

Rickettsia conorii: Unusual cause of diarrhoea[☆]



Rickettsia conorii: causa inusual de diarrea

This article looks at the case of a 59-year-old female whose only relevant history was primary hypothyroidism. This was treated by a digestive disease outpatient clinic in September 2016 after she was referred from her primary care doctor due to suffering from diarrhoea for 15 days. Interesting epidemiological information included a tick bite 2 weeks earlier (she had dogs and lived in the countryside). The patient complained of severe asthenia, headache, myalgia and 4–5 semi-solid stools without blood, mucus or pus as a result of this tick bite. She had not travelled abroad. She had no fever upon physical examination at the clinic, but said she felt cold (she had a fever of 38.5 °C for the first 3 days after the onset of symptoms).

A comprehensive stool culture was done with no relevant findings, and also an ileocolonoscopy was performed with no relevant gross findings, although biopsies showed mild non-specific inflammation. The following lab test results were obtained: negative transglutaminase antibodies, normal thyroid hormones and positive IgM test for *Rickettsia conorii* at titres of 1:160, plus high CRP and 13,000 leukocytes.

As a result of these findings, the patient received an empirical cycle of doxycycline (100 mg/12 h on the first day followed by 100 mg/day orally for a further 6 days) with clear improvement. She was asymptomatic after three days of treatment with normal number and consistency of bowel movements. Five months later, the patient is completely asymptomatic.

Rickettsiae are gram-negative bacteria that behave as obligate intracellular parasites. The most common rickettsiosis in Spain, which is also most prevalent in the Mediterranean region (Spain, Italy, France and Israel), is Mediterranean spotted fever.^{1,2} There was a major resurgence of this zoonosis in these countries after approximately 1975. Rickettsioses can be transmitted through bites or stings, although they tend to infect hosts via vectors such as ticks or fleas. Human beings are accidental hosts.³

In the case of Mediterranean spotted fever, a large number of patients report previous contact with dogs. Its main vector is a tick (*Rhipicephalus sanguineus*) and its causative agent is *R. conorii*. Notably, most cases occur in the summer, coinciding with the tick season. Its incubation period can vary from 5 to 21 days, although this cannot usually be accurately determined since the tick's bite usually goes unnoticed. It was previously considered a rural disease, but is currently reported increasingly more often in urban areas.^{3–5}

Symptoms tend to have a sudden onset and generally include fever, headache, photophobia, myalgia and malaise.

A papule with a necrotic centre and erythematous halo, known as a black spot or "tache noire", tends to appear at the tick-bite site. This lesion is generally not painful. A maculopapular rash, with palmoplantar involvement, may appear. This is one of the most characteristic features. In some cases, vasculitic lesions, pericarditis, as well as kidney and gastrointestinal symptoms may occur.^{3,6}

Gastrointestinal symptoms (including most commonly diarrhoea, abdominal pain or vomiting) may occur in up to 30% of patients. Although hepatomegaly can also be seen in approximately 30% of cases, liver dysfunction tends to be subclinical.^{3,7}

The aforementioned black spot and especially a history of tick bite are the main features that result in early diagnosis of rickettsiosis. Once the rash appears, a differential diagnosis with other exanthematous diseases, such as toxicoderma, secondary syphilis or measles, must be performed. Serological diagnosis by immunofluorescence assay is fast. This method seems to be the best technique available as it has excellent sensitivity and specificity, demonstrating both specific IgM antibodies to a current infection and residual seropositivity. With this technique, titres of 1:80 or greater are considered significant.^{3,8}

Levels of acute-phase reactants tend to be high. The most common abnormal lab test results are leukopaenia (sometimes leukocytosis) and potential thrombocytopenia. Hyponatraemia may also occur.^{3,8}

If treated appropriately, rickettsiosis is generally a benign disease that can be cured. However, if treatment is delayed for more than one week, it may cause severe consequences and even death. *R. conorii* is highly sensitive to tetracyclines, especially doxycycline. Quinolones are also effective.^{1,3}

To prevent the disease, measures such as checking your dog for ticks and parasites and disinfecting places frequented by infested animals is fundamental.^{2,3}

To conclude, it is important to remember that the patient's medical history is once again fundamental, since epidemiological information is often the only thing that can help us reach an early diagnosis. Given that this is a curable disease, adequate treatment must be started early in order to prevent potential complications. This disease is relatively prevalent in Spain, and can also be observed in urban areas today. Therefore, it must be considered in a differential diagnosis of diarrhoea.

