Gammaglobulin Treatment in an Unusual Meningococcal Case

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To the Editor: Prolonged fever is a possible complication of meningococcal meningitis, appearing in approximately 10 % of cases. Defined as fever lasting from four to ten days after the symptoms of meningitis begin, it can be classified as persistent, secondary or recurrent [1].

In the persistent type, the fever never disappears, and intracranial causes such as brain abscesses, subdural empyema, and vasculitis must be ruled out [1]. The secondary fever re-appears at least 24 h after being afebrile. Extracranial causes should be suspected, including viral and bacterial infections [2, 3]. Finally, with the recurrent fever, a parameningeal focus of infection and congenital defects should be investigated [1].

We report an 11-mo-old male infant with meningococcal meningitis septicemia, who remained afebrile between 24 and 72 h after starting the antibiotic therapy. Fever re-appeared on the fourth day of antibiotic treatment, associated with palpable nodules on his left arm. Four days later, despite non-steroidal anti-inflammatory drugs (NSAIDs) being administered, vasculitis by immune complexes was suspected, and oral steroid treatment with prednisolone was initiated with doses of 2 mg/kg/d. He remained afebrile afterwards and was discharged two days later, receiving antibiotic treatment and oral steroids for a week.

Fever re-appeared 24 h after steroid treatment was completed. Palpable nodular elements persisted together with the appearance of new ones, and arthralgia and a systolic murmur were detected. We restarted 2 mg/kg/d prednisolone dose with subsequent tapering to 0.3 mg/kg/d, with new fever recurrence after it was suspended.

Laboratory studies showed declining levels of C-reactive protein and the erythrocyte sedimentation rate, rising levels of complement factors, negative antinuclear antibody and rheumatoid factor. An echocardiography and urinalysis were normal.

The immune complex vasculitis-arthritis was controlled with steroid treatment but was not resolved yet. Two doses of 2 g/kg/d of intravenous gammaglobulin were needed, after which the fever and arthralgia disappeared.

The presence of palpable nodules, arthralgia and increased acute phase reactants lead to the diagnosis of vasculitis-arthritis by immune complexes [4, 5]. Although there are no protocols involving immunoglobulins for vasculitis management, it has been an effective and extensive treatment over the years in medical practice. Our patient required two doses of gammaglobulin with subsequent complete remission of symptoms.

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