

Location of Major Duodenal Papilla in Human Duodenum

Sharmina Sayeed¹, Shamim Ara², Mesbahul Hoque³, Zannatul Ferdous⁴, Kanetarin Kashem⁵

Abstract

Context: The major duodenal papilla is one of the most fascinating papilla present at the duodenum attracting many gastroenterologists as they do endoscopic retrograde cholangiopancreatography (ERCP) for diagnosis and treatment purpose of many diseases. Most of the textbooks of Anatomy describe that the summit of major duodenal papilla is situated posteromedially in the descending part of duodenum. Henceforth the present study was undertaken in 70 human duodenums to observe the location of major duodenal papilla.

Materials & Methods: A cross-sectional observational study was conducted in the department of Anatomy, Dhaka Medical College, Dhaka from July 2010 to June 2011. Seventy postmortem human duodenums were collected from unclaimed dead bodies that were under examination in the morgue of department of Forensic Medicine and the department of Anatomy of Dhaka Medical College, Dhaka. Location of major duodenal papilla was observed and recorded.

Results: The location of major duodenal papilla was observed in the medial wall of second part of duodenum in 78.6% specimens, in the posteromedial wall of second part in 15.7% cases and in the posteromedial wall of the junction between second and third part in 4.3% and absent in 1.4% duodenum.

Conclusion: The location of major duodenal papilla varies in position.

Key words: Major duodenal papilla.

Introduction

The major duodenal papilla (papilla of Vater) is the point where the dilated junction of the pancreatic duct and the bile duct (ampulla of Vater) enters the duodenum¹. It is a slight elevation on the duodenal mucosa when observed through the lumen. It is usually located on the posteromedial wall of the second part of the duodenum². It is an extensive anatomical and functional region that traverses the duodenal wall.

Location of major duodenal papilla provides information to gastroenterologist regarding opening of common bile duct and pancreatic duct in the duodenum during ERCP.

Materials

70 postmortem human duodenums were collected from unclaimed dead bodies that were examined in the department of Forensic Medicine and Department of Anatomy of Dhaka Medical College, Dhaka from July 2010 to June 2011.

Methods

The 10% formol saline fixed specimens were initially washed with running tap water to wash away the formol saline so as to avoid irritation to the eyes and nasal mucosa. Then the specimens were taken in a dissecting tray, and the surrounding fat and other unwanted tissues were removed carefully with

1. Assistant Professor, Department of Anatomy, Ibrahim Medical College, Dhaka
2. Professor & Head, Department of Anatomy, Dhaka Medical College, Dhaka
3. Assistant Professor, Department of Anatomy, Satkhira Medical college, Satkhira
4. Assistant Professor, Department of Anatomy, Marks Medical College, Dhaka
5. Assistant Professor, Department of Anatomy, Dhaka Central International Medical College, Dhaka

Correspondence: Dr. Sharmina Sayeed

the help of sharp scissors, fine dissecting forceps and BP blade to expose the duodenum. Then the specimens were washed with water and dried with the blotting paper. The duodenum was incised along the lateral border to expose the lumen. Location of the major duodenal papilla was observed and recorded.

Result

Location of the major duodenal papilla as observed in the present study are shown in Table I.

Table-I
Location of the major duodenal papilla

Location of the major duodenal papilla	No. (n=70)	Percentage (%)
Medial wall of the 2 nd part of the duodenum	55	78.6%
Posteromedial wall of the 2 nd part of the duodenum	11	15.71%
Posteromedial wall in the junction between 2 nd and 3 rd part of the duodenum	03	4.3%
Absent	01	1.42%

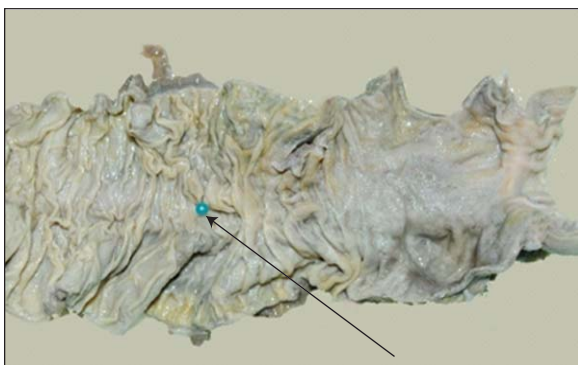


Fig.-1: Photograph showing the location of the major duodenal papilla marked by arrow in the medial wall of the second part of the duodenum



Fig.-2: Showing location of major duodenal papilla marked by arrow in the posteromedial wall of the second part of the duodenum



Fig.-3: Showing location of major duodenal papilla in the posteromedial wall in the junction between second and third part of the duodenum marked by arrow



Fig.-4: Showing absence of major duodenal papilla in the duodenum

Discussion

So far it is known, there is no published work on human cadaveric duodenum in our country, whereas only a few studies had been carried out in other

countries. So, the present study could not be compared with any previous similar study on the Bangladeshi population. The comparison had been made mostly with the findings in the text books and with few published articles. Ellis¹, Borley², Sinnatamby³, Singh⁴, Datta⁵ and Mendelson⁶ found that the major duodenal papilla was located in the posteromedial wall of the second part of duodenum. Snell⁷ and Fred⁸ stated that the major duodenal papilla was located on the medial wall of the second part of the duodenum. Moore and Dalley⁹ observed that the bile and main pancreatic duct enter on its posteromedial wall. According to the discussion of Linder et al cited by Horiguchi and Kamisawa¹⁰ regarding the course of the common bile duct into the duodenum in 1,000 patients, the major duodenal papilla is mainly located in the second part of the duodenum (82%), and occasionally in the transition between the second and third part (12%) or in the third part (6%). The finding of the present study was similar with the above findings.

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