

# Presence of Hartmann's Pouch in Human Gallbladder

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## Abstract

**Context:** Hartmann's pouch is an out-pouching of the wall of the gallbladder, at the junction of the neck of the gallbladder and the cystic duct. It may be a site where gall stone impacts, which leads to mucocele of gallbladder. So its identification is useful in delineating biliary anatomy while performing a cholecystectomy.

**Objective:** To identify the presence of Hartmann's pouch in human gallbladder.

**Study Design:** A cross-sectional type of study.

**Place and period of study:** The study was carried out in the Department of Anatomy, Dhaka Medical College, Dhaka from July 2008 to June 2009.

**Materials:** 70 postmortem gallbladder were collected from unclaimed dead bodies that were under examination in the morgue of the Department of Forensic Medicine, Dhaka Medical College, Dhaka.

**Methods:** Formalin fixed gallbladder was washed with plain tap water to remove excess formalin and was kept on metallic tray. On observation Hartmann's pouch in gallbladder was detected and noted.

**Results:** In the present study 70 cadaver's gallbladder were observed carefully in the neck region for Hartmann's pouch. The Hartmann's pouch was detected in 4 cases out of 70 (5.7%).

**Conclusion:** Further studies to find out the gross anatomy and histological study of Hartmann's pouch is recommended.

**Key Word:** Hartmann's pouch, Gallbladder.

## Introduction:

Hartmann's pouch was named after Henri Albert Hartmann who first described it<sup>1</sup>. The gallbladder is divided into a fundus, a body and a neck or infundibulum. The wall of the neck where it join with the cystic duct may show a small diverticulae known as Hartmann's pouch sometimes project downward and backward towards the duodenum<sup>2</sup>. This is not a feature of normal gallbladder and is always associated with a pathological condition; it may be the site of impaction of gallstone<sup>3,4</sup>. This pouch is variable in size but a large Hartmann's pouch may obscure the cystic duct and the Calot's triangle. This may be the

result of plain enlargement or due to adherence to the cystic duct or bile duct<sup>5</sup>. When a gallstone lodges in this area, the gallbladder cannot empty normally and contractions of the gallbladder wall produce severe pain<sup>6</sup> and leads to mucocele of gallbladder. So its identification is useful in delineating biliary anatomy while performing a cholecystectomy.

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**Fig.-1:** Showing Hartmann's pouch of gallbladder

**Materials:**

70 postmortem gallbladder were collected from unclaimed dead bodies that were under examination in the morgue of the Department of Forensic Medicine, Dhaka Medical College, Dhaka. The study was approved by the Ethical Review Committee of Dhaka Medical College, Dhaka. The collected samples were divided into three groups.

**Table-I**  
*Age and sex distribution of different groups<sup>8</sup>*

Group	Age in years	No of samples
A	10-20	8
B	21-40	34
C	41-60	28

**Methods:**

Formalin fixed gallbladder was washed with plain tap water to remove excess formalin and was kept on metallic tray and observed carefully in the neck region for Hartmann’s pouch.

**Results:**

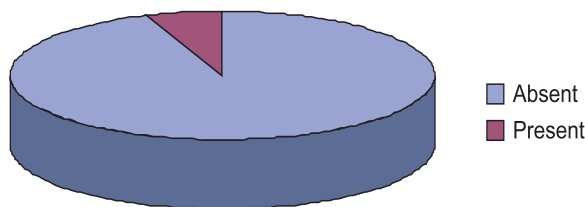
In the present study 70 cadaver’s gallbladder were observed and Hartmann’s pouch was detected and noted. In group A no Hartmanns’ pouch was found among the 8 samples. In group B, Hartmanns’ pouch was found only in 1 sample out of 34 samples In group C, 3 Hartmanns’ pouch were found. So the Hartmanns’ pouch were detected in 4 out of 70 cases (Fig.-2) (Table-II).

**Table-II**  
*Presence of Hartmann’s pouch in the gallbladder in different age groups*

Age groups	Hartmann’s Pouch				P value
	Present		Absent		
	No.	%	No.	%	
A (n = 8)	0		8	(100.0)	> 0.10 ns
B (n = 34)	1	(2.9)	33	(97.1)	
C (n = 28)	3	(10.7)	25	(89.3)	

Statistical analysis done by Chi-square test, ns = not significant.

Group : A 10-20 years  
Group : B 21-40 years  
Group : C 41-60 years



**Fig.-2 :** Presence of Hartmann’s pouch in male & female gallbladder

**Discussion:**

In the present study, 70 cadavers gallbladder were observed carefully in the neck region. The Hartmann’s pouch was identified in 4 cases out of 70 (5.7%). Van Eijck et al<sup>7</sup> examined 98 gallbladders; 49 obtained after laparoscopic or open cholecystectomy and 49 obtained after postmortem examination, among the gallbladder Hartmann’s pouch was present in 51 out of 98 (52%), which was much higher than that the present study.

**References:**

- H. Hartmann: *Quelques points de l’anatomie et de la chirurgie des voies biliaires*. Bulletin de la Société anatomique de Paris, Paris, 1891, 5 sér., 5, 480-500.
- Datta AK. *Essential of Human Anatomy*. 7<sup>th</sup> ed. Current Books International; 2006. 225-30.
- Sinntamby CS. *Last’s Anatomy: regional and applied*. 10<sup>th</sup> ed. Edinburgh: Churchill Livingstone; 1999. 257-59.
- Neil R Borly, editor. *Hepatobiliary system*. In; Standring S, Ellis H, Healy GC, Johnson D, WilliamsA, Collins P, et al. editors . *Gray’s anatomy*. 39<sup>th</sup> ed. London: Elsevier Churchill Livingstone; 2005. 1227-29.
- Mosby’s *Medical Dictionary*, 8th edition. , Elsevier. © 2009.
- Adams DB. The importance of extra hepatic biliary anatomy in preventing complications at laparoscopic cholecystectomy. *Surg Clin N America* 1993;73:861-71.
- Van Eijck FC, Van Veen RN, Kleinrensink GJ, Lange JF. Hartmann’s gallbladder pouch revisited 60 years later. 2007; 21: 1122-25.
- Habiba AC. Role of preoperative ultrasound measure of gallbladder wall thickness in predicting laparoscopic operability (M phil. thesis). Dhaka: University of Dhaka; 2001.