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An Unusual Anomalous Peritoneal Fold Around the Gall Bladder – A Case Study

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ABSTRACT

Anomalies of peritoneum are found commonly in humans. We report the presence of an abnormal peritoneal fold around the gall bladder in a 50year old male cadaver. Presence of this fold is of clinical importance as surgeons should not mistake this for adhesions induced by recurrent attacks of cholecystitis and more over the adhesions at this site are mainly omental.

KEY WORDS Peritoneal fold, Gall Bladder, Anomalous

INTRODUCTION

The peritoneum is the largest and most complexly arranged serous membrane which lines the abdominal cavities and is reflected over the viscera to invest them partially or completely. The potential peritoneal spaces, the peritoneal reflections forming peritoneal ligaments, mesenteries and omentum and the natural flow of peritoneal fluid determines the route of spread of intra peritoneal fluid and consequently disease processes within the abdominal cavity. The peritoneal cavity and its reflections are frequently involved by infective, inflammatory, neoplastic and traumatic processes.

MATERIALS AND METHODS

In a study of 100 embalmed cadavers from Department of Anatomy at Sri Devaraj Urs Medical College and M S Ramaiah Medical College and abnormal peritoneal fold was observed around the gall Bladder in a 50 year old male cadaver.

A Broad sheet of Peritoneal fold extending from the Inferior surface of the liver attaching to the surface of the Gall Bladder and extending on the left to gastro pyloric junction and on the right to the hepatic flexure of the colon having a broad base towards the gastro pyloric junction.

During Dissection the peritoneal reflection was separated and the Gall Bladder was found to be normal in anatomical position, size and relationship with liver and surrounding structures. There were no anomalies of the cystic duct, cystic artery and common bile duct. There were no gall stones and common bile duct was not dilated and was 5mm in diameter.

DISCUSSION

The underlying anomaly may be a congenital pre disposition of an abnormal peritoneal fold of gall bladder.[1]

During embryonic life, the stomach is first seen as a fusiform dilatation of the foregut just distal to the oesophagus. Its dorsal border is

