

ducts are of the catarrhal type. This gives rise to an increased epithelial degeneration and the presence of albumen. Then follows the formation, in solid form, of cholesterin and bilirubin calcium. These two substances are insoluble, and do not exist in the solid state in normal bile. Cholesterin is produced by the degeneration of epithelium; and appears as viscous myelin globules. It will thus be seen that cholesterin never existed in the bile in solution. Viscous masses are thus formed and these are frequently pressed together into larger masses.

With regard to bilirubin calcium it can be said that it does not exist in the bile. These two constituents are never united except as the result of disease. Bilirubin alone is sometimes deposited; but the compound with calcium does not occur in health, nor can it be formed by any process of inspissation of bile. The union of the calcium with the bilirubin is retarded by other bile salts. The albumen derived from epithelial disintegration in catarrh favors the precipitation of the compound bilirubin calcium. Stagnation of the bile is not sufficient. If kept aseptic, stagnant bile never deposits cholesterin, bilirubin or calcium, the three components of gall stones.

The cause of the catarrh of the gall bladder and larger bile passages is mainly of an infectious character, namely, typhoid fever, or the bacterium commune coli. But the liver seems capable of excreting products that act as irritants, and cause catarrh high up in the intrahepatic ducts. It is here that those small bilirubin calcium bodies are most frequently found. Harmful products are constantly carried to the liver by the portal vessels. The liver deals with these either by destroying them, or by excreting them. In these processes, catarrh may be set up; and cholelithiasis result.

TREATMENT OF DIGESTIVE DISORDERS.—Dr. David Inglis, of Detroit, in *Medical Record* for December 25, has a vigorous and timely article on the craze after mechanical treatment of so many stomach troubles. He refers to the absurd teachings of Bouchard, that nearly every one who has stomach trouble has dilatation of the organ; and must have a stomach to be passed, the organ regularly washed out, his abdomen massaged and electricity applied. Dr. Inglis admits properly that these are useful agents in their own place and in suitable cases, but objects to this rush for mechanical therapeutics. We are told that the stomach gets out of place, and must be supported by means of belts. When the abdominal muscles are relaxed and not supporting the viscera, it is quite proper to make use of the bandage for a time. But in all these cases the treatment must be guided by good sound sense.