tion given of the pains of gall-stone colic. The description may locate the pains more definitely in the right upper quadrant, but, unfortunately, in many cases it is not so typically located.

The difficulties of diagnosis are well illustrated in the following cases.

In a lady whom I saw a few days ago there was a history of attacks of colic extending with intervals over 8 years. In the earlier years she said the pain always began in the lower zone of the abdomen, and gall-stones were not suspected as the cause; in recent attacks the pain was rather diffuse in the area between the ensiform cartilage and the umbilicus. Her gall-bladder now formed a freely movable pyriform tumour extending nearly to the umbilicus. There was persistent vomiting and marked prostration. There was no fever, yet leucocytosis was so decided that empyema of the gall-bladder had doubtless occurred in this attack. Her general health was such as not to permit of operation, and she died two days later.

In another case, a lady of rather neurotic temperament, the pain began at the costal margin, just at the ninth cartilage, but was greatest to the right of the spine between the eighth and twelfth ribs where there was much tenderness of the muscles with radiation of pressure pain to the front; to the gall-bladder region if the pressure was made over the eighth or ninth ribs, and to the appendix region if over the eleventh and twelfth ribs. There was marked tenderness in the region of the gall-bladder, but no spasm of the overlying muscles. The tenderness was evidently due to hyperæsthesia and not to inflammation. The recurrences of pain were irregular, sudden in onset and ceased suddenly, bore no apparent relationship to food, and were often accompanied by vomiting. There were no symptoms of gastric ulcer or history to indicate perigastric adhesions. The gall-bladder could not be made out with certainty. The right kidney was slightly prolapsed so that the lower portion of it could be palpated. In such a case only a probable, or even a possible diagnosis of gall-stones could be given. Some years ago Boas drew attention to tenderness to the right of the twelfth dorsal vertebra as a sign of gall-stones. The tenderness may persist long after the attack has subsided. In the foregoing case tenderness was more diffused and was nearly as marked on the opposite side.

Jaundice is usually said to occur in one-half the cases of gall-stones, that is, we are to infer that in half the cases the stone passes into the common duct. My own experience places it much below that. Stones in the gall-bladder and cystic duct cause no jaundice unless from extension of catarrhal inflammation to the common duct. It is probable that in considerably less than one-half the cases with a