

## Gallbladder agenesis diagnosed intraoperatively

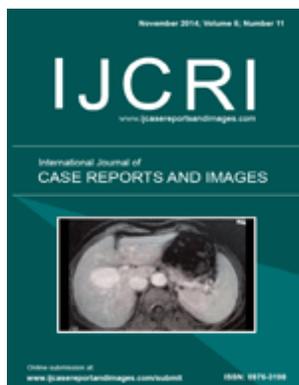
**Atul Kumar Mittal, Pinakin Patel, Gajendra Anuragi, Bhairu Gurjar,  
Suresh Singh, Rajgovind Sharma**

### ABSTRACT

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## Gallbladder agenesis diagnosed intraoperatively

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### To the Editor,

Gallbladder agenesis is a rare congenital anomaly with very low incidence of 0.01–0.06% [1]. Female predominance seen in ratio of 3:1 [2]. Symptoms usually present in second or third decade of life [2]. Some patients present with a clinical picture suggestive of gallbladder disease. The inability of ultrasonography abdomen to convincingly diagnose agenesis of the gallbladder the diagnosis is infrequently made preoperatively. This study describes a case of gallbladder agenesis diagnosed on laparoscopy.

A 30-year-old female presented with pain (on and off) right hypochondrium since two years in surgery outdoor with reports of ultrasonography abdomen showing cholelithiasis. Clinical examination revealed a tender right hypochondrium with a positive Murphy's sign. The diagnosis of cholecystitis with cholelithiasis made on further ultrasonography and she was scheduled for laparoscopic cholecystectomy.

Intraoperative findings were:

1. The gallbladder could not be seen even after meticulous search.

2. The procedure converted to open procedure.
3. In open exploration; gallbladder could not be seen, common bile duct was dilated and stones were absent.
4. Postoperative magnetic resonance cholangiopancreatography confirmed the diagnosis of congenital absence of the gallbladder (Figures 1 and 2). Postoperative diagnosis was costochondritis, and managed with topical and oral analgesics and anti-inflammatory drugs.

Gallbladder agenesis can present with an unpleasant surprise to the surgeon intraoperatively [1]. Gallbladder agenesis was first reported by Lemery and Bergman in 1701 and 1702. Agenesis resulted from failure of the gallbladder and cystic duct to bud off from the common bile duct during the fifth week of gestation [3].

Gallbladder agenesis clinically presents with:

- (1) Asymptomatic (incidental finding at laparotomy for another reason) (35%)
- (2) Symptomatic (50%)
- (3) In children with multiple fetal anomalies (such as tetralogy of Fallot and agenesis of the lungs) [1].

Symptomatic patients present with clinical features, similar to those of biliary tract conditions symptomatic group should be managed conservatively with smooth muscle relaxants and if this fails, sphincterotomy is done [4, 5].

Unable to find out the gallbladder at laparoscopy prompts surgeons to open exploration of the biliary tracts frequently, it is of no benefit and adds morbidity of the procedure, like iatrogenic injury to biliary tract. Recent non-invasive imaging techniques such as magnetic resonance cholangiopancreatography and endoscopic ultrasonography provide an excellent alternative to open exploration [6–9].

Gallbladder agenesis is a rare congenital anomaly with very low incidence. Cases in which ultrasound suggests non-visualization of the gallbladder or suspicion of biliary tract anomaly, preoperative magnetic resonance cholangiopancreatography should be considered [7]. It is also helpful in demonstrating an ectopic gallbladder along with other possible anomalies of the biliary tract

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system [8, 9]. Proceed to immediate open exploration should be avoided in order to prevent iatrogenic biliary tree injuries [8].



Figure 1 (A–C): Magnetic resonance cholangiopancreatography films showing dilated common bile duct and agenesis of gallbladder with normal extrahepatic biliary system.

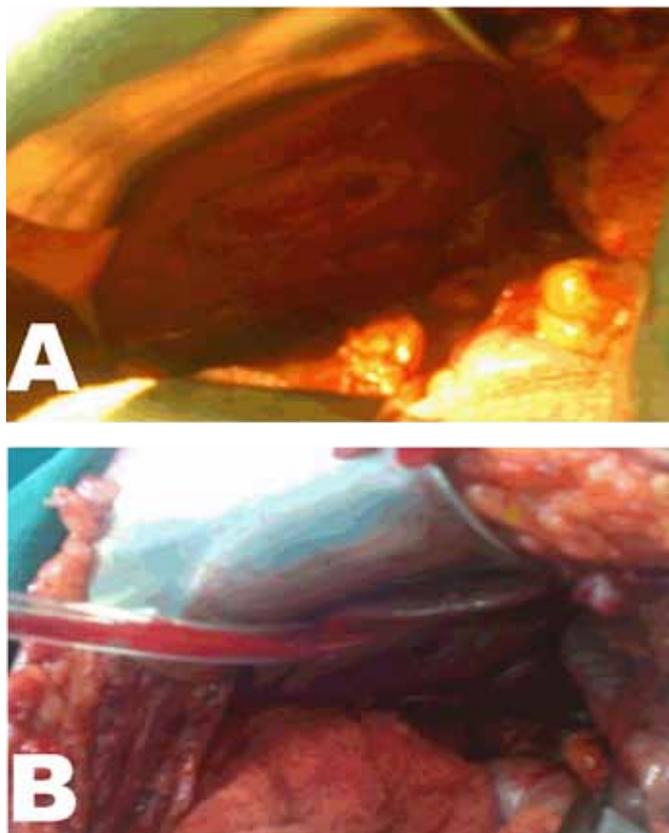


Figure 2 (A, B): Open exploration showing absence of gallbladder.

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Atul Kumar Mittal – Conception and design, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published

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Gajendra Anuragi – Conception and design, Critical revision of the article, Final approval of the version to be published

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### Guarantor

The corresponding author is the guarantor of submission.

### Conflict of Interest

Authors declare no conflict of interest.

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