Borrelia burgdorferi and *Coxiella burnetti* were negative and showed *Toxoplasma gondii* past infection. An immunofluorescence assay (IFA) against *Bartonella henselae* showed an IgM titer of 1:200 and IgG titer of 1:3200. Treatment was changed to oral doxycycline and rifampicin. Four days later the patient was discharged with a diagnosis of atypical CSD with parotid abscess and aseptic meningitis. Patient completed treatment for 2 weeks, and 1 month later he had fully recovered. A cervical CT-scan did not show abnormalities and CRP was within the normal range. Six months later, the IgG titer against *B .henselae* had decreased to 1:800.

To our knowledge, this is the first case reported of *B. henselae* infection that appeared as parotid abscess and aseptic meningitis. Some clinical aspects are worth mentioned.

Only 6% of CSD patients are elderly people. CSD is more frequent in women at this age, and atypical and severe forms are more frequent.[3]

Parotid involvement is present in 6% of cervical and head location in CSD[4,5] and generally appears in the context of Parinaud's syndrome but this is very rare in elderly patients.[1–3] The patient did not show the typical eye affectation and only had a parotid abscess that is the typical involvement of parotid in CSD.[5] A rare sign was the presence of torticollis that has been reported in only 1% of cases in cervical CSD, generally associated with deep tissue involvement [4] and that was excluded in our patient by MRI and CT-scans. Encephalitis and neuroretinitis are the most frequent CSD neurologic manifestations.[1,2] Encephalitis is more frequent in elderly patients.[3] Our patient did not develop convulsions, disorder of consciousness or any signs of focal neurological involvement that are typical of encephalitis. Meningitis is a very rare manifestation, and normally appears in the context of neuroretinitis.[6–8] In our patient, the assessment of meningeal signs was difficult in context of neck stiffness and pain secondary to torticollis, but the CSF analysis was indicative of meningeal injury with findings of aseptic meningitis. This fact was essential for the choice of antimicrobials and duration of the therapy. Moreover, our patient did not show ocular involvement or loss of vision suggesting neuroretinitis.

In this case, the diagnosis was made by serologic assays. PCR tests were negative. This fact may be due to the low sensitivity of PCR in some samples and the previous use of antimicrobials. Doxycycline and rifampicin were prescribed since this is the option that experts recommend for CNS involvement.[9,10] Our patient favorably evolved, probably due to the early instauration of the treatment. It is known that delayed treatment is a prognosis factor, especially for elderly people.[6,9,10]

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Characteristics of human metapneumovirus infection, is it important the age?☆

Características de la infección por metapneumovirus humano, ¿es importante la edad?

Acute respiratory infections are one of the main causes of morbidity in children.[1] In recent years, thanks to progress with molecular diagnostics technologies, new viruses implicated in these infections have been described, one being the human metapneumovirus (hMPV).[2]

Although it causes 6–14% of respiratory tract infection admissions in children,[3,4] less often than the main causes of hospitalisation (RSV, parainfluenza), up to 20% of these viral infections in children have been attributed to it.[5,6]

There are few papers that evaluate the epidemiology of hMPV infection in our area, therefore in this scientific letter, we wish to highlight different epidemiological, clinical, diagnostic and therapeutic aspects among the hospitalised children in whom hMPV infection has been demonstrated, and to present the differences encountered between infections in infants under the age of 2 years and older children. This cut-off point was chosen under a hypothesis of greater obstructive symptomatology and severity in infants versus older children.[7,8]

In a retrospective study conducted in our hospital between April 2009 and May 2014, 192 cases of hMPV isolated in nasopharyngeal aspirates were included, corresponding to 190 patients between the ages of 0 and 14 years (in 2 patients, hMPV was isolated in 2 admissions in different years). All the samples were sent to the hospital laboratory's virology department in viral transport media (VTM), and they were studied using direct immunofluorescence with specific monoclonal antibodies

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Table 1
Treatments received based on age group.

