AB067. P-38. Microbial analysis of gallstones and gallbladder tissue by MALDI-TOF in patients with symptomatic gallstones

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Background: Mucosa-associated bacteria (MAB) may play a role in the pathogenesis of chronic cholecystitis and gallbladder carcinoma (GBC) in patients with gallstone (GS). Prevalence and nature of MAB a high incidence area for GBC is not known. We determine the prevalence and nature of bacteria on the gallbladder (GB) mucosal surface and on the GS surface among patients undergoing cholecystectomy.

Methods: A prospective study was performed among patients undergoing cholecystectomy (94 symptomatic GS, 2 each of Whipple's surgery, pediatric cholecystectomy & pediatric choledochol cyst) from April, 2017–April, 2018. Clinical and demographic profile was recorded. Immediately after surgery 1 GS and 1 cm^2 GB tissue was inoculated in two separate Robertson cooked meat (RCM) media & cultured on blood & MacConkey agar plates. The nature of bacterial species was identified using MALDI-TOF.

Results: The mean age of the study subjects was 44.2±13.67 years and 81% were females. Out of the 94 cases with GS 69 (73%) of GB mucosal samples were culture positive and 38 (40%) of GS were culture positive. Both (GB tissue & GS) were culture positive in 35 (37%) of the patients while both were culture negative in 16 (17%). Similar organisms were found in 17 (18%) and different were found in 14 (15%). Among the patients who were culture positive (n=69) in GB tissue 43 (62%) were Gm negative and 26 (38%) were Gm positive. A similar profile was seen in GS. The commonest Gm negative were *E. coli*, *P. aeruginosa*, *P. moselli*, *K. pneumoniae* & Gm positive were *M. luteus*, *S. hominis*, *S. haemolyticus*, *E. faecium*, *C. striatum* in GS and GB tissue. While the GB sample obtained from Whipple's surgery & pediatric surgery were found sterile.

Conclusions: There is high prevalence of asymptomatic bacterial infection in the GB mucosal surface & the GS surface among adult patients with symptomatic GS undergoing routine cholecystectomy. The predominant organisms were Gm negative in nature.

Keywords: Gallstone; microbes; MALDI-TOF

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