malignant cells may be found. Culture of the pleural fluid for tubercle bacilli is essential. Tuberculous effusions usually contain large numbers of lymphocytes, while numerous polymorphs with lymphocytes point to a postinfective pleural effusion, invariably sterile on culture. Lung scans, repeated if necessary, and phlebography of the legs will help to distinguish effusion complicating pulmonary infarction. Chylous pleural effusions appear milky and are due to perforation of the thoracic duct or its malignant infiltration. Though the cause of most pleural effusions can be diagnosed by these means, in difficult cases bronchoscopy, pleural biopsy, or mediastinoscopy with biopsy may be needed.

[1] Meigs, J. V., *American Journal of Obstetrics and Gynecology*, 1954, **67**, 962.
[2] Hiller, E., Rosenow, E. C., and Olsen, A. M., *Chest*, 1972, **61**, 452.
[3] Berger, H. W., *et al.*, *Annals of Internal Medicine*, 1975, **82**, 362.

Wandering Gall Bladders

Congenital anomalies of the gall bladder, its ducts, and its blood supply are sufficiently common for the surgeon to need to be aware of these vagaries. Indeed most postoperative complications of cholecystectomy may be related to a combination of inadequate anatomical knowledge and poor visualization of the operative field.[1]

The gall bladder may be absent, double, abnormally shaped or malpositioned. Complete absence is rare: more often the organ is represented by a rudiment of a fibrous nodule. If it is any compensation to the patient, he might be told that the rat has no gall bladder but this does not prevent its ability to digest an extraordinary range of substances.

A double gall bladder is common in cats (12%) and to a lesser extent in pigs, sheep, and cows, but it is rare in man. There may be two entirely separate gall bladders and cystic ducts or the gall bladder may be Y-shaped or divided by a septum.[2] In such cases only one of the two gall bladders may be the site of the disease. The diagnosis may be difficult, because the apparently perfectly normal cholecystogram merely demonstrates the normal twin, whereas the second, inflamed, gall bladder is non-functioning and is not visualized. In other more fortunate instances gall stones can be seen within one loculus.

Malformations of the gall bladder are usually acquired, the viscus being kinked or else distorted into a dumb-bell or hour-glass shape by inflammatory adhesions and scar tissue from repeated inflammatory episodes. A common congenital malformation seen on cholecystography or at operation or necropsy is a marked kink between the body and fundus, which produces the phrygian cap deformity—this was the liberty-cap headgear adopted by the Parisian mob at the time of the French Revolution. The deformity itself is of no clinical significance.

Anomalous positions of the gall bladder are rare. It may be buried partially or completely within the substance of the liver which may make cholecystectomy more than usually difficult. In other rare cases the gall bladder lies under the left lobe of the liver, or is placed transversely, or points posteriorly beneath the right lobe. In congenital transposition of the viscera the gall bladder and the liver may be situated in the left upper quadrant of the abdomen, and this may be associated with transposition of the heart and great vessels. Indeed, the diagnosis may initially be suggested clinically by discovering that the apex beat of the heart is situated on the right side. It is surprising how confused the surgeon feels when called upon to perform a left-sided cholecystectomy.

The opposite of an intrahepatic gall bladder is the ptosed or floating gall bladder, which instead of being plastered firmly against its bed in the liver is suspended from it by a mesentery which is either complete or else surrounds the fundus and body. In rare cases the gall bladder is completely invested in peritoneum and has no mesentery whatsoever. There has been one example where such a gall bladder herniated through the foramen of Winslow. Ptosis of the gall bladder is not unusual; it occurs in some 5% of individuals. Its importance is that it allows torsion of the gall bladder to occur with consequent gangrene of the organ.[3]

Chiavarini and his colleagues[4] have recently reported an unusual example of a hypermobile gall bladder and liver. This was a 22-year-old male who gave a history of almost daily episodes of abdominal pain dating back to early childhood. A chest *x*-ray film showed a large collection of right upper quadrant gas beneath the right hemidiaphragm. A cholecystogram showed a normal gall bladder in the left upper quadrant, which subsequently gradually shifted to the right side. Barium studies showed that the stomach, which initially presented to the right of the midline, later occupied a more normal position on the left. Initial radiographs failed to show the normal liver density, but subsequently this organ was seen quite prominently in its normal position. The transverse colon was markedly dilated. At operation the liver was found to be suspended only by the falciform ligament, which was elongated and midline. The omenta were elongated, and the entire colon was quite mobile on a mesentery. The spleen, duodenum, and small intestine had normal attachments. A total abdominal visceropexy was performed with relief of symptoms. The authors were able to find only three similar cases in previous publications, and all were in men under the age of 30. From time to time surgeons have recorded a large mobile mass within the abdomen which at laparotomy is readily delivered into the wound on its long mesentery. Fortunately, it has been possible to identify this mass as a ptosed liver before performing what would have been an all too easy inadvertent total hepatectomy.

[1] Maingot, R., *Abdominal Operations*, 6th edn., vol. 1, p. 928. New York, Appleton, Century, Crofts, 1974.
[2] Gross, R. E., *Archives of Surgery*, 1936, **32**, 131.
[3] Levene, A., *British Journal of Surgery*, 1958, **45**, 338.
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Acute Muscle Compartment Compression Syndromes

Volkmann's ischaemic contracture is one of the eponyms that all medical students remember, and while they may not appreciate the many ways in which the flexor muscles of the forearm can become ischaemic they all recognize the common end result—fibrosed contracted muscles and a claw hand. Yet despite this widespread appreciation of the existence and cause of Volkmann's contracture the effect of muscle ischaemia in other fascial compartments, particularly in the leg, is less well known and often undiagnosed and mistreated.[1]

The anterior group of muscles in the lower leg is contained