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Plexiform fibromyxoma, a rare mesenchymal gastric tumor



Fibromixoma plexiforme, un tumor gástrico mesenquimal poco frecuente

Plexiform angio-myxoid myofibroblastic tumor, also known as plexiform fibromyxoma, is a novel rare entity of gastric mesenchymal tumors, typical of gastric antrum, and commonly causing mucosal ulceration with upper gastrointestinal bleeding and anemia, and effectively treated by complete surgical resection usually accomplished by distal gastrectomy.

We report one recent patient from our center meeting clinical and histopathologic criteria compatible with plexiform fibromyxoma.

A 37-year-old male patient with no history of interest was admitted with upper gastrointestinal bleeding with hemodynamic instability. A total of three esophago-gastro-duodenoscopies were performed and we could observe a five centimeter-violaceous lesion with antral location. At first it seemed like a blood clot, but later it was checked a greater consistency which was different than a blood clot and more similar to an antral vascular neof ormation (Fig. 1)

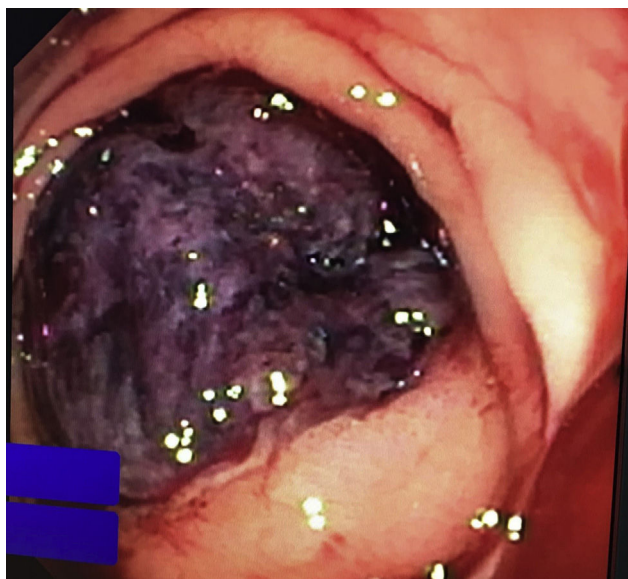


Figure 1 Endoscopic antral lesion.

Abdominal ultrasonography and abdominal contrast-enhanced computed tomography reported an irregular rounded heterogeneous lesion in gastric antrum and acute bleeding areas suggestive of hematoma, with a size of 5.8 × 4 × 5 cm. However they could not check an underlying lesion or associated thickened gastric wall. After a new episode of hemodynamic instability, the patient underwent emergency surgical intervention with an antrectomy (Fig. 2). Postoperative period was uneventful and the patient was discharged on postoperative day 9.

Histopathological examination revealed partial dense collagenous matrices and networks of fine capillary-caliber blood vessels. The tumor demonstrated lobular or fused nodular growth of spindle cells without atypical cytology, with abundant alcian blue-positive myxoid extracellular matrix. Hematoxylin and eosin staining showed lobulated or fused multinodular growth. Immunohistochemically it demonstrated an expression of muscle specific actin, desmin, and immunoexpression of CD10, and it was negative for CD31, CD34, VIII Factor, S100, Ckit, DOG1, HHV8, ALK, MDM2, CD23.

This pathological anatomy revealed a case of gastric plexiform fibromyxoma, an angio-myxoid plexiform myofibroblastic tumor which is a benign tumor that has recently been defined as a multinodular myxoid tumor with a peculiar plexiform growth pattern, myxoid stroma, prominent vasculature, and spindle cells with myofibroblastic differentiation.



Figure 2 Surgical piece.