INTRODUCTION:

Fever of unknown origin (FUO) is one of the most common and difficult diagnostic challenges in daily practice. (1) The exact definition of FUO is a subject of disagreement and controversy, but the “presence of fever for 8 or more days in a child for whom a careful and thorough history, physical examination, and preliminary laboratory data fail to reveal a probable cause of the fever” seems like a reasonable working definition for clinical purposes. (1,2)

Four categories are usually taken into account: infectious, rheumatic/inflammatory, neoplastic, and miscellaneous disorders (10-20% of cases in which a definitive diagnosis is never established). (1,2) Most underlying causes are relatively common, but sometimes atypical manifestations can occur; indeed, it is more likely for a FUO in pediatrics to be caused by an unusual manifestation of a common disorder rather than a common manifestation of a rare disorder. (2)

CASE REPORT:

Previously healthy 14-year-old boy
3-week history of high fever (39.5°C maximum)
Involuntary weight loss of five kilos and night sweats.
Left axillary lymphadenopathy
He lived in a rural region
Had a domestic cat
Didn’t consume unpasteurized dairy products
No recent travels

Physical examination
Cervical, inguinal and axillary lymphadenopathy with no inflammatory signs
Abdominal pain with left shoulder discomfort
Upper left abdominal tenderness at palpation
No palpable organ enlargement

Abdominal ultrasound and CT scan
MILD SPLEEN ENLARGEMENT WITH MULTIPLE HYPOECOGENIC AND HYPODENSE INFRACENTIMETRIC LESIONS ALL OVER THE PARENCHYMA, RESEMBLING MICRO-ABSCESSES

Bloodwork
Haemoglobin 12.6 g/dL
WBC 7.9 x 10^9/L
Neutrophils 68.5% / Lymph 20.5% / Mono 6.8%
Erythrocyte sedimentation rate 101 mm/h
C reactive protein 139.5 mm/h
Ferritin 253 ng/ml
Globulin fractions:
α1 5.7 g/l / α2 13.3 g/l / γ 22.0 g/L

Etiologic investigation
Serologies for L. monocytogenes, Borrelia, Rickettsia, Toxocara, Caxiella
PCR/Urinalysis for Leptospira
HIV 1/2
Tuberculin test, IFN-gamma release assay (IGRA)
Ziehl-Neelsen, PCR and Lowenstein for M. tuberculosis
Cultures (blood, urine, faeces)
Auto-immunity serologies
NEGATIVE

Rifampicin + Ciprofloxacin 6-week

Follow up (3 months after): Spleen with normal dimensions, with less expressive nodular hypoecogenic lesions

DISCUSSION:

Cat-scratch disease (CSD) is usually characterized by an acute and relatively mild clinical presentation of regional lymphadenopathy, fever, fatigue, weight loss and other constitutional symptoms after a scratch/bite from a cat or kitten. (3,4)

In a number of cases (~5-14%) unusual manifestations can occur (5); hepatitis-related CSD is one of them, taking part on the differential diagnosis of a fever of unknown origin or a prolonged fever in children. (4,6) Antibiotic treatment may be needed in unusual forms, and several regimens have been used, such as rifampin, trimethoprim-sulfamethoxazole, azithromycin and parenteral gentamicin (2,5,7). In our case, we used a 6-week treatment of rifampicin and ciprofloxacin with a favorable outcome.