Diverticulum of the Gallbladder

A Report of Three Cases and a Review of the Literature

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The diagnosis of congenital diverticulum of the gallbladder has been reported to be of the rarest congenital anomalies of the gallbladder. The infrequent reports and references in the literature to this pathologic entity corroborate this fact. In the past six months we have had the opportunity to make this diagnosis on three occasions. This number constitutes approximately 10 percent of cases of this type of congenital anomaly reported in the literature.

Congenital gallbladder diverticula are also referred to as true diverticula of the gallbladder and must be differentiated from acquired, pseudo, or false diverticula. The differentiation can be made on the basis of the histological features of each when pathologic specimens are available.

True congenital diverticulum retains all the histologic features of the gallbladder. Embryologically, congenital diverticula have been thought to have their origin from an incomplete resolution of the solid stage at embryologic development. Others, however, feel that the congenital diverticula represent persistent cystic-epithelial ducts. It is unlikely that the congenital diverticulum has its origin from a single error of germ-plasm differentiation, since representative types have been reported, each consistent with one of the previously described theories. Roentgenographically, the congenital diverticulum will visualize (See Figs. 1, 3, and 5) and contract (See Figs. 2, 3, and 6) normally following a motor fatty meal in the absence of secondary inflammatory pathology.

Acquired diverticulum of the gallbladder, except the traction type, does not usually retain the histologic features of the gallbladder. It is apparent from the literature that there are usually associated factors that predispose to the formation of acquired
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diverticula. This can be in the nature of a traction diverticulum, similar to that seen in the esophagus, which has its origin from pericholecystic adhesions. It may be in the form of a partially healed gallbladder fistula which may simulate a diverticulum in its projection from the gallbladder. Intramural diverticulosis may develop, having its origin secondary to chronic obstructive patho-

logy of the gallbladder, with resultant increased intracystic pressure, and finally fingerlike sinuses projecting through defects in the muscularis mucosa to produce multiple pseudodiverticula or a single diverticulum. Erosion of the gallbladder wall and the subsequent formation of a pseudodiverticular outpouching has also been described. It is evident, from the etiologic factors enumerated, that acquired diverticula cannot contract normally following a motor fatty meal because of inhibition by mechanical traction factors or because there is no normal musosa muscularis present within the pseudodiverticulum to respond to a normal stimulus. Roentgenographically, then, none of the acquired diverticula will contract following a fatty meal and, in fact, they are usually better visualized.

It is interesting that the true diverticulum may or may not be involved in the pathology which is present within the gallbladder. All possible combinations of such disease have been reported. Specially, cholecystitis has been associated with diverticulitis, cholecystitis has been associated with a normal diverticulum, and diverticulitis has been associated with a normal gallbladder. In some cases the diverticulum has been so large as to produce pressure obstruction, cause perforation, and has contained calculi.

In our cases, the findings were incidental in the course of gastrointestinal survey study. Unfortunately pathologic specimens were not available on any of the patients because the patient either refused surgery or the gastrointestinal complaints were not severe enough to justify surgery. All of our patients were females whose diverticula were located in the fundus of the gallbladder.

The contrast material used in these patients was Orabilex. In a preliminary study we have found this oral cholecystographic medium to compare favorably with all of the existing contrast materials being used for oral cholecystography.