IJCRR
Vol 05 issue 14
Section: Healthcare
Category: Research
Received on: 17/06/13
Revised on: 04/07/13
Accepted on: 23/07/13

STUDY OF LUMEN CONTENT OF VERMIFORM APPENDIX AND ITS CLINICAL CORRELATION: 100 CASES

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ABSTRACT

Aim: The purpose of this study is to correlate content of lumen of vermiform appendix and causes responsible for appendicitis.

Methods: Total 100 cases content of lumen of vermiform appendix is observed in the department of Anatomy, Smt N.H.L Municipal Medical Collage Ahmedabad.In which 70 cases of cadaver during 2009 to 2012.

Results: Out of 100 cases we find 40% lumen of the appendix is empty in 40%, feces 24%, pus 23% and whitish material 13%.

Conclusion: Obstructive acute appendicitis result due to Faecolith, foreign body, Parasite in the lumen of the vermiform appendix. Present study help surgeon and radiologist in clinical diagnosis of appendicitis.

Keyword: appendix, appendicitis, appendix lumen content variation.

INTRODUCTION

The Vermiform appendix present only in human beings, certain arthropod apes and the wombat (a nocturnal, burrowing Australian marsupial) was probably first noted as early as the Egyptian civilization (3000 B.C). During the mummification process, abdominal parts were removed and placed in Coptic jars with inscriptions describing the contents as "worm of the intestines" were discovered[1]. The Vermiform appendix is considered by most to be a vestigial organ, its importance in surgery due mainly to its propensity for inflammation that results in the clinical syndrome known as acute appendicitis. Acute appendicitis is the most common cause of "acute abdomen" in young adolescents and appendectomy is often the first major procedure performed by a Surgeon in training [2,3,4].

Obstruction of the lumen is the dominating factor in acute appendicitis. Fecaliths are the usual cause of appendiceal obstruction. Less common is hypertrophied tissue, inspissated barium from previous

X-rays, vegetable, fruit seed, worms (Entrobius vermicularis, Balantidum Cali, Schistosoma haematobium) [5,6]

MATERIAL AND METHOD

This present study was conducted in the anatomy department of Smith N. H. L Municipal Medical Collage of Ahmedabad. The study includes 70 cases from cadaver and 30 cases from the post Mortum room, during the routine dissection in first mobs batch. For the dissection guideline we use cunnighalm volume two[7]. We don't do correlation with cadaver and postmortem cases. We cut lumen of vermiform appendix at

maximum thickness and we find following as the content of the vermiform appendix. 2009 to 2012.

In 100 cases of study 70 from cadaver and 30 from postmortem room. we fine 40% lumen of the appendix is empty (Figure;1), 24% feces (Figure; 2), 23%pus (Figure;3) and 13%whitish material (Figure;4)

