

Aeromonas sobria sepsis in a neutropenic patient

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Abstract

We report the case of a neutropenic patient with hematologic malignancy who developed a sepsis by *Aeromonas Sobria*, an emerging pathogen. Antimicrobial therapy with Ciprofloxacin and Amikacin was administered achieving complete recovery of infection.

Text

Aeromonas sobria (*A. sobria*) is an aerobic, gram-negative, bacillus, usually living in fresh- or sea- water where often infects the aquatic fauna. It also may be isolated on wash-basin drains, water pipes, taps and distilled water installations. Such an organism is a pathogen which is emerging as a cause of hospital bacteremia in immunocompromized patients whose main infection sources are hygienic installations. In comparison with bacteremia by other gram-negative bacilli, that caused by *A. sobria* is less frequent, but ofte represents a therapeutic problem for its resistance to many antibiotics except fluoroquinolones, as ciprofloxacin which is instead effective against it. We report below the case of a neutropeni patient with an hematologic malignancy who developed an *A: sobria* sepsis. A 79-years old woman was admitted to our hospital with asymptomatic pancytopenia. Phisical examination revealed only a mild hepatomegaly, without spleen and lymph nodes enlargement; body temperature was normal. Complete blood count included hemoglobin level of 8.4 gr./dl, platelet count of 138.000/mmc and white blood count of 1100/mmc with neutropenia (418/mmc) relative lymphocytosis (60%) and blasts in peripheral blood smera. By bone marrow examination and immunophenotypic analysis, acute myeloid leukaemia diagnosis was formulated. Antileukemic chemioterapy (with Idarubicin+Cytarabine+Etoposide) was started and carried out for 5 days. After 4 days neutrophil count dropped even more (6/mmc). In the next days intermitted fever (with thermic peak at 39,2°C) occurred. An empirical antibacterial therapy i.v. (i.e. Teicoplanine 400 mg./die+ Piperacillin/Tazobactam 4,5 gr.x 4/die + Imipenem 0.5 gr.x 3/die) associated with antifungine and antiviral agents (respectively: fluconazole 200 mg./die i.v. and Acyclovir 250 mg. X 3/die i.v.) was so started and myelostimulating trial with prednisone (50 mg./die os) was performed. Serial blood and urine cultures, as well as other microbiological studies on pharyngeal, rectal and vaginal material were initially negative. *Toxoplasma gondii*, rubeola cytomegalovirus and herpesvirus simplex 1-2 sierology didn't prove an ongoing infection. Chest radiograph showed mild strengthenng without lung consolidation. After 12 days of persistent fever despite antimicrobial therapy, *A. sobria* was isolated from blood culture. According to relative antibiogram (Table 1), specific antibiotic therapy was undertaken, substituting Piperacillin/Tazobactam and Imipenem by Amikacin (1,5 gr./die i.v.) and Ciprofloxacin (400 mg. X 2/die i.v.) added to Teicoplanine and Fluconazole. Persisting furthermore severe neutropenia, administration of recombinant human granulocyte-colony stimulating factor (rh G-CSF) - 300 mcg./die s.c. - was addes. After one week of combination antibiotic therapy (Teicoplanine + Amikacin + Ciprofloxacin + Fluconazole) fever disapparead. *A. sobria* didn't turn out any longer from serial blood

cultures. Almost at the same time leucocyte and granulocyte count gradually recovered reaching normal values within 10 days while myelostimulating treatment was continuing. In conclusion, the above case illustrates efficacy of Ciprofloxacin and Amikacin in the management of infections caused by *A. sobria*, a "difficult" organism. Undoubtedly white blood recovery contributed to success of antibiotic therapy.