

A CLINICAL AND MICROBIOLOGICAL STUDY OF GALL STONE DISEASE

ABSTRACT:

Introduction: Cholecystitis and cholelithiasis with its complications dominate the disease of the biliary tract. In Asian countries, the prevalence of gallstone disease ranges from 3% to 10%. Cholelithiasis is an increasing problem in India due to westernization of our food culture. Although this disease has a low mortality rate, its economic and health impact is significant due to its high morbidity. The most common bacteria of symptomatic cholelithiasis isolated worldwide were *E.coli* followed by *Klebsiella*, *Salmonella* and *Shigella*. There is relatively sparse data, both local & international on the prevalence of the infection in patients undergoing cholecystectomy. The conservative & prophylactic treatment therefore is based on best guess basis.

Aim of study: This study was done to determine the frequency of common bacteria and their antibiotic sensitivity in patients with symptomatic cholelithiasis. That Antibiotic must be a part of empirical regime as it will help in reducing the morbidity associated with symptomatic cholelithiasis

Materials and Methods: This prospective study was conducted at Department of Surgery, Tirunelveli medical college hospital, Tirunelveli. Total 50 cases were selected and operated by open or laparoscopic cholecystectomy were included in this study. They presented with symptomatic cholelithiasis. Patients with history of acute cholecystitis, acute acalculus cholecystitis, empyema gall bladder, mucocele gall bladder, history of jaundice, stones and or dilated common bile duct and patients who were not willing for surgery were excluded from the study. Ultrasound was the main tool for pre-operative diagnosis. During cholecystectomy, bile was aspirated and specimens were sent to laboratory for microbiological examination. The results were recorded on a proforma.

Results: Culture reports of the bile revealed organism in 23 cases(46%) while it showed no growth of organism in 27 cases(54%). *E.Coli* was the most common organism in 11 patients(22%) followed by *Klebseilla* 6 (12%), *Proteus vulgaris* 3 (6%), *Salmonella* 2(4%) and *Shigella* 1(2%). Out of 23 cases with microbial growth in bile, 17 were from pigment stones and 6 were from cholesterol stones. On culture and sensitivity test, all the 5 isolated bacteria showed sensitivity to Cefuroxime, Ceftriaxone and Ciprofloxacin in more than 50% cases, while all the five bacteria showed resistance to amoxicillin in more than 50% cases.

Conclusion: The most common bacteria of symptomatic cholelithiasis are *Escherichia coli* and *Klebsiella* followed by *Proteus vulgaris*, *Salmonella* and *Shigella*. These bacteria showed maximum sensitivity to cefuroxime and ceftriaxone. The empirical antibiotics used for the treatment of symptomatic gall stone disease must cover these common bacteria. Ceftriaxone and/or Cefuroxime must be a part of empirical regime as it will help in reducing the morbidity associated with symptomatic cholelithiasis.

Keywords: Antibiotic sensitivity, Bile culture, Cholecystectomy, Cholelithiasis, Culture, gall stone, bactobilia.

