

but a small portion of that region just around the spot where pain is mostly felt in gall-stones, we have stomach, pylorus, duodenum, gall-bladder, bile-ducts and pancreas all lying in close juxtaposition, and in the closest relationship physiologically and pathologically. To determine what particular organ is primarily attacked and in what manner, is no easy task, and not seldom the problem baffles the most experienced and skilled observer. Not that it is of no importance; it is of the utmost importance to distinguish between a gastric ulcer and an inflamed gall-bladder, an impacted or perforated bile-duct, and the different forms of obstruction at the outlet of the stomach, as the treatment in these conditions is so widely different, and a life often depends on a correct diagnosis. Further, I call attention to the importance of an early diagnosis of gall-stones, as this is a disease which is specially amenable to treatment in its early stages, but which, in its later development, occasionally defies the skill of the ablest physician or surgeon.

*Pain.*—It is probably because the position and character of the pain has not been carefully observed that a few years ago biliary colic was always attributed to the stretching of the ducts by the passage of a stone, while the tendency now is to regard it as mostly, if not entirely, due to inflammation and distension, with subsequent contraction of the gall-bladder. It has been found after operation that when sterilized water or other fluid is injected and the gall-bladder distended pain is produced. "The pains," says Naunyn, "usually commence in the epigastrium, and afterwards spread into both hypochondria and to the back, where they are often felt, not only to the right, but on both sides of the vertebral column. Sometimes they extend upwards to the head and neck, or downwards to the lumbar and even to the sacral region. Now and again they radiate into the upper part of the thigh and along the arms even to the finger-tips. Pain in the right shoulder is not, in my experience, by any means especially common in gall-stone colic, and is relatively much less frequent than in cases of hepatic abscess."

The point on which I insist as being of great importance in diagnosis is this: that when biliary colic is due to the passage of gall-stones the pain begins in the back, and not, as in other affections of the bladder and ducts, in the right hypochondrium. Dr. Kraus, of Carlsbad, who has had large experience in the treatment of gall-stones and himself suffered from the disease, in a short treatise published a few years ago, also insists on this point. Doubtless, however, so great is the influence of phrases recurring in our text-books, the pain of biliary colic will still continue to be