

Study of Hartmann's Pouch of the Gallbladder

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Abstract

Background: The gall bladder is a hollow pear shaped sac lying within a fossa on the visceral surface of the right lobe of the liver. In the junction of neck of the gallbladder and the cystic duct, there is a pouch present called Hartman's pouch or infundibulum of the gallbladder which is a frequent but inconstant feature of the normal gallbladder. It is the common site of lodged gallstones. **Objective:** To determine the proportion of presence of Hartman's pouch in our population so that the concerned personnel might have a thought in mind that common pathologies of gall bladder may also involve this pouch. **Materials and method:** This cross sectional study was carried out in the department of Anatomy, Sir Salimullah Medical College & Mitford Hospital, Dhaka, Bangladesh, from July 2010 to June 2011. The number of sample was 62 postmortem human gallbladders which were collected from unclaimed dead bodies. **Results:** Hartmann's pouch of the gallbladder was found in 45 (72.58%). **Conclusion:** Hartman's pouch is present in a good proportion of our population.

Keywords: Hartmann's pouch; gallbladder.

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Introduction

The gallbladder is a flask-shaped, blind ending diverticulum which acts as a reservoir and concentrator of hepatic bile.^{1,2} It usually lies on the visceral surface of the right lobe of the liver in a fossa known as the cystic fossa between the right and quadrate lobes.³ The gallbladder has fundus, body and neck from below upwards and backwards. The fundus entirely covered by peritoneum usually extends beyond the inferior border of the liver. The body continues into the tapering neck which opens into the cystic duct.⁴ On the ventral aspect of the gallbladder just proximal to the neck, a dilatation may be present known as Hartmann's pouch. Gallstones commonly impact in this sac.⁵⁻⁹ It may also be involved in several other pathologies. If a peptic duodenal ulcer ruptures, a false passage may

form between the infundibulum and the superior part of the duodenum, allowing gallstones to enter the duodenum.¹⁰ Hartmann's pouch is responsible for adhesion between the neck and cystic duct even with the common bile duct in inflammatory condition.¹¹ To elucidate the scientific discrepancies with regard to Hartmann's pouch of the gallbladder, a descriptive study of its incidence and morphology was performed.

Materials and method

This cross sectional study was carried out in the department of Anatomy, Sir Salimullah Medical College & Mitford Hospital, Dhaka, Bangladesh. The study was conducted from July 2010 to

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June 2011. The number of sample was 62 postmortem human gallbladders which were collected from unclaimed dead bodies that were under examination in the department of Forensic Medicine of Dhaka Medical College, Dhaka, Bangladesh and Sir Salimullah Medical College & Mitford Hospital, Dhaka, Bangladesh. Morphological study was carried out on all samples. Among the studied samples, the age ranged from 10 to 65 years.

Observation of the Hartmann's pouch

Presence of the Hartmann's pouch was observed with naked eye and was recorded accordingly (Fig 1).

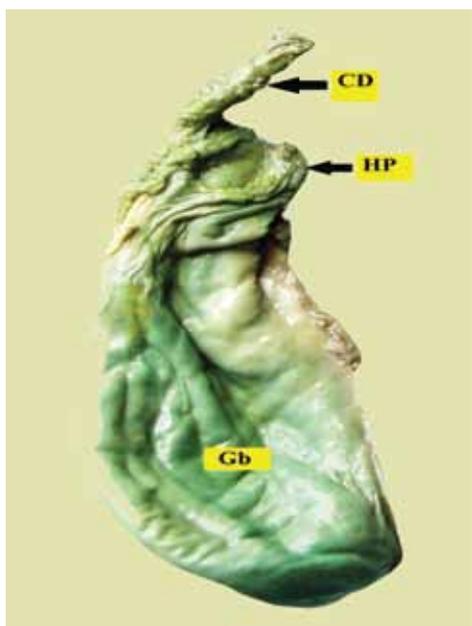


Fig 1: Photograph of Hartmann's pouch of the gallbladder.

Gb-gallbladder

HP-Hartmann's pouch

CD-cystic duct

Results

Hartmann's pouch of the gallbladder was found in forty five (45) samples out of sixty two (62). The percentage of the presence of Hartmann's pouch was 72.58% (Figure 2). Morphology of Hartmann's pouch was observed with naked eye and was recorded. Typical morphological features are shown in Figure 2.

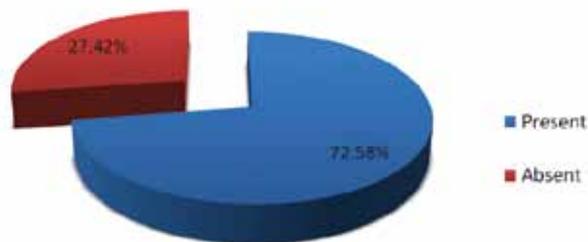


Fig 2: Proportion of Hartmann's pouch of the gallbladder

Discussion

In the present study, Hartmann's pouch of the gallbladder was found in 72.58% samples.

Brunicardi¹² in 2010 stated that the neck of the gallbladder follows a gentle curve, the convexity of which may be enlarged to form the infundibulum or Hartmann's pouch. Standing¹ in 2008 and Moore and Dalley¹⁰ in 2006 observed that a dilatation or pouch appears at the junction of the neck of the gallbladder and the cystic duct. This pouch is called the infundibulum or Hartmann's pouch in which gallstones commonly collect. Eijck et al.¹³ in 2006 studied on 98 gallbladders, among them 49 were obtained after post mortem examination and 49 were obtained after laparoscopic or open cholecystectomy. They found Hartmann's pouch in 71 samples out of 98(72.44%). They concluded in their study that Hartmann's pouch is a frequent but inconstant feature of the normal human gallbladder. The result of this study is similar to the findings of the present study. In another study done in Bulgaria, presence of Hartman's pouch was observed in a slightly higher proportion (81%) in a group of chronic calculous cholecystitis patients.¹⁴

Gallstone formation is very common worldwide and this is one of the commonest clinical problems encountered in our daily practice in Bangladesh. Majority of the other biliary diseases are the effects and complications of gallstones, such as acute and chronic cholecystitis, empyema of the gallbladder, gallbladder carcinoma, obstructive jaundice, acute cholangitis, acute pancreatitis, etc. So findings of study regarding Hartmann's pouch may serve as a

useful tool for surgeons, gastroenterologists, pathologists, and radiologists to understand the anatomy for accurate diagnosis, successful treatment and better prognosis.

Hartmann's pouch is a frequent feature of the gallbladder. To establish a standard data similar study with larger sample size in different age groups and using more advance methods including both sexes are recommended.

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