ISSN 2692-5877
DOI: 10.46998/IJCMCR.2023.33.000821

International Journal of
Clinical Studies & Medical Case Reports

Case Report

Rickettsiosis and Pancreatitis

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Received: September 06, 2023 **Published:** January 29, 2024

Abstract

Mediterranean spotted fever is an infectious disease caused by Rickettsia conorii. It is characterized by the symptomatological triad: fever, maculo-papular rash and black spot.
Mediterranean spotted fever usually has a mild course, but sometimes it can have a severe evolution. Gastrointestinal complications are relatively common and affect up to 30% of patients. We report a case of Rickettsiosis with exceptional pancreatic involvement.

Keywords: Mediterranean spotted fever; Pancreatitis; Rash

Introduction

Mediterranean spotted fever is an infectious disease caused by Rickettsia conorii. It is usually characterized by the following symptomatological triad: fever, maculo-papular rash and black spot, the typical eschar at the site of the tick bite. Other common symptoms may be associated: myalgias, arthralgias and headaches [1].

This disease is transmitted by the dog tick Rhipicephalus Sanguineus, and is endemic in the Mediterranean area, particularly in southern Europe and North Africa [1].

Mediterranean spotted fever usually has a mild course.
However, it can have a severe evolution, with neurological, respiratory, cardiac or digestive disorders, which can reach, in some cases, high mortality rates [2,3].
We report a case of Rickettsiosis with exceptional pancreatic involvement.

Observation

76-year-old patient, hypertensive for 3 years on calcium channel blockers, was admitted to the emergency room with a febrile consciousness disorder which the history goes back to 10 days before her admission when she presented a fever with chills and headache and then the onset of consciousness disorder. 3 days later she developed a skin rash. The clinical examination revealed an unconscious patient, Glasgow score 10, blood pressure130/80mmHg, heart rate 80b/mn, febrile at 38.7 with neck rigidity.

The dermatological examination showed a maculopapular exanthema, with purpuric elements in some places, diffused over the whole tegument, the escarotic spot was not found in our patient. There was no mucosal or phanerotic involvement.

Figure 1: Maculopapular rash.

In front of this clinical picture of febrile rash, a meningococcal meningitis was suspected, eliminated by a lumbar puncture and brain scan that was normal.

Biological workup: renal failure with urea at 3.99 and creatinine at 47, renal ultrasound normal, glycemia = 3.2. kalemia, natraemia, blood count, c-reactive protein, prothrombin level and urine cytobacteriological examination were normal.

The patient received two sessions of hemodialysis with improvement of the state of consciousness and renal function with urea at 1.32 and creatinine at 14.

During her hospitalization, she presented epigastralgia with epigastric sensitivity and hight level of lipasemia a stage E

pancreatitis of the BALTHAZAR classification on abdominal scan.

The patient was treated by DOXY 200/d + CIPRO 750 twice a day with good improvement. Indeed, she disinfiltrated her rash, improved her state of consciousness and healed her pancreatitis with a normal level of lipasemia after 05 days of treatment. A serology of Rickettsiosis was positive confirming the diagnosis.

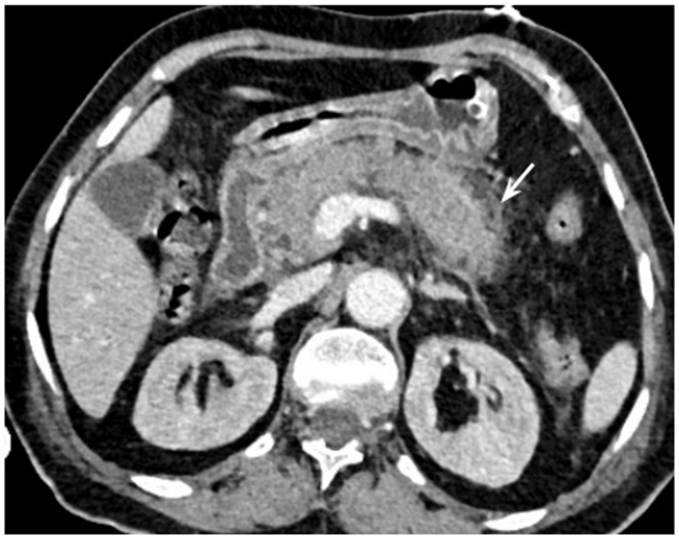

Figure 2: CT images of stage E pancreatitis.

Discussion

Mediterranean spotted fever is characterized by the association of fever, maculopapular rash and black spot not usually found like in our patient [1].

Usually, Mediterranean spotted fever is characterized by a benign course. However, forms of rickettsial disease have been described with a more severe course in 5-6% of cases and sometimes fatal. The number of severe or fatal cases of Mediterranean spotted fever varies from year to year and also by geographic region. The reasons for these variations are still unknown [4-6].

After the tick bite, the bacterium enters the body through the skin and reaches the circulation and the vascular endothelial cells. There it causes vasculitis, which is responsible for the clinical and biological manifestations, with increased vascular permeability, edema, and an immune-mediated response by natural killer cells, interferon gamma, antibodies, tumor necrosis factor alpha, and cytotoxic T cells [7].

In most cases of Mediterranean spotted fever, focal lesions in various organs are observed, but these are not responsible for severe organ dysfunction [7].

Gastrointestinal complications are relatively common and affect up to 30% of patients [8] The most frequent manifestations are: nausea, vomiting, diarrhea, and gastrointestinal bleeding. Hepatic involvement is very common, although mild, consisting of hepatomegaly and abnormal liver function tests. However, in a few cases, transaminase elevation may be severe and recovery delayed [9,10]. Rarer is the pancreatic involvement [11,12].

Our patient had no hematological damage, but had developed renal failure and severe pancreatitis stage E of the BALTHAZAR classification which is very rare.

Would the renal involvement in this case be secondary to organ dysfunction during pancreatitis, or could it be part of the visceral manifestations during Rickettsiosis?

The pancreatic involvement was described in the literature in a few cases.

In the first case, the pancreatic involvement was mild, with a rapid response to antibiotic therapy [11].

In the second case, a patient admitted for pancreatitis management developed a rash with an escarotic spot two days later and was found to be serologically positive for Rickettsial disease. The patient was treated by DOXY 200mg/d with a complete remission of his pancreatitis and rash after 05 days of treatment [12].

Other cases described with severe involvement of several organs, including the pancreas, in three South African patients infected with Rickettsia conorii [13].

Conclusion

Involvement of the gastrointestinal tract during Mediterranean spotted fever is not uncommon, however, pancreatic involvement is exceptional but should not be overlooked.

Consent: The examination of the patient was conducted according to the Declaration of Helsinki principles.

Conflicts of interest: The authors do not declare any conflict of interest.

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