no mention is made of intervals of freedom. The record is essentially as follows. When first seen, nine months previously, there had been circinate patches involving trunk, thighs, and arms. These had faded characteristically but had left irregular-shaped patches of eruption symmetrically placed at the sides of the neck, anterior and posterior folds of the axillæ, and over the prominences of the hips. The efflorescence was indolent, rose-brown in colour, dry, finely desquamative, and slightly raised above the surface of the skin, especially at the margins of the patches. Twice during the time that he was under observation the patient had had jaundice. Sherwell⁵ makes a casual reference to a case in which he had noted recurrence of an eruption of pityriasis rosea during repeated pregnancies, but the record is too meagre to afford any information of value.

I now give the details of the case which prompts this note and which is the first instance of recurrence to come under my own notice. In my paper of February I tabulated 174 personal observations of the disease occurring in some 27,000 cases of general skin disease, and in none of these was recurrence observable.

The patient, a boy, aged 5½ years, was brought to see me at St. Mary's Hospital skin department on July 9th, 1914, by his mother. He showed a very typical and definite eruption of pityriasis rosea, distributed in the usual positions on the back and sides of the trunk. The mother said the eruption had begun a week previously with several patches which had preceded the general eruption by a few days, and which could be still identified as being larger, and therefore presumably older, than the rest of the rash. There was much itching, but no other affection of the skin except that there were a few small scars of a recent varicella and three much larger and older scars from a burn sustained in earlier childhood. Scales were examined for fungus with negative result, the diagnosis of "pityriasis rosea with several pioneer patches" was unhesitatingly recorded, and the patient was given a mixture of salicin and potassium citrate and no local remedy ordered. He was seen again by me on July 16th, when a saline aperient was added to his treatment, as he complained of constipation; the rash was unaltered at the second visit. Owing to the absence from London of the mother and the boy the patient was not again seen by me until Oct. 8th, but the history of events in the interval was very clearly given by the mother, who displays exceptional intelligence. She states that she was confined of her second child on July 30th—an event which explains the particularity of her recollection that a few days prior to that date the patient was sent to his paternal grandmother, living at Yarmouth; that before he left she, the mother, noted the state of the boy's skin carefully, as she was afraid the grandmother might have objections to receiving the child, and that when he was actually sent there were only faintly scaly marks with no remaining pinkness of tint which had particularly attracted her attention in the observation of the initial eruption. The grandmother, whose adverse reception of the child had been feared, made no comments, and the boy was returned to his mother's charge on August 10th, but was not

critically inspected by her until about August 21st, when she specially noted that his body was perfectly clear of any trace of eruption. In the interval between the 10th and the 21st the boy had been bathed and looked after by his maternal grandmother, who failed also to note the presence of eruption. From August 21st to Sept. 20th the child was regularly bathed by his mother, and no eruption was seen until about the latter date, when a new eruption, exactly like the previous one, was noted on the back and front of the trunk, which took about four days to reach its full development, and was characterised by the same pink colour on which the mother had before laid stress. He was brought to me again, as I have mentioned, on Oct. 8th. On this date I noted a copious attack of typical pityriasis rosea, occupying the front and back of the body, with all the characteristics of the disease corresponding to the duration of the eruption (about 14 days) as given by the mother. There was not any itching with the second attack, but with this exception it was exactly similar to the earlier rash. Scales were again examined for fungus with a negative result, and he was again given a mixture of salicin and potassium citrate, without any local application. He was brought to me for examination on Oct. 12th and Oct. 19th, when the eruption was noted as progressively fainter in colour, and it had completely disappeared by Oct. 26th. He has remained clear up to the present date (Nov. 12th), when he has been discharged from attendance.

There is thus good evidence for stating that the first eruption persisted for five weeks, was followed by an interval of complete freedom of somewhat over a month, and that a second acute attack of the disease with characteristic inauguration and evolution of the eruption persisted for nearly five weeks, when it also disappeared under purely expectant treatment.

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TRAUMATIC RUPTURE OF THE LIVER; LAPAROTOMY; RECOVERY.

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CASES of rupture of the liver being uncommon, and the instances of recovery being still more so, I think it may be of interest to publish the notes of this case which came under observation in the Government Hospital, Kelantan.

On June 13th, at 10 A.M., a Tamil woman was admitted with the following history. At 9 o'clock on the preceding morning her husband had returned home drunk, and after bullying her for some time had pushed her through the window of their house into a drain four feet below. He then walked round and jumped on her many times, stamping on her chest and abdomen. Without assistance she was unable to leave the house that day, but in the evening her friends took her to make a report at the police station, and the next morning the officer in charge brought her across river in a native boat and to hospital in a rickisha. On arrival she was seen by the residency surgeon and myself, and the following signs and symptoms were noted. There were no external bruises or cuts. On inspection the abdomen was found to move fairly well; there was, however, marked distension below the umbilicus. On palpation the upper part proved

⁵ Sherwell: *Journal of Cutaneous Diseases*, New York, 1896, vol. xiv., p. 355.

tender, especially over the right kidney. On percussion there was dulness in the flanks, more marked on the right side, and the distension noted above was resonant. The patient's general state was poor, the pulse being weak and rapid, but there was no rise of temperature.

