Salmonella enterica subsp houtenae SEROGROUP O:16 IN A HIV POSITIVE PATIENT: CASE REPORT

Maria Cristina S. LOURENÇO(2), Eliane Falavina M. dos REIS(1), Rogério VALLS(2), Marise Dutra ASENSI(1) & Ernesto HOFER(1)

SUMMARY

We described a case of salmonellosis in a 33-year old HIV-infected patient. The patient presented oral and esophageal candidiasis, intense epigastric and retrosternal pain. During the physical examination he was hypochloremic, acyanotic, anicteric and afebrile. Admittance laboratorial tests indicated: red cells 3.6 millions/mm³; hemoglobin, 10.1 g/dL; leukocyte count, 3,000/mm³, with 1% of eosinophils, 14% of non-segmented and 53% of segmented neutrophils and 31% of lymphocytes. The blood culture was positive for Salmonella enterica subsp houtenae serogroup O:16. This is probably the first human report of bacteremia due to Salmonella enterica subsp houtenae in Brazil associated to HIV-infected patient.

KEYWORDS: Salmonellosis; S. houtenae; HIV patient; Blood culture.

INTRODUCTION

Salmonellosis is an important zoonosis in developing countries. It is widely disseminated within animals, affecting homeothermic and poikilothermic species, which is an infection source. Main dissemination routes are represented by contaminated food and water.

Salmonella genus presents two species: S. bongori and S. enterica and six subspecies (I a VI), called enterica, salamae, arizonae, diarizonae, houtenae and indica. Salmonella enterica subsp enterica presents the greatest number of serovars (2480) and it is often related to human and animal pathological processes, mostly Enteritidis, Agona, Infantis, Typhimurium, Heidelberg and Dublin serovars.

Although Salmonella enterica subsp houtenae currently comprises 71 distinct serovars (POPOFF & LE MINOR, 2001) human infections due to this microorganism are rarely documented, with less than 1% of isolations (TAUNAY et al., 1996; TAVECHIO et al., 2002). We report the isolation of this species of Salmonella from blood culture of a HIV-infected patient in Rio de Janeiro, Brazil.

CASE REPORT

A 33-year-old man, white, single, was attended at Instituto de Pesquisa Evandro Chagas (IPEC)/Fundação Oswaldo Cruz/FIOCRUZ, an infectious and parasitical diseases hospital unity, on August 10th, 2002, complaining of intense epigastric pain and retrosternal pain.

The patient has had an irregular follow up in IPEC since 1996, when he sought medical assistance due to an AIDS related disease, the cryptococcal meningitis. At that moment his blood test for HIV infection was positive and confirmed the sign and symptoms. He reported drug addiction and had low adherence to the antiretroviral drugs and prophylaxis prescribed. The last CD4+ T-cell count (September 2000) was 60 (Facs Count – Becton & Dickson) and viral load was 330000 (5.52 log) (NASBA test – Organon). He lived in a brick house in Rio de Janeiro periphery with piped water and cohabited with dogs and birds. On the physical examination he was pale, hypochloremic, acyanotic, anicteric, hypohydrated with massive oral and esophageal candidiasis. Blood pressure and axilar temperature were normal.

At patient’s admittance, CBC analysis indicated: red cells 3.6 millions/mm³; hemoglobin, 10.1 g/dL; leukocyte counting, 3,000/mm³, with 1% of eosinophils, 14% of bands; 53% of polymorphs/neutrophils and 31% of lymphocytes. Dosages of bilirubin, ALT, AST, glucose, urea, creatinine, chlorine, sodium, potassium and albumin were at normal levels. Gamma glutamyl transferase dosage was 210 g/dL. Abdominal ultrasound revealed homogenous splenomegaly, with no further alterations. Three blood cultures were collected and referred to Bacteriology Laboratory in IPEC.

The patient remained afebrile and without diarrhea until the third day in the hospital when fever of 38.5 °C was detected. On the same day, was given ciprofloxacin (500 mg, 12/12h) and the Bacteriology Laboratory informed that two of three blood samples showed bacterial growth. After the third day of treatment, fever and epigastric pain yielded and, on August 20, 2002 he was dismissed.

Blood cultures were done through BACTEC 9050 system (BioMérieux) and, at the first sign of bacterial growth, it was subcultivated on Agar Blood plates (Columbia Agar Base -MERCK with 5% of defibrinated sheep blood –produced by FIOCRUZ), incubated at 37 °C in aerobic conditions. After 24 h-incubation period, isolated colonies were identified through API 20E system (BioMérieux), as Salmonella enterica subsp houtenae by an NASBA test – Organon. The stain was identified as S. enterica subsp houtenae based on the following biochemical tests: production of acids from: lactose...
It is important to consider the fact that the patient cohabited with birds and dog, which might have served as Salmonella reservoirs, as well as the possibility of contamination through ingested food, although there was no intestinal repercussion (diarrhea).

This report may serve as an alert in the search for bacteriological diagnosis in clinical cases of HIV positive patients with or without fever and splenomegaly, as well as to emphasize clinical signs that do not occur as in classical salmonellosis cases. Early diagnosis and treatment could provide advantages for life quality and management of these patients.

**RESUMO**

Salmonella enterica subsp houtenae sorogrupo O:16 em um paciente HIV positivo: relato de caso

Descriwe-se um caso clínico de salmonelose ocorrido em paciente HIV positivo de 33 anos, portador de candidíase oral e esofágica, com intensa dor abdominal superior e dor retro-esternal. Ao exame clínico apresentou-se hipocôrerdão, acianótico, hipohidratado, anictérico e afebril. A investigação laboratorial na admissão apresentou: hemácias, 3,6 milhões/mm³; hemoglobina, 10,1 g/dL; contagem de leucócitos, 3,000/mm³, com 1% de eosinófilos, 14% de bastões; 53% de neutrófilos segmentados e 31% de linfócitos. A hemocultura foi positiva para Salmonella enterica subsp houtenae sorogrupo O:16. Provavelmente, este é o primeiro relato de caso clínico humano com bactereia causado por Salmonella enterica subsp houtenae no Brasil associado a paciente HIV-infected.

**ACKNOWLEDGMENT**

To Dr. Dália dos Prazeres Rodrigues, chief of Laboratório de Enterobacterias/IOC/FIOCRUZ, for technical support.

**REFERENCES**


Received: 6 October 2003
Accepted: 15 April 2004