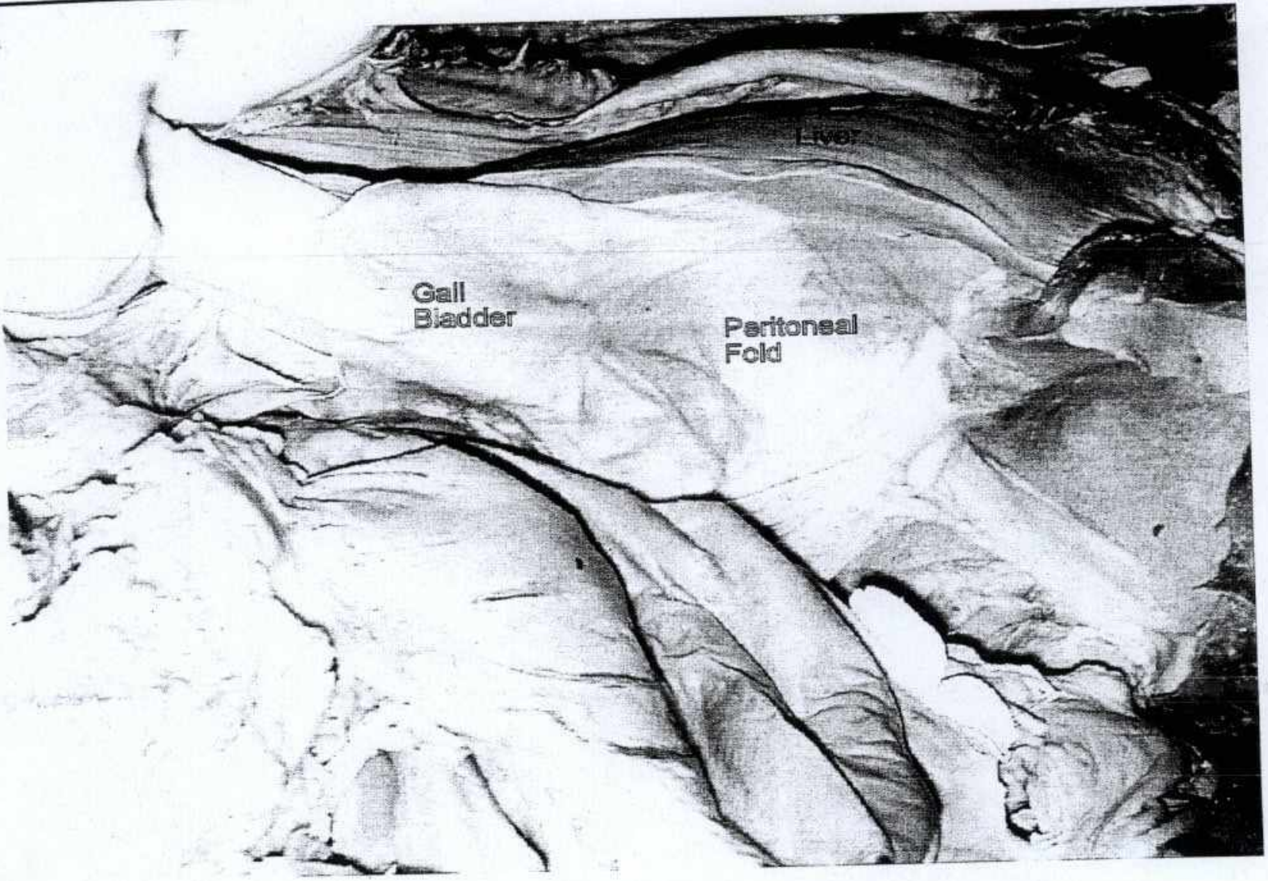

Figure 1 showing Gall Bladder with the peritoneal folds with liver in situ

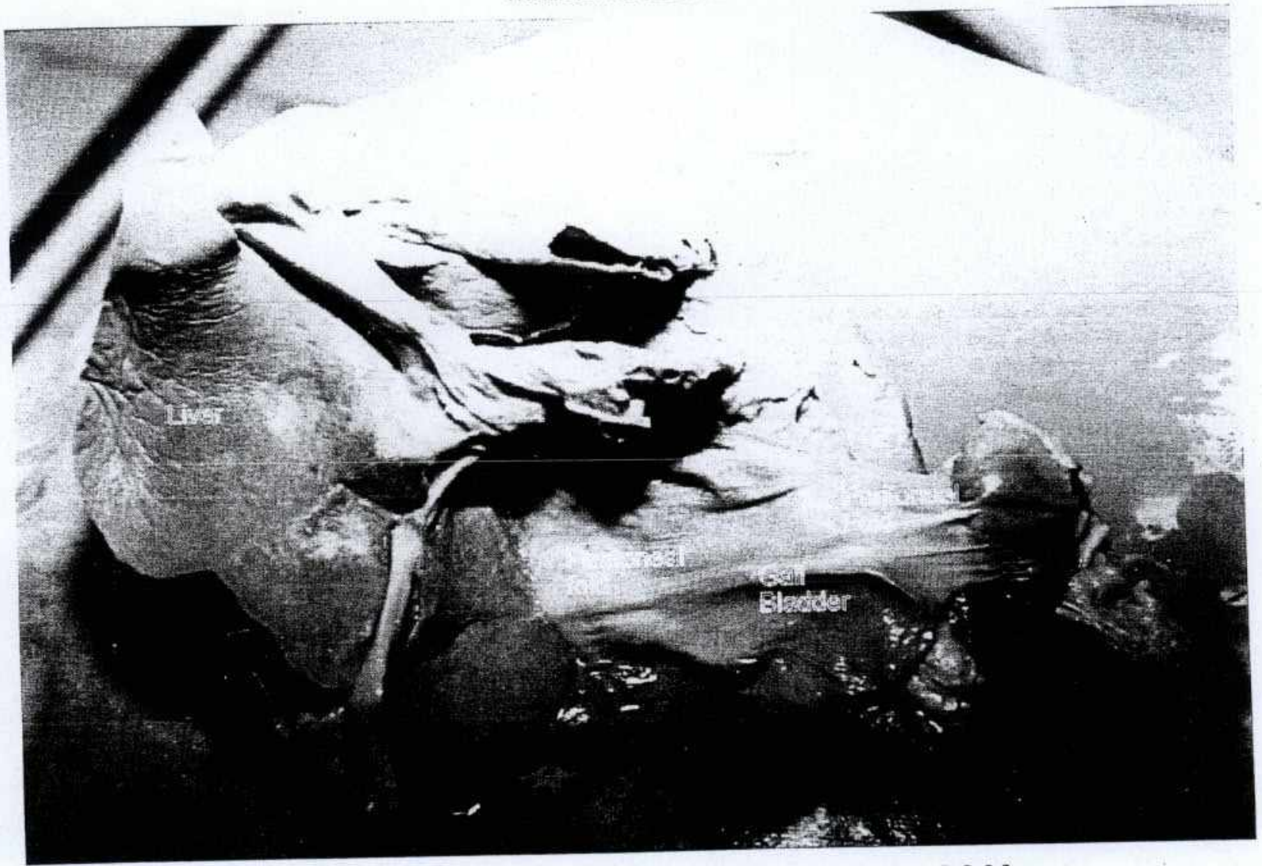

Figure 2 showing Gall Bladder with the peritoneal folds after removal of the liver from the cadaver

attached to the posterior abdominal wall by a fold of peritoneum called dorsal mesogastrium and its ventral border is attached to the anterior abdominal wall by the ventral mesogastrium. The ventral mesentery exists only in the region of the terminal part of the oesophagus, the stomach and the upper part of the duodenum and is derived from the septum transversum.

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Growth of the liver into the mesenchyme of the septum transversum divides the ventral mesentery into

1) The lesser omentum extending from the lower portion of the oesophagus, stomach and upper portion of the duodenum to the liver and

2) The falciform ligament extending from the liver to the ventral body wall the rest of the ventral mesentery disappears normally.[2]

As described by Sheila Sherlock in congenital adhesions of the Gall Bladder the peritoneal sheets are due to an extension of the anterior mesentery which forms the lesser omentum.[3]

The Gall Bladder possesses a supporting membrane in 4 to 5 % of specimens. The peritoneal fold surrounding the gall bladder continues as two approximated leaves to form a fold or mesentery to support the gall bladder from the under surface of the liver. This fold may allow the gall bladder to hang as much as 2 to 3 cms below the inferior hepatic surface.[3]

