

it extended into the pelvis right along the iliac artery as far as the lumbar glands. These glands were dark-red, soft and friable and intensely engorged and looked like soft spleen tissue; there was great engorgement, extravasation, and œdema around them, and they surrounded the iliac artery and vein, so that in dissecting out the gland mass these vessels came away enclosed in it. The glands were as large as almonds or smaller and were so incorporated in the coagulated blood that it was scarcely possible to dissect them out. The remaining glands and other organs in the body were in the condition described above.

**B.—THE SEPTICÆMIC FORM OR PLAGUE-SEPTICÆMIA.**

In the bubonic form of plague, one set of glands with extravasated blood around them forms the bubo, and there is practically no alteration in the remaining glands of the body; but in the septicæmic form there is no such bubo, yet there is a general involvement of nearly all the lymphatic glands. Yet though so many glands show evidence of disease, one gland or several glands of one set show characteristic changes which are pathognomonic of this type of plague. These appearances are: The gland is enlarged to the size of an almond or less, is rounded, firm, and pink in colour; on section it shows some, but not much, engorgement and some œdema; its substance is rather soft and can be easily scraped off with a knife, and sometimes small softening areas were present. There was no hæmorrhage in the areolar tissue around this gland and at most only a little œdema and trifling engorgement of the vessels. Commonly there were one or several such glands in one inguinal region, and usually the lowest gland of the chain was most markedly affected; whilst those higher up varied in size from a bean to an almond, and had the same firm pink appearance, though there were at times some which looked nearly normal in size and shape. The iliac glands of the same side were similarly affected, as large as almonds, and either pink and firm or softer and of a dark red colour. The inguinal glands of the opposite side showed similar changes, but sometimes to a less extent, and the iliac sometimes showed slighter changes or some of them looked normal. The lumbar usually showed slight enlargement and were either pale and soft or somewhat pink and firm. The cervical and axillary varied in size from hazelnuts to firm. The cervical and axillary usually showed merely engorgement, being full of dark peas and usually shewed merely engorgement, being full of dark peas; but sometimes some of them showed the pink firm appearance described above. The mesenteric were enlarged to the size of peas and beans and were either slightly or considerably engorged. The supra-trochlear and popliteal were normally engorged. There was no hæmorrhage or œdema around any of the above-mentioned glands, and no enlargement of the lymphatic vessels was observed. The condition of the remaining organs was such as has already been described under the bubonic form.

*Note.*—In several cases of plague-septicæmia where death had occurred shortly after attack, the glands were found slightly enlarged of a dark red colour and contained much blood and œdema fluid. This appeared to be an earlier form of the characteristic pink plague glands described above. The difference between the bubonic and septicæmic form of plague appears to be this:—In the bubonic form the plague bacillus after entering the body is arrested at the nearest group of glands, grows here vigorously, and as a result of its growth the bubo is formed. Here the bacillus forms the toxins which are discharged into the system and cause the symptoms of plague, but the glands of the bubo form a barrier which prevents the bacilli from passing on and growing generally throughout the body; and it is only shortly before death, in fatal cases, that this resistance is overcome and the bacilli are able to pass on into the system generally. But in the septicæmic form the bacillus, after entering the body, meets with feeble resistance at the nearest glands; it speedily overcomes all opposition and passes on to infect other glands and organs where it grows abundantly. These points will be illustrated later in the detailed account of autopsies.

It may be mentioned here that no bubo of the mesenteric glands was ever found; these glands were always examined, and though changes might be found in them, they were always less marked and less distinct than plague glands found in other parts of the body. In short, there was no autopsy which went to show that the plague bacillus had reached the stomach or intestines, e.g., in food, and thence infected the mesenteric glands.

(To be continued).

**Correspondence.**

**SERUM TREATMENT OF LEPROSY—GUAICOL.**

To the Editor of "THE INDIAN MEDICAL GAZETTE."

