FIVE CASES OF ATYPICAL PRESENTATION OF RICKETTSIAL INFECTIONS

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BACKGROUND

Rickettsia conorii is the most frequent species of Rickettsia causing disease in Portugal. The usual presentation is a triad of signs including fever, exanthema and headache, associated to an eschar.1

Several atypical signs of rickettsiosis have been described, such as interstitial pneumonia, pericardial effusion, myositis1 and meningitis2 which makes early diagnosis a challenge.2 Also there is growing evidence that the exanthema appears late in the course of the disease and isn’t pathognomonic.4

AIM

To analyse unusual presenting symptoms and signs of rickettsial infections

METHODS

Descriptive study, from 2000 to 2010, of children admitted to our hospital with atypical presentation of rickettsial infections. Diagnosis was defined according to clinical presentation, serology and PCR. Demographic data, contacts with animals, clinical presentation, complementary exams, final diagnosis and evolution were analysed.

CASE 1

2 year old boy
Eschar
No tick, animal bite or exposure
Fever, cough, limb pain, hepatosplenomegaly
No rash

Fever
Myositis (CPK 9.600 U/L), Hepatitis (AST 287 U/L, ALT 1.148 U/L)
Edema (hyaloalbuminemia (1,6 g/dL), pericardial effusion

Leukocytes -
PCR 20 mg/dL

IFI Rickettsia (2 weeks apart)
IgM positive 1:32 (2 occasions)
IgG negative

Rickettsia conorii

Doxycycline

MYOSITIS

HEPATITIS

SEROSITIS

CASE 2

20 months old boy
No eschar, tick bite or exposure
Contact with dogs
Fever, vomiting
Functional disability
Exanthema

Fever, vomiting, maculo-papulo-nodular exanthema
Hip arthritis (synovial fluid on the left hip)

Leukocytes -
VS 43 mm/h, PCR 16,21 mg/dL
Blood and synovial fluid culture - Negative

IFI Rickettsia (acute, convalescent samples):
IgM positive 1:32
IgG seroconversion (negative to 1:123)

Rickettsia conorii

Doxycycline

HIP ARTHRITIS

CASE 3

3 years old boy
Eschar
Contact with dogs
Fever, myalgias, hepatosplenomegaly
Exanthema

Fever, maculo-papular exanthema, conjunctival hyperemia
Myalgias, Hepatosplenomegaly , abdominal pain

Leukopenia (1.900 cells/µL)
Thrombocytopenia (75.000 cells/µL)
Ultrasound: ↑ gall bladder wall thickness, intra-abdominal fluid and hepatic lymphadenopathy

PCR (Rickettsia spp): positive

Rickettsia conorii

Azitromycin

CHOLECYSTITIS

CASE 4

2 years old boy
Eschar
No tick, animal bite or exposure
Fever, exanthema

Fever, maculo-papulo-nodular exanthema, conjuntival hyperemia, hepatomegaly, lymphadenopathy, left scrotal edema

Leukopenia (2.900 cells/µL)
Thrombocytopenia (90.000 cells/µL)
Ultrasound: left hydrocele and epididymitis

IFI Rickettsia (acute): negative
PCR (Rickettsia conorii Malish): positive

Rickettsia conorii

Azitromycin

EPIDIDYMISIS

CASE 5

18 years old boy
No eschar, tick bite
Contact with a squirrel and dogs
Low fever, headaches, lethargy
No rash

Fever, headaches, LCR pleocytosis (320 cells/µL)
Hypoglicorrachia (38 mg/dL), hyperproteinorrachia (284 mg/dL)

Leukocytes -
PCR 20 mg/dL

IFI (acute, convalescent samples):
IgM negative, IgG positive (1:128; 1:1024)
PCR blood and cerebrospinal fluid : negative
Squirrel serology: positive (IgG 1:64)

Rickettsia conorii

Doxycycline

MENINGITIS

CONCLUSIONS

Rickettsiosis is a well known disease, with specific signs and symptoms overtly described. However, there are many presentations which are rare and don’t fit in the common description for this disease. Indeed, the previously presented cases are unusual and peculiar. Also two cases presented without exanthema, which enhance the relevance of a low diagnostic threshold for this disease. In the first case there was no seroconversion, probably due to infection with a related spotted fever group conorii strain Rickettsial diseases typhus and spotted fever may cause central nervous system infection. For patients with fever and headache but no rash or eschar, diagnosis is difficult

REFERENCES