Our goal was to evaluate the microbe species responsible for bacteremia or infections related to central venous catheter (CVC) or fluid collections after liver resection” Kostakis et al (2018).

Abstract:

BACKGROUND: Our goal was to evaluate the microbe species responsible for bacteremia or infections related to central venous catheter (CVC) or fluid collections after liver resection.

PATIENTS AND METHODS: Data from 112 patients (68 males, 44 females) who underwent liver resection over a period of 63 months were reviewed. Patient and tumor characteristics, intra-operative and post-operative data, and the results from cultures of peripheral blood, CVC tips and drained intra-abdominal or intra-thoracic fluid collections were collected.

RESULTS: There were positive blood cultures in 20 patients (17.9%). Coagulase-negative staphylococci (CoNS) and bacteria of enteric flora were the micro-organisms found most frequently and half of the cases had multiple isolated microbe species. The construction of a bilioenteric anastomosis was an independent risk factor for microbe isolation in peripheral blood (odds ratio [OR]: 11, p = 0.01). Furthermore, there were positive cultures of the CVC tip in 14 patients (12.5%), with CoNS being the micro-organism found most frequently and most cases had only one isolated microbe species. No specific risk factor for catheter-related infections was detected. In addition, there were positive cultures of drained fluid collections in 19 patients (17%), with bacteria of enteric flora being the micro-organisms found most
frequently and the majority of cases had multiple isolated microbe species. The construction of a biliary-enteric anastomosis (OR: 23.5, \(p = 0.002\)) and the laparoscopic approach (OR: 4.7, \(p = 0.0496\)) were independent risk factors for microbe isolation in drained fluid collections. Finally, the presence of positive blood cultures was associated with the presence of positive culture of CVC tips (\(p = 0.018\)) and drained fluid collections (\(p = 0.001\)).

CONCLUSIONS: Post-operative bacteremia, colonization of CVCs, and contamination of fluid collections occur frequently after liver resections and various microbe species may be involved. Patients who undergo hepatectomy and a synchronous construction of a biliary-enteric anastomosis are at increased risk of bacteremia development and contamination of fluid collections.

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