SIR,—In the *Gazette* for October Lt.-Col. Duke records the results achieved by treating ten lepers with serum derived from other lepers. The form of leprosy in three of the number is not stated, but in all it appears to have been of the maculo anæsthetic type, no

though reference is made to the presence of patches, or to other changes in the integument except that of the face, which in some of the lepers is described as being copper-coloured. None of the lepers apparently displayed tubercles, but one (Case 1.) had ulcers on the buttocks, which were, however, probably not the consequence of a specific tropho neurosis, for where only terminal cutaneous nerve twigs are involved anæsthesia, with perhaps some atrophy, will alone result.

The duration of the disease varied from 1 to 10 years, and the chief improvement occurred in the oldest ones; but the evidences of this existed chiefly in the subjectivity of the patients, that is to say, some degree of sensation was said to have been regained. Assertions of the kind by lepers must be viewed with much suspicion, nor should any remedy be regarded as possessing therapeutic value unless its exhibition be attended with decided objective signs of amelioration such as the disappearance of nodules, coupled with marked improvement in the general health and nutrition. It is by relying mainly on such subjective impressions as Lt.-Col. Duke reports that the sundry nostrums for leprosy brought forward from time to time attain some ephemeral notoriety until the fallacy of their pretensions is exposed.

For sero-therapy or any other means of treatment to accomplish a cure, i.e.,—a *restitutio in integrum*—of leprosy, the nerve fibres of the implicated nerves, which have to a large extent been replaced by interstitial connective tissue, would need to be regenerated and restored, and this is obviously an impossibility. Moreover, after active specific neuritis has subsided, its cause, the living bacilli, disappear from the nerves, so that the anæsthesia which results from the shrinking of the newly formed fibrous tissue, and the consecutive compression and atrophy of the included nerve fibres cannot be removed by serum injection or otherwise.

I am at present using guaiacol in full doses and would suggest that other observers should give this drug a trial; but its action can only be usefully studied in cases of tubercular leprosy, for in anæsthetic lepers, as Impey and other leprologists assert, the disease is practically at a stand still, and in them treatment can only be directed to the results of the disease which are often mistaken for the disease itself.

MADRAS,  
November 9th, 1898.

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**THE ANTI-VEGENE TREATMENT OF LEPROSY.**

To the Editor of "THE INDIAN MEDICAL GAZETTE."

SIR,—The anti-vene treatment of leprosy, which, as we read in the *New Orleans Medical and Surgical Journal* of October last, is to bring about a revolution in therapeutics, owes its origin to an accident. A negro, in the island of Guadeloupe, stung by a rattle snake, died within 24 hours: the man was a leper, and Dr. Carreau observed that in that short period the tubers underwent a perceptible degree of regression. It is characteristic of Dr. Dyer that, mentioning this fact, he states that the change in the lepromas took place before the patient recovered from his wound: even, when speaking of an event so fundamental to his revolutionary doctrine, his soaring mind cannot dwell long enough on the shabby reality of ordinary things to allow of an absolutely correct statement.

Looking over the facts relating to the medication of leprosy, during this century and the last, you will come to the conclusion that there is hardly a substance that might not, at a moment's notice, and without causing extreme surprise, be proclaimed a cure for leprosy, on the strength of undeniable regressions. Dr. Carrasquilla obtains them with the blood of horses, charged with anti-toxine: if somebody found that the horses' blood, without the anti-toxine, produced exactly the same effect, would any leprologist be amazed?

Dr. Carreau, though, being a man of scientific mind, he felt not inflated with revolutionary hopes, resolved to make as good a use as he could of his experience. He bethought himself that the effect of snake venom on the blood is an increase of the hæmoglobine, and as chlorate of potassium also produces this effect, he tried whether the organic compound would reduce leprosy tubers, as the organic poison seemed to have done. He obtained the same regressions which have rewarded, and will reward, the efforts of so many others. Apparently he did not obtain more, and what is the use of gaining so little? Is there in this a cure for leprosy? Beaven Rake, who took up the same experiments, did not even get those insufficient results. He declares that (and nothing could throw upon what I have said as to the futile character of the regressions, a stronger light than his words): "free purgation may bring about a temporary diminution in the cutaneous infiltrations;" that is exactly the result attributed to the serpent of Guadeloupe.

But the snake-poisoning case of Guadeloupe, by which Dr. Carreau probably recognized that he had been led on a false