

# Double Gallbladder

Puneet, S Tiwary, S Agarwal, S Singh, A Khanna

## Citation

Puneet, S Tiwary, S Agarwal, S Singh, A Khanna. *Double Gallbladder*. The Internet Journal of Gastroenterology. 2005 Volume 4 Number 2.

## Abstract

Double gallbladder is rare congenital anomaly. It is important to diagnose it preoperatively. Ultrasound is the preferred modality of imaging. Laparoscopic cholecystectomy can be safely done in benign condition of double gallbladder.

## INTRODUCTION

Double gallbladder is a rare congenital abnormality (1). Pre-operative diagnosis is extremely important as if diagnosed during surgery; the per-operative location of the second gallbladder may be difficult or even be missed (2). We are reporting a case of double gallbladder as it is very rare.

## CASE REPORT

A 16 years female presented with pain in epigastric region without jaundice. History of nausea and vomiting was present. General examination revealed no abnormality. On abdominal examination mild tenderness was present in the epigastric region. Ultrasound abdomen show double gall bladder lying in the gallbladder fossa with no evidence of stone or cholecystitis. Upper endoscopy (EGD) done revealed pre-pyloric ulcer. Patient was kept on medical treatment for peptic ulcer. No surgical intervention done for asymptomatic double gall bladder.

## DISCUSSION

Double gallbladder is a rare congenital anomaly with an incidence of one in 4000 patients (1). It is important to diagnose this anomaly pre-operatively because the second gallbladder may be overlooked during surgery (2). Double gallbladders are classified according to the Boyden's classification (3). The two main types of duplications are vesica fellea divisa or bilobed gallbladder and vesica fellea duplex or true duplication, with two different cystic duct. The true duplication is sub classified into Y shaped type (two cystic duct unites before entering into the common bile duct, usually the two gallbladder and adherent and occupy the same fossa) and the H shaped type or ductular type (two separate gallbladder and cystic ducts entering separately into the common bile duct). The accessory gallbladder of

ductular type may be adjacent to the normal organ in the gallbladder fossa or may be intrahepatic, subhepatic or within the gastrohepatic ligament. The true duplication is more common and occurs due to bifurcation of gallbladder primodium during the 5<sup>th</sup> and early 6<sup>th</sup> week of embryonic life (1,2,3,4). The differential diagnosis of double gallbladder include gallbladder fold, focal adenomyomatosis phrygian cap, intraperitoneal fibrous (Ladd's) bands, choledochal cyst, pericholecystic fluid and gallbladder diverticulum(5).

The double gallbladders do not present with specific symptoms and the incidence of disease in this gallbladder is similar to its normal variant (5). Gallstone is the commonest complication occurring in one lobe but, both lobes can be involved. There is no increase in the incidence of disease in double gallbladder, so prophylactic cholecystectomy in an asymptomatic patient is not recommended (6).

The various modalities like ultrasound, Oral cholecystogram (OCG), scintigraphy, ERCP, PTC, CT scan and MRI can be used pre-operatively to diagnose double gallbladder. OCG and scintigraphy depend on certain conditions such as hepatobiliary uptake and excretion with a patent cystic duct. The other drawback is that, only one lobe will be visualized in the presence of disease. ERCP and PTC are the invasive procedures and will be used rarely. Ultrasound imaging is the modality of choice, with a high sensitivity and specificity. CT scan and MRI are the nonvasive modality and can be used to delineate the anatomy (2).

In symptomatic patient, cholecystectomy is recommended with the excision of both the gallbladder even if the disease is present only in one lobe (2, 6). Complete pre-operative evaluation of anatomy is must to avoid potential damage to the ductal system. During surgery meticulous dissection of

the Callot's triangle is mandatory. Laparoscopic cholecystectomy which has now become the gold standard for cholecystectomy is also recommended and can be done safely in double gallbladder (2, 6).

### CORRESPONDENCE TO

Dr. Puneet Lecturer Department of Surgery Institute of Medical Sciences Banaras Hindu University Varanasi-221 005 UP, India Phone: (0091)542-2369172 Fax: (0091)542-2369115 E-mail: puneet\_ms@rediffmail.com

### References

1. Boyden EA. The accessory gallbladder-an embryological and comparative study of aberrant biliary vesicles occurring in man and domestic mammals. *Am. J. Anat* 1926; 38; 177-231.
2. Mazziotti S, Minutoli F, Blandino A, Vinci S, Salamone I, Gaeta M. Gallbladder duplication: MR Cholangiography demonstration. *Abdom Imaging* 2001; 26; 287-9.
3. Ozgen A, Akata D, Arta A, Demirkazik FB, Ozmen MN, Akhan O. Gallbladder duplication: imaging findings and differential considerations. *Abdom Imaging* 1999; 24; 285-8.
4. Gray SW, Skandalakis JE. *Embryology for surgeons*. Saunders, Philadelphia 1972.
5. Goiney RC, Schoenecker SA, Cyr DR, Shuman WP, Peters MJ, Cooperberg PL. Sonography of gallbladder duplication and differential consideration *AJR Am J Roentgenol*. 1985; 145; 241-3.
6. Gigot J, Van Beers B, Goncette L, Etienne J, Collard A, Jadoul P, Therasse A, Otte JB, Kestens P. Laparoscopic treatment of gallbladder duplication-A plea for removal of both gallbladder. *Surg Endosc* 1997; 11; 479-82.

**Author Information**

**Puneet, MS, DNB, MNAMS**

Lecturer, Department of Surgery, Institute of Medical Sciences, Banaras Hindu University

**Satyendra Kumar Tiwary, MS**

Senior Resident, Department of Surgery, Institute of Medical Sciences, Banaras Hindu University

**Sameer Agarwal, MD**

Consultant, Radiologist, Sameer Diagnostic

**Sanjay Singh, MD**

Consultant, Department of Surgery

**A. K. Khanna, MS, FACS**

Professor, Department of Surgery, Institute of Medical Sciences, Banaras Hindu University