

Medical Matters.

"INTESTINAL SAND" DUE TO THE BANANA.

Many cases of the rare condition termed "intestinal sand" have, says the *Lancet*, been carefully investigated, but the subject is still involved in some obscurity. Two forms—true and false—have been distinguished. False intestinal sand is said to be composed of the remains of vegetable food which have resisted digestion with possibly an incrustation of earthy matter. In true intestinal sand such vegetable basis is said to be wanting; there is a much larger proportion of inorganic matter. This sand is therefore supposed to be an intestinal secretion. It is almost always associated with intestinal disorders, usually with membranous colitis. Among vegetable foods the pear is especially apt to produce intestinal sand, as it contains many sclerenchymatous particles which appear in the motions. The banana has been found by American writers to have a similar aptitude. In the *American Journal of the Medical Sciences* for March Dr. J. S. Myer and Dr. J. E. Cook have reported a case, and shown that "intestinal sand" may be produced *ad libitum* by eating bananas. They make a very reasonable suggestion which simplifies the whole subject—that all "intestinal sand" is due to vegetable remains, and that when a large amount of salts is deposited the vegetable nucleus is overlooked. . . . The following is the case now reported. A woman, aged 24 years, complained of fulness in the abdomen and chronic constipation. The abdomen was tense and slightly tympanitic. The stools were intimately mixed with small black or brown sand-like granules. A stool was washed through a fine sieve and the greater part of the sand was found in the water. It was brownish and felt gritty. Under the microscope the sand was seen to consist of irregularly shaped more or less oval grains, varying in size from 0.05 to 0.2 millimetre in diameter. They were translucent and varied in tint from light yellow to dark yellow, brownish, and greenish yellow. By reflected light they had a beautiful appearance, resembling variously coloured quartz. They were hard and brittle and were crushed with difficulty under the cover-glass. On applying a strong acid gas was evolved and the sand became of a lighter yellow colour. Chemical analysis showed 17.2 per cent. of moisture; the residue contained 95.8 per cent. of organic matter. The inorganic portion consisted principally of phosphate of calcium. The high proportion of organic matter pointed to a vegetable origin. By ingestion of various vegetables they endeavoured to produce sand artificially, but failed. The presence of a chain

of sand with two or three fibro-vascular bundles originating from a common point and separated by a mass of parenchyma cells suggested a remnant of banana tissue. It was then found that on eating one or two bananas intestinal sand could be found in the motions in quantities varying from a teaspoonful to a tablespoonful in the 24 hours for several days, and in cases of constipation for much longer. As a rule, the grains were found singly, but also in chains if the stool was not manipulated too much in washing. If a banana is cut transversely and exposed to the air light brown markings appear on it. Under the action of perchloride of iron they form rapidly as black strands, which under the microscope were found to be identical with the grains of sand in the fæces. These strands are the "milk tubes" of the banana and are composed of cells containing a resin suspended in a fluid rich in tannin. The action of the intestinal secretions on the resin forms the sand.

KALA-AZAR IN THE FAR EAST.

Mr. P. W. Bassett-Smith, Fleet Surgeon, R.N., of the Royal Hospital, Haslar, describes in the *British Medical Journal* two cases of this disease.

The chief endemic centre was, he says, at first believed to be restricted to the North-Eastern part of India. During the past few years our knowledge of the relationship of the peculiar organisms known as the Leishman-Donovan bodies to the many undifferentiated fevers has largely increased, and in the above district they were fully studied by Leishman, Rogers, Patton, and others. The geographical range has been considerably increased by further investigations, and it has been demonstrated that in children suffering from a prolonged febrile disease in North Africa analogous organisms are commonly found, produce similar blood changes, with enormous enlargement of the spleen and liver, and give rise to a high mortality.

Mr. Bassett-Smith states that he has lately received a blood film from Surgeon G. B. Scott, R.N., taken from a case at Kiukiang, in the Yangtse Valley, which was swarming with Leishman-Donovan bodies. The patient was a boy who came from a village about twenty miles from Kiukiang, where large spleens and livers are common, and many die from a disease similar to that found in this boy, whose symptoms were irregular fever, great anæmia, and very marked enlargement of the liver and spleen. Acting with Dr. Lambert, the resident medical officer of the institution, Surgeon Scott punctured the liver, and from the fluid drawn off the films were made.

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