At midday an exploratory laparotomy was made, and the upper part of the abdomen was found to be full of dark blood, which issued in large quantities. On passing the hand in and round over the surface of the liver a tear was found about $1\frac{1}{2}$ to 2 inches in length by $\frac{1}{4}$ inch in depth on the outer surface of the right lobe. The residency surgeon after examination decided that nothing could be done since the wound was out of reach except to the hand, and the patient's state on the table was extremely critical. The abdominal incision was therefore closed up with three interrupted silk-worm gut sutures through the peritoneum and all the layers. The patient was then moved back to bed as quickly as possible.

The after-treatment was practically *nil*, for on the day of the operation cholera broke out in the gaol and the hospital patients could only get very scant attention. The dresser, however, reported each day that the patient did not improve and that her pulse could hardly be felt, but on the fifth day I visited the ward and found her sitting up on her bed. From then onwards she improved daily, and 13 days after the operation she left the hospital, refusing to stay any longer.

The wound in the liver might have been packed with gauze to inhibit bleeding, but it was thought that binder pressure over the ribs would bring about the same result, and this seems to have been the case.

Kelantan, P.M.S.

MORPHOLOGICAL TYPES OF BACILLI AS AN ELEMENT IN PROGNOSIS IN PULMONARY TUBERCULOSIS.

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DURING the examination of samples of sputa from cases of varying type there is marked difference in the appearances shown by the acid-fast bacilli, though the greatest care has been taken to render the processes as identical as possible. In one case the bacilli are short, plump, and taking a uniform stain, with a noticeable absence of the clear spaces so frequently seen and which were once considered spores; in another specimen the bacilli are longer and thinner, the clear spaces numerous and well marked, the stain less deeply taken, and, excepting the acid-resisting properties common to the two, quite distinguishable from the first type. Again, we frequently meet with cases midway between the two. Spengler at one time attributed these differences to the human or bovine origin and considered the staining of the waxy envelope responsible for the difference in appearance of the strains of bacillus, but this explanation is not accepted by other authorities, nor is it substantiated by more recent investigation, for the report of the recent Royal Commission on Tuberculosis concludes that the microscopical appearances alone are insufficient to differentiate between the different types of bacillus. Muir and

Ritchie in their "Manual of Bacteriology" on this point hold the view that there are the two different strains of organisms which on cultivation resemble in appearance the two types as described by Spengler and mentioned above, which vary in virulence and cultural characteristics. On the other hand is the view that the beaded type is a degenerate strain of that which stains homogeneously, and this view also finds able supporters.

At the International Congress in Brussels in 1910 the following results of experiment were recorded by Maher, of New Haven (Connecticut): "New growths of any strain—avian, human, or bovine—are consistently acid-fast and stain entire, and are of uniform size when grown on glycerine broth, glycerine agar, or glycerine potato broth. Old growths on glycerine broth grow long and filamentous, beaded and granular, say at six months, and partly lost their resistance to acids." In the same connexion Muir and Ritchie state: "We can only say that the younger bacilli stain uniformly and that in older forms inequality in staining is met with. This latter condition is, however, not found to be associated with greater powers of resistance." These observers, however, uphold the optical differences mentioned above as characteristic of the human and bovine bacilli respectively, but add that intermediate forms are met with, and that "in view of these facts it is probable that bovine bacilli will undergo corresponding modifications in tissues of the human subject."

Whether these differences in appearance are due to the fact that the one form is bovine, the other human (Spengler), or that they are respectively the young or old type of bacillus of either strain (Maher), which view is also favoured by myself, the difference has a distinct bearing on the prognosis of the case, and in examining sputum from a tuberculous case it is insufficient to detect the mere presence or absence of bacilli, but their morphological characteristics should be noted as to size, vacuolation, and acid-resisting properties. Variations in appearance of the bacilli coincide as a rule with the virulence of the attacking force, acuter and more florid cases harbouring bacilli corresponding to the young growths and the more chronic cases with fibrosis and old cavities being the hosts of the moniliform type. Either type (whether looked on as "old and young" or "human and bovine") may be conveyed to the lung by inhalation and may be the starting point of infection, and we may take as a prognostic axiom the "younger" the type the more virulent the case.

If certain cases are watched over a long period and the sputum systematically examined the type of bacillus is found steadily to approximate the vacuolated type, and two explanations may be suggested for this. The one explanation is that the bacillus is originally of bovine strain, but under the influence of environment it is gradually adapting itself to human surroundings and at the same time decreasing in virulence; or, secondly, that the original strain, whatever its origin, is losing ground against strong resistance, which view is more in accordance with present opinions cited above.

This leads to another aspect of the question—namely, whether the changes are due primarily to bacillary alteration or to varying resistance in the tissues of the individual infected, the resistance being either acquired or inherited, or to both. A