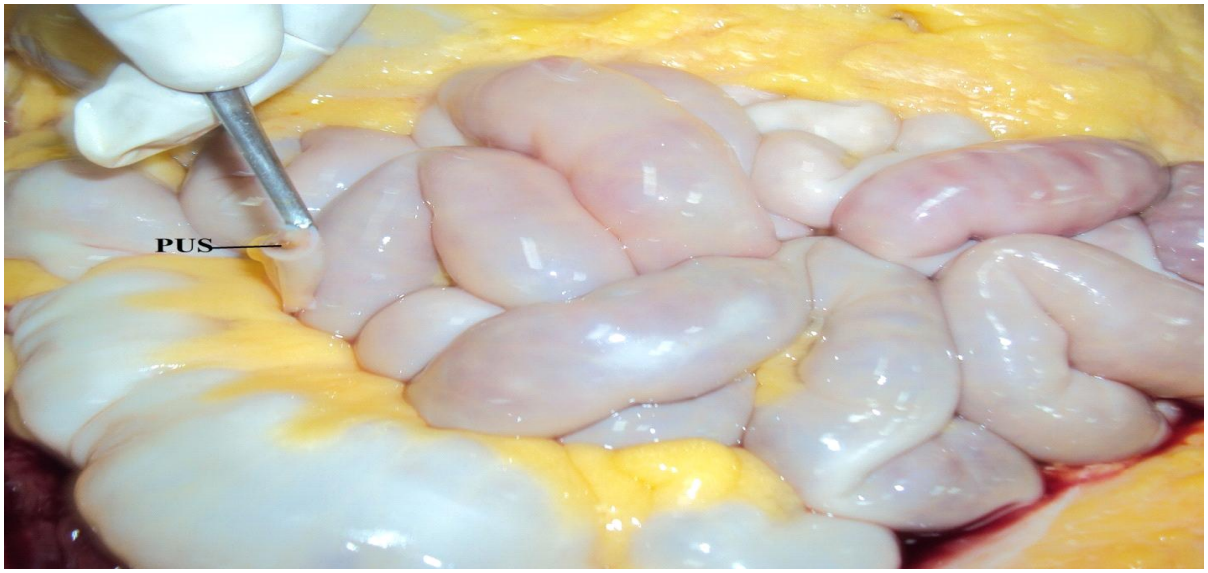
RESULT

A table showing the content of linen of the vermiform appendix.

Lumen of vermiform appendix	Empty	Feces	Pus	Whitish material
Number of cases	40%	24%	23%	13%

Figure:1.Empty lumen

Figure: 2. feces



Figure; 3.Pus

Figure; 4 Whitish Materials

DISCUSSION

In the present study we find the content of vermiform appendix is feces, whitish material pus. Appendicolithiasis is a condition characterized by a concretion in the vermiform appendix. Appendicoliths are found in 10% of patients with acute appendicitis, but they are seen more frequently in perforated appendicitis and in abscess formation[8]

Patients who have an appendicolith usually develop appendicitis, often with perforation[9].Animal experiments and clinical studies have suggested an obstructive fecalith as a cause of acute appendicitis. It was hypothesized that patients with acute appendicitis would have a longer colonic transit time and more fecal retention reservoirs (coprostasis) than healthy control persons, thus favoring the occurrence of a fecalith in the appendix[10].

Appendiceal fecaliths and calculi appear to play a role in the pathogenesis of acute appendicitis and are associated with complicated appendicitis (perforation and abscess) [11]. The prevalence of fecaliths is higher in developed countries, such as Canada, than in developing countries, such as Africa, and is also higher in patients with than in those without appendicitis. These data support the theory that the low-fiber diets consumed in developing countries lead to fecalith formation, which then predisposes to appendicitis[12]

Fecalith which result from the inspissations of fecal material and inorganic salts within the appendiceal lumen, are the most common cause of obstruction and are present in 11%-52% of patients with acute appendicitis [13].True appendiceal calculi(hard, noncrushable, calcifiedstones) are less common than appendiceal fecaliths (hard but crushableconcretions) but have been shown to be associated more commonly with perforating appendicitis and with periappendiceal abscess .Once appendiceal obstruction occurs,the continued secretion of mucus results in elevated intraluminal pressure and luminal distention. This stimulates the visceral afferent nerve fibers that enter the spinal cord at thoracic levels T8 through T10, which causes referred epigastric and periumbilical pain[14]

In older people the obstruction usually result from fecalith (coprolith), a concretion that forms around a centre of fecal matter.When secretions from appendix cannot escape, the appendix swells ,stretching the visceral peritoneum. The pain of appendicitis usually commences as a vague pain in the periumbilical region because afferent pain fibers enter the spinal cord at the T10 level, Later ,sever pain in right lower quadrant from irritation of the parietal peritoneum lining the posterior abdominal wall[15]

In 60% to 70% of cases of acutely inflamed appendices obstruction proximal lumen by fecalith, fibrous bands, parasites or tumors can be demonstrated[16]

CONCLUSIONS

Obstructive acute appendicitis result due to Faecolith, foreign body, Parasite in lumen of vermiform appendix.so present study help surgen and radiologist in clinical diagnosis of appendicitis.The cause of appendicitis relates to blockage of the inside of the appendix, known as the lumen. The blockage leads to increased pressure, impaired blood flow, and inflammation. If the blockage is not treated, gangrene and rupture (breaking or tearing) of the appendix can result. Most commonly, feces blocks the inside of the appendix

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