

Session: P095 Intestinal and intraabdominal infections

Category: 2d. Abdominal/gastrointestinal, urinary tract & genital infections

25 April 2017, 12:30 - 13:30
P2005

Anaerobic flora as aetiological agents of abscesses of internal organs and body cavities in patients hospitalized in a tertiary care university-affiliated hospital

Agnieszka Milner¹, Halina Marchel¹, Grazyna Nurzynska¹, Marta Wroblewska^{*2}

¹*Central Clinical Hospital; Department of Microbiology*

²*Institute of Hematology And; Infection Control Unit*

Background:

Anaerobic bacteria are important etiological agents of both endogenous and exogenous infections, located in different tissues and organs. Infections caused by Gram-positive and Gram-negative obligatory anaerobic flora may lead to complications, such as abscesses of internal organs and body cavities in different anatomical locations.

The aim of the study was to evaluate the profile of strictly anaerobic bacteria isolated from abscesses localized in the internal organs of patients hospitalised in a tertiary care university-affiliated hospital and to assess their susceptibility to antimicrobials.

Material/methods:

Analysis comprised of 344 samples for anaerobic cultures, obtained from the internal organ and body cavity abscesses of 296 patients in the period 01.01.2014 – 30.09.2016. Samples were cultured using standard microbiological procedures. Isolated bacteria were identified by MALDI-TOF MS system (Maldi Biotyper Microflex LT, Bruker, Germany). Antimicrobial susceptibility was determined by ATB ANA tests (bioMerieux) or antibiotic gradient strips (E-test, bioMerieux).

Results:

In total 344 clinical samples were cultured for strictly anaerobic bacteria, out of which 118 (34.3%) were positive. These samples yielded 239 isolates. The most common were samples from liver abscesses (n=86, 25.0%) and peritoneal cavity abscesses (n=86, 25.0%), followed by pancreas abscesses (n=39, 11.34%), perianal abscesses (n=37, 10.75%) and brain abscesses (n=22, 6.39%). The most commonly isolated bacteria comprised the strains of *Bacteroides fragilis* group (n=85, 35.56%), and *Fusobacterium* spp. (n=29, 12.13%). All isolates of *Fusobacterium* spp. (100.0%) were susceptible to penicillin, amoxicillin/clavulanate, clindamycin and metronidazole, in contrast to *Bacteroides fragilis* rods, characterised by the following susceptibility profile: 0%, 98.82%, 45.88%, and 100.0%, respectively.

Conclusions:

1. In the analysed group of patients the most common complications were abscesses localised in the gastrointestinal tract, which reflects the profile of the hospital.
2. Predominance of Gram-negative anaerobic flora indicates an endogenous source of infections complicated by abscess formation.

3. A high percentage of strains susceptible to metronidazole and amoxicillin/clavulanate confirms the sustained usefulness of these antimicrobials in the therapy of infections caused by anaerobes.