ulceration of the mucous membrane of the gall-bladder, and the pain more marked when there is no ulceration.

In the gangrenous or phlegmonous cases as in all acute intra-abdominal diseases, the diagnosis is difficult in proportion to their severity. The more severe the symptoms the more they lose their localizing characteristics and the less likely they are to indicate even the section of the abdomen in which the disease occurs. The symptoms are those of *peritonism*, and are such as may arise from gangrenous inflammation of any abdominal organ, as gangrenous appendicitis for which they are most frequently mistaken. They simulate also strangulated bowel, gangrenous pancreatitis, perforation of the stomach or intestine, and acute intestinal obstruction. A previous history of cholecystitis, of gall-stones, or an infective fever, especially typhoid, indicate the gall-bladder as the seat of disease and may enable us to make a diagnosis.

II. Cholelithiasis.

Gall-stones are said to occur in 20 per cent. of all persons over 60, but to produce symptoms in only 5 per cent. of those affected. The occurrence of symptoms depends, first on the situation of the stones, and, secondly, on the condition of the wall of the gall-bladder and the surrounding tissues. So long as the stones lie in the gall-bladder no symptoms arise directly from them; it is only as they block the ducts that they cause disturbance. Once the wall of the gall-bladder and the tissues around it become inflamed, the occurrence of symptoms may be quite independent of the presence of stones.

Of those in whose gall-bladders there are stones, in a large group there are no symptoms; in a smaller group, the symptoms are mild, consisting of slight disturbances in the region of the liver and stomach, such as may arise from gastric catarrh with hyperæsthesia, floating kidney, slight adhesion of the stomach, or a neurosis. The possibility of gall-stones should not be forgotten in such cases. In the third and smallest group the symptoms are severe; they may or may not be characteristic.

In a typical case, the onset is sudden, it may be with such slight prodromata as chilliness, nausea, and malaise. There is usually no apparent cause for the symptoms, though there may have been some error in diet. The pain may be sudden in onset and extreme from the first, or, begin mildly and become slowly or rapidly severe. It is felt in the right upper quadrant of the abdomen, with some extension to the left. It radiates to the back, the right shoulder, and even down the abdomen and thigh. It may be so severe as to cause collapse. Usually it is somewhat paroxysmal, and terminates abruptly. Nausea and vomiting may be marked. Such is the descrip-