Treatment	Under 2 years old $n = 149$; n (%)	Over 2 years old $n = 43$; n (%)	p-value
Bronchodilators	125 (83.9)	27 (62.8)	0.003
Corticosteroids	84 (56.8)	18 (41.9)	0.045
Oxygen therapy	95 (63.8)	20 (46.5)	0.042
Antibiotics	70 (47.3)	34 (79.1)	<0.001

(D3 Duet® DFA RSV/Respiratory Virus Screening Kit, Diagnostic Hybrids).

Patients under the age of 2 accounted for 77.6% of the cases. Of the patients in our series, 10.4% presented an underlying condition (neurological, heart, oncological, prematurity), with no statistically significant differences between the two groups (<2 years 7%; >2 years 11.6%; $p = 0.542$). Eight point nine percent (8.9%) of the patients required admission to the intensive care unit, again with no differences between the two groups (<2 years 10.1%; >2 years 4.7%; $p = 0.370$). One patient died with a congenital cytomegalovirus infection and respiratory exacerbation in the context of the infection.

The under-2 patients more frequently presented cough, rhinitis, apnoea and difficulty breathing, with statistically significant differences found ($p < 0.001$); meanwhile those over 2 more frequently presented seizures and fever ($p = 0.005$). There were 20 patients in whom other germs were simultaneously isolated in the nasopharyngeal aspirate. The isolated germs were *H. influenzae* ($n = 10$), *M. catarrhalis* ($n = 4$), *S. aureus* ($n = 2$), *P. aeruginosa* ($n = 2$), *Candida* ($n = 1$) and *Parainfluenza 3* ($n = 1$). No statistically significant differences were found between the two groups.

Regarding supplementary tests, more laboratory tests were performed in the over 2 group (82.1% vs. 58.2%; $p = 0.006$), as well as more chest X-rays (81.4% vs. 59.1%; $p = 0.007$). There were no differences in the infection marker levels (C-reactive protein and procalcitonin) or white blood cells. Differences were found in the presence of parenchymal consolidations on X-rays, which were more common in the older group (65.7% vs. 40.9%; $p = 0.013$).

The differences in treatment are shown in Table 1.

This study provides data based on a broad patient sample that exclusively corresponds to children under 14. With the hypothesis that there is greater obstructive symptomatology and severity from hMPV infection in infants,[7,8] it was decided to divide the sample into patients over and under 2 years of age. It was found that the latter had greater lower tract involvement and, therefore, a higher need for corticosteroid bronchodilator treatment and oxygen therapy.[9]

Contrary to what was expected, it was observed that more supplementary tests were used in the older patients, which may be explained by more underlying conditions and fever symptoms.[9] Moreover, by presenting more parenchymal condensations, we assume a higher use of antibiotic therapy, despite there being no differences in the infection parameters, supporting the viral origin.

Performing direct immunofluorescence enables a definitive diagnosis to be reached in under 24 h, however, there is no rapid diagnostic test as used in other infections, such as those caused by the flu virus or group A streptococcus, that enable decisions to be made in the emergency department or at the time of admission to the hospital. If such tests existed, they could decrease the use of diagnostic techniques and unnecessary treatments, as we have seen happen.

Admission to the intensive care unit was required for a significant number of patients in both groups, therefore hMPV should be considered in the aetiological diagnosis of respiratory infections in patients requiring admission to the hospital.

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Primary sternal osteomyelitis caused by *Salmonella enteritidis*

Osteomielitis esternal primaria causada por Salmonella enteritidis

Salmonella osteomyelitis is a rare infection manifested mostly in patients with sickle cell disease. Of all locations, sternal osteomyelitis comprises only 0.3% of the cases,[1] the majority being a complication secondary to sternotomy. Primary sternal osteomyelitis is a rare syndrome, with *Staphylococcus aureus* being the most frequent cause.[2] We report the case of a primary sternal osteomyelitis caused by Salmonella.

A 45 year-old male presented with a long-standing history of an osteo-cutaneous fistula over the sternal area. His previous medical history included poorly controlled Diabetes Mellitus and hypertrigliceridemia. His present illness started 16 months before his visit to our hospital, when he developed a left pectoral muscle tear after lifting a heavy object. He initially received conservative care with little improvement, later presenting with fever, pain and edema over retrosternal area. An MRI demonstrated an isolated left major-pectoralis abscess near the left sternum border at the level