to inflammation of the gall-bladder is owing to the later date of their clinical observation.

Tumor.—The impression is a common one that when a calculus plugs the outlet of the gall-bladder, the viscus must soon become distended and form a tumor which can be felt. The unconscious influence on the mind of the case of the other bladder, the urinary, which must fill up if its outlet is closed, doubtless has much to do with producing this conception, but the facts are that in common-duct obstruction the reverse usually happens. Thus, Courvoisier found the gall-bladder contracted in fifty-three cases of common-duct obstruction and distended in only seventeen. We should remember that the gall-bladder is both filled and emptied like a bottle, through one neck. That neck ends in a short tube, which is soon joined by another tube, the hepatic duct, which conducts all the bile which is secreted. Plug the first tube, or the cystic duct, and nothing can get either in or out that way. Plug the second, or hepatic, duct, and no bile can then pass back into the bladder, while the bladder may still be able to empty what it has past the obstruction in the common duct. With the first, or the cystic, duct closed, the gall-bladder may fill up and become greatly distended, but ordinarily not with bile. A watery fluid instead is secreted from its walls, much as if it were a closed cyst, and on drawing this off it is frequently found to contain but little admixture of biliary ingredients. So long as it remains uninfected, it is striking how little pain or disturbance this tumor causes, though it may grow to a great size and reach the pelvis or even cross the median line to the left. That it is a distended gall-bladder may be first inferred by the general rule in abdominal tumors that they spring from the region where no free border can be felt. In this case, that is above, for it seems to be continuous with the liver, and, unless bound by adhesions, descends plainly with inspiration. Its lower portion is often easily movable and wider than its attachment. Usually it gives the sensation of being smooth and rounded, and of containing fluid, but sometimes it may seem solid. On the other hand, a gall-bladder tumor which is painful and sensitive to manipulation has then a significance of its own, for it means that there is cholecystitis, and all its other accompaniments must then be carefully investigated.

Jaundice.—In fully one-half of the cases of trouble from gall-stones there is no jaundice. Thus, in all cases in which the impaction is in the cystic duct alone there will be no jaundice. In order for jaundice to be caused by gall-stones, they have to pass through the cystic duct into the common duct, and then the jaundice will depend for its continuance and degree on the behaviour