

fewer year by year—are those long since demonstrated at autopsy of advanced and practically untreated mechanical disease. It happens frequently enough to excite remark that in operations upon the very earliest known manifestations of gall-stones, ancient, serious, and extensive conditions are found which have taken place gradually in the course of many years without causing any unusual or even noticeable symptoms. I have seen, for instance, a gall-stone completely obstructing the small intestine in a patient of sixty-five, who had never in his life a moment's pain. This stone must have formed in the gall-bladder and ulcerated into the intestine, where it became lodged. That this could have happened without causing pain seems to me extraordinary. It illustrates very well the remark just made—that the condition may be severe without previously existing symptoms. In many cases the gall-bladder will be found thickened, contracted, everywhere adherent, filled with pus or muco-pus, with here and there a gall-stone ulcerated into its surface; and this after a history in which perhaps the most remarkable symptom has been a slight dyspepsia, or an occasional discomfort in the right upper quadrant. Sometimes one finds a single stone or chain of stones hopelessly impacted in the cystic duct, the only manifestations of disease being occasional pain with tenderness over the gall-bladder. A stone impacted in the common duct, or in the hepatic duct, would seem necessarily to cause a permanent jaundice. I have seen not a few cases, however, in which the jaundice has been transitory, even when the stone has been hopelessly impacted. The stone acts as a ball valve, becoming at one time tightly impacted and causing jaundice, at others loosened enough to permit bile to pass, relieving jaundice. In the beginning I looked upon a stone in the common duct or in the hepatic duct, as necessarily causing jaundice. On the other hand, the absence of permanent jaundice seemed to me to prove beyond a doubt that there could be no stone in these ducts. Numerous cases have shown the error of such observations; and the surgeon who argues, from the disappearance of jaundice, that the stone has made its way into the duodenum, will often find himself mistaken.

Although far-reaching and lethal changes are now occasionally found when there have been no previous symptoms of severity, yet in the great majority of cases the changes in the biliary passages are of a trivial nature, when the diagnosis is made early. It follows from the general remarks that I have just made as to the great variation in appearances, that one found