

**BACTERIOLOGICAL PROFILE OF ACUTE APPENDICITIS AT RMMCH**

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**ABSTRACT**

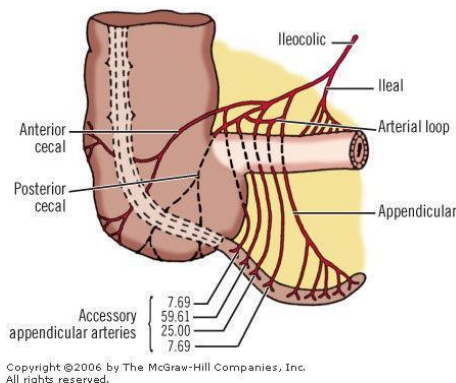
The appendix, although considered to be a vestigial organ, has a huge implication in the field of surgery, as it results in a cuted appendicitis. This study was done on 100 patients in Rajah Muthiah Medical College Hospital, Chidambaram admitted with radiological confirmation of acute appendicitis between September 2014 and September 2016. This study was conducted with the objectives of finding the commonest bacteria found in acute appendicitis and to evaluate the presence of anaerobic bacteria and its role in determining the management of acute appendicitis. Objectives: To study the bacteriology of the appendix post appendectomy in Rajah Muthiah Medical College, To determine the commonest bacteria isolated from the specimen of the appendix, To determine the presence of anaerobic bacteria and its effect on the management of acute appendicitis.

**Keywords:** Appendicitis; Appendectomy; aerobic bacteriae; anaerobic bacteriae

**1.INTRODUCTION**

The appendix, although considered to be a vestigial organ, has a huge implication in the field of surgery, as it results in acute appendicitis. 1 Appendectomy for appendicitis is the most commonly performed emergency operation in the world. 2 The role of bacteria in the occurrence of this disease has been globally accepted and a variety of studies have been done in the past with the aim of identifying the organisms

responsible for the condition (Williams et al., 2013). However, not many studies have been done on this topic in the recent past, especially anaerobic studies (Bruincardi et al., 2010). In this study, we aim to identify the most common aerobic and anaerobic bacteria cultured from the appendix in Rajah Muthiah Medical College.



**Figure 1: Arterial Supply of the Appendix**



**Figure 2: Culture Media Showing Bacterial Growth**

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**2.MATERIALS AND METHODS:**

This study was done on 100 patients in Rajah Muthiah Medical College Hospital, Chidambaram admitted with radiological confirmation of acute appendicitis between September 2014 and September 2016. Patients with recurrent appendicitis and appendicular mass were excluded from the study. Specimen collected from the appendix was cultured for aerobic bacteria according to Koneman and anaerobic bacteria according to Wadsworth Anaerobic manual. Collected data was further analyzed by frequency, percentage and Chi-square test.

**3.RESULTS:**

**Table 6: Anaerob es species**

	Frequ ency	Percent
b.thetaiota micron	1	2.0
bacteroides fragilis	25	50.
bacteroides spp, porphyromonas	1	2.0
bacteroides, clostridia	1	2.0
bacteroides, peptostreptococci	6	12.
Clostridia	5	10.
clostridia, actinomyces	1	2.0
clostridia, bilophilia	1	2.0
Fusobacterium	2	4.0
Peptostreptococci	7	14.
Total	50	100

In our study, out of the 100 patients operated, aerobes were present in 78 specimens (78%) and absent in 22 specimens (22%). Binomial test  $p < 0.001$ . This implies that the finding is highly significant. E.coli was present in 21 specimens (38.7%). Klbsesiella was present in 18 specimens (23.1%), Pseudomonas was present in 13 specimens (16.7%). Anaerobes were present in 50 specimens (50%) and absent in 50 specimens (50%).  $p > 0.05$ . Bacteroides fragilis was found in 25 specimens (50%), Peptostreptococci was present in 7 specimens (14%), bacteroides and peptostreptococci were found in 6 specimens (6%), clostridia were found in 5 specimens (5%).

**4.DISCUSSION**

This study was conducted with the objectives of finding the commonest bacteria found in acute appendicitis and to evaluate the presence of anaerobic bacteria and its role in determining the management of acute appendicitis. Aerobes were more common than the anaerobes (Rondelli, 2013). However, anaerobes were present in 50% of the specimens. Hence, it is important to include anaerobic coverage in the management of acute appendicitis.

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