

## MULTI-SEPTATE GALLBLADDER, A RARE ANOMALY!

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### ABSTRACT

Multiseptate Gallbladder (MSG) is a congenital problem with varying clinical presentation. Its prevalence in paediatric age group is much less as compared to adults, especially in females, making it a rare condition. Symptoms may be mild or severe, or patient may be completely asymptomatic, with incidental sonographic diagnosis. Exclusion of other associated conditions is also required. Its correct diagnosis is important, so that the patient can be observed for complications including possibility of carcinoma in rare instances. We report here a case of a female child, diagnosed as having Multiseptate gallbladder, at Hearts International Hospital, Rawalpindi, Pakistan. She is being regularly followed in opd.

**Keywords:** Congenital, Multiseptate gallbladder, Paediatric, Radiological.

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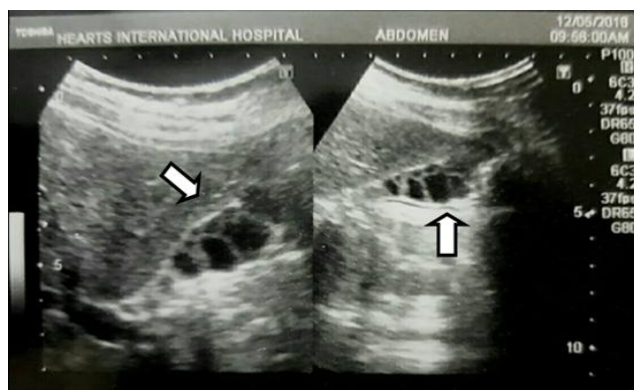
### CASE REPORT

MSG is a rare congenital anomaly<sup>1</sup>. It's a benign condition with risk of developing cholangiocarcinoma<sup>2</sup>. We report here a case of ten years old girl, who presented with complaint of chronic pain right upper abdomen. Pain was intermittent, crampy in nature, and moderate in intensity. It had no relation with food intake. Aggravating factors were not known, though was relieved temporarily with pain killers. No history of fever, or vomiting, and her bowels were normal and regular. Her abdominal examination was unremarkable, abdomen being soft, non-tender and bowel sounds normally audible. Her baseline laboratory tests, including blood complete picture and liver function tests, were within normal limit. Her transabdominal ultrasound, performed using curvilinear probe, showed multiseptate gallbladder. The gallbladder was divided by multiple echogenic septae, measuring 2-3mm, into many compartments. Gallbladder size, wall thickness, extra and intra hepatic bile ducts and blood flow in portal and hepatic systems were normal. There were no gallstones or signs of inflammation. She has been advised to observe her symptoms and to consult a surgeon if symptoms persist or aggravate. She has improved symptomatically with no

surgical intervention needed so far.

### DISCUSSION

Multiseptate Gallbladder is a rare condition with little published literature<sup>1</sup>. Simon and Tandon first described this condition in 1963<sup>2</sup>. Less than 50 cases have been published so far, out of which 13 being of paediatric age group. Female to male ratio has been reported to be 1:2<sup>2</sup>. Etiology is congenital, either due to incomplete cavitation<sup>3</sup> or vacuolization<sup>2</sup> of gallbladder during embryonic



**Figure:** Ultrasonographic image of liver and gall bladder, showing multiple septa dividing the gall bladder lumen into different compartments (MSG).

period, or overgrowth of gallbladder as compared to surrounding structures, giving it a sort of wrinkled appearance secondary to invaginations. This is called wrinkling theory. Another theory called Phrygian cap theory suggests that gallbladder appears wrinkled due to lack of space<sup>2</sup>.

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Received: 08 Aug 2018; revised received: 20 Dec 2019; accepted: 26 Dec 2019

However, acquired multiloculated gallbladder secondary to inflammation, has also been reported<sup>4</sup>.

MSG may be associated with other conditions like sludge, gallstones, cholecystitis<sup>1</sup>, ectopic gall bladder, choledochal cysts and biliopancreatic junction anomalies<sup>3</sup>.

Investigation of choice is transabdominal ultrasound. Magnetic Resonance Cholangio-Pancreatography (MRCP) can also be performed for both diagnosis<sup>2</sup>, as well as to exclude associated anomalies<sup>5</sup>. To look for gall bladder filling and emptying defect, biliary scintigraphy may be done<sup>6</sup>.

On ultrasound, MSG has honey comb or cluster of grapes like appearance<sup>2</sup>. The gallbladder is of normal size with lobed shape. Several thin septae partially or completely divide the gallbladder into multiple compartments, with echogenic bands without acoustic shadowing<sup>2</sup>. The channels may be communicating, with bosselated external surface<sup>4</sup>. The septae are lined by columnar epithelium, with a muscular layer within the septa, being continuous with the outer wall<sup>6</sup>.

The patient may experience symptoms due to either increase intraluminal pressure of gallbladder or impairment of normal bile flow due to mechanical effects by septa<sup>7</sup>.

The differential diagnosis of gallbladder mucosa desquamation, hyperplastic or polypoid cholecystoses, adenomyomatosis or hydatid cyst

should be kept in mind while diagnosing the anomaly on ultrasound<sup>8</sup>. MSG though is a benign condition, has a risk of developing cholangiocarcinoma<sup>3</sup>.

Conservative management with regular follow-ups is recommended in asymptomatic patients, while surgical intervention especially laparoscopic cholecystectomy is the treatment of choice in case of symptomatic patients<sup>2</sup>.

### CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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