So in our study out of 100 cadavers we observed this abnormality in only one cadaver making it an incidence of 1%.

A Cystogastrocolic fold and associated atrophy of the gall bladder was reported by Pamidi N in 2008.[4]

Eric Samuel in 1952 described the cystogastrocolic band wherein the congenital theory was based on the fact that the normal development of the adult position of the gut where various primitive mesenteries disappear, the persistence of any of these mesenteries results in the development of one of these accessory peritoneal bands.[5]

Sateesha Nayak B in 2009 has reported a case of abnormal peritoneal fold connecting the greater omentum with the liver, gall bladder, right kidney and lesser omentum.[6]

Gall Bladder volvulus where rotation of the gall bladder on its mesentery along the axis of the cystic duct and cystic artery has been reported by Omer Ridvan Tarhan in 2006.[7]

Two cases of torsion of gall bladder was reported in elderly woman patients by V Malherbe in 2008.[8]

CONCLUSION

The broad base of the peritoneal reflection in this

case is unlikely to go in for volvulus, though volvulus of the gall bladder has been reported. As literature says the Gall Bladder possess a supporting membrane in 4 to 5% of specimens, we report one case in 100 specimens and our incidence being 1%. It is of importance for surgeons as they may mistake the fold as omental adhesions during open and laparoscopic cholecystectomy.

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