

prominent. The solitary glands, which range in size from a pin's head to a large pea, are usually deeply imbedded in the submucosa, but project to a variable extent. Occasionally they are very prominent and may be almost pedunculated. Microscopical examination shows at the outset a condition of hyperæmia of the follicles. Later there is a great increase and accumulation of cells of the lymph-tissue which may even infiltrate the adjacent mucosa and the muscularis; and the blood-vessels are more or less compressed, which gives the whitish anæmic appearance to the follicles. The cells have all the characters of ordinary lymph-corpuscles. Some of them however are larger, epithelioid, and contain several nuclei. Occasionally cells containing red blood-corpuscles are seen. This so-called medullary infiltration, which is always more intense toward the lower end of the ileum, reaches its height from the eighth to the tenth day and then undergoes one of two changes, *resolution* or *necrosis*. Death very rarely takes place at this stage. I have seen but one instance in my series—a girl, aged twenty-four, who died at the end of the first week with severe nervous symptoms and in whose ileum the lymph-follicles were greatly swollen, pitted and cribriform, but without necrosis. Resolution is accomplished by a fatty and granular change in the cells, which are destroyed and absorbed. A curious condition of the patches is produced at this stage, in which they have a reticulated appearance, the *plaques à surface réticulée*. The swollen follicles in the patch undergo resolution and shrink more rapidly than the surrounding framework, or what is more probable the follicles alone owing to the intense hyperplasia become necrotic and disintegrate leaving the little pits. In this process superficial hæmorrhages may result and small ulcers may originate by the fusion of these superficial losses of substance.

There is nothing distinctive in the hyperplasia of the lymph-follicles in typhoid fever. Apart from this disease we rarely see in adults a marked affection of these glands with fever. In children however it is not uncommon when death has occurred from intestinal affections. It is also met with in measles, diphtheria, and scarlet fever.

2. *Necrosis and Sloughing*.—When the hyperplasia of the lymph-follicles reaches a certain grade resolution is no longer possible. The blood-vessels become choked, there is a condition of anæmic necrosis, and sloughs form which must be separated and thrown off. The necrosis is probably due in great part to the direct action of the bacilli. The process may be superficial, affecting only the upper part of the mucous coat, or it may extend to and involve the submucosa. It is always more intense toward the ileo-cæcal valve, and in very severe cases the greater part of the mucosa of the last foot of the ileum may be converted into a brownish-black eschar. The necrosis in the solitary glands forms a yellowish cap which often involves only the most prominent point of a follicle. The extent to which the necrosis reaches is very variable. It may pass deep into the muscular coat reaching to or even perforating the peritonæum.