

tion, with emphasis on past contact with cats, as especially kittens, are the main reservoir of *B. henselae*.⁴ The microbiologic diagnosis is based on the detection of high titres of antibodies (IgG/IgM) against *B. henselae* in the acute phase of disease. Nevertheless, if there is a high suspicion of CSD and the initial antibody titers are negative, they should be repeated in 2–3 weeks. Another available option is PCR for detection of *B. henselae* in blood, tissue and other fluids.

The diagnosis of CSD in patients with an atypical presentation poses a challenge. In patients with FUO and suspected CSD, performance of an abdominal ultrasound is a prudent measure while awaiting the results of serologic tests, as this is a non-invasive test that can detect the characteristic microabscesses in the liver or spleen, in addition to an eye funduscopy, whose findings can not only guide the differential diagnosis of rheumatologic diseases but can also support the diagnosis of CSD.⁵ We also ought to underscore that there should be a high index of suspicion of osteomyelitis in these cases, as the findings of the physical examination may be unremarkable and the levels of inflammatory markers within normal range.⁶

The optimal antibiotic treatment for disseminated CSD is still under debate, although courses lasting 2–6 weeks are generally recommended depending on the extent of disease.¹ Our patients received combined therapy with RIF/DOX, antibiotics that have been found to achieve adequate control of the disease in the past. In brief, we present 2 cases of disseminated CSD that responded to antibiotic therapy, emphasising the importance of taking a detailed history, with emphasis on the investigation of epidemiologic factors, and a thorough physical examination to assess the possibility of CSD and avoid unnecessary tests when the diagnosis of FUO is being considered.

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Is the vertical transmission of *Chlamydia trachomatis* a little known problem in Spain? ☆,☆☆



¿Es la transmisión vertical de *Chlamydia trachomatis* un problema poco reconocido en España?

Dear Editor:

Infection by *Chlamydia trachomatis* is an important public health problem worldwide, and *C. trachomatis* is the

most frequent bacterial cause of sexually transmitted diseases. The infection can be acquired by passage through the birth canal and may cause neonatal nasopharyngitis and/or conjunctivitis (usually with onset 5–12 days post birth) and pneumonia in the first 3 months of life.^{1,2} The aetiological diagnosis of these infections is important, as the symptoms overlap with those caused by other microorganisms and treatments that do not include a macrolide may not be effective against *C. trachomatis*. The aim of our study was to establish the rate of perinatal transmission of infection by *C. trachomatis*.

We conducted a prospective study between October 2010 and September 2015 by performance of real-time nucleic acid amplification tests (NAATs) (Cobas[®] 4800 CT/NG, Roche) to assess for the presence of *C. trachomatis* in 103 newborns of infected mothers identified by screening during the puerperium period at the Hospital Universitario Donostia (HUD).³ The research project was approved by the Ethics Committee of the HUD (memorandum 9/2010). All the participants, as is done routinely in all newborns delivered at the HUD, received ocular prophylaxis with a topical cream (active ingredient: tobramycin through October 2013, and chlortetracycline hydrochloride thereafter). We assessed newborns for vertical transmission 7–10 days post birth by means of a physical examination and collection of a throat

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Table 1 Clinical characteristics of vertical transmission of *Chlamydia trachomatis*: 103 cases of exposure (October 2010–September 2015).

Clinical characteristics	Vertical transmission (%)	P (Fisher exact test)
<i>Prepartum antibiotherapy</i> ^a		.03*
Yes	0/30 (0)	
No	11/73 (15.1)	
<i>Mode of delivery</i>		.35
Caesarean section	0/13 (0)	
Vaginal	11/90 (12.2)	
<i>Gestational age</i>		1
<35	0/4 (0)	
≥35	11/99 (11.1)	
<i>Birth weight</i>		.60
<2500 g	0/7 (0)	
≥2500 g	11/96 (11.5)	
<i>Maternal age</i>		.35
<25	6/42 (14.3)	
≥25	5/61 (8.2)	
<i>Primiparous mother</i>		.45
Yes	4/53 (7.6)	
No	7/80 (8.8)	
<i>Forceps/vacuum delivery</i>		1
Yes	1/11 (9.1)	
No	10/92 (10.9)	
<i>Neonatal ocular prophylaxis</i>		1
Tobramycin	8/72 (11.1)	
Tetracycline	3/31 (9.7)	

^a Beta lactam antibiotic (penicillin or amoxicillin/clavulanic acid) <48 h before delivery (colonisation by *Streptococcus agalactiae*, caesarean section or other causes of intrapartum fever).

* $P = .11$ if caesarean deliveries were excluded (0/20 vs 11/59).

swab specimen, supplemented with an eye swab specimen in cases where conjunctivitis was suspected and routinely in the last year under study. Infected newborns received an oral course of erythromycin for 14 days while this formulation was available in hospital, and thereafter a 3-day course of azithromycin. They remained in follow-up for 3 months (parents were directed to seek care if the child developed symptoms of conjunctivitis, pneumonia or nasopharyngitis), and we contacted the family by phone at the end of the follow-up period to confirm the absence of symptoms.

We found evidence of vertical transmission in 11 newborns (10.7%; 5 male and 6 female), with the cases distributed uniformly throughout the period under study. This percentage rose to 15.5% (11/71) if we excluded newborns delivered by caesarean section and/or born to mothers that had received antibiotherapy in the 48 h prior to delivery (Table 1). *C. trachomatis* was detected in 8.7% (9/103) of pharyngeal samples and 17.6% (6/34) of eye samples ($P = .15$). Seven of the infected newborns were

Table 2 Studies on the vertical transmission of *Chlamydia trachomatis* that used molecular techniques for its detection.

Author (citation), country, period under study	Sample	Perinatal transmission (%) ^a
Yu et al. (Curr Microbiol. 2009;58:315–320), China, Apr 03–Feb 04	Nasopharynx	8/33 (24.2%): 6/9 (66.7%) by vaginal delivery and 2/24 (8.3%) by caesarean section
Chojnacka et al. (Ginecol Pol. 2012;83:116–121), Poland, 2004–2009	Nasopharynx and conjunctiva	6/8 (75%). Deliveries before 34 weeks' gestation
Justel et al. (Emerg Infect Dis. 2015;21:471–473), Angola, Dec 11–Feb 12	Conjunctiva	4/8 (50%)

^a For all three studies, it is unknown whether neonatal ocular prophylaxis was used.

asymptomatic, while 4 (3.9% of the total included in the follow-up) had conjunctivitis, in one case associated with cold symptoms. All infected newborns received antibiotherapy (7 erythromycin, 4 azithromycin), with early resolution of infection observed in 7 out of the 8 that attended the appointment scheduled for microbiological follow-up 15 days later; in another patient, the cultures remained positive for *C. trachomatis* and the symptoms (conjunctivitis) persisted for 2 months due to poor adherence to treatment by the parents.

The data on the rate of vertical transmission of *C. trachomatis* is scarce for Europe and non-existent for Spain. In Germany, a study that used culture for diagnosis and excluded newborns delivered by caesarean section or born to mothers treated with antibiotherapy before delivery found a prevalence of neonatal ophthalmia due to *C. trachomatis* of 15.2% (15/230) in newborns that received topical antibiotics for ocular prophylaxis.⁵ Few recent studies have investigated the perinatal transmission of *C. trachomatis* using NAATs, and they have reported higher rates (24%–75%), although it is difficult to compare reported rates due to the methodological differences between studies (Table 2). In Spain, assuming a prevalence of infection by *C. trachomatis* in women in childbirth of 1%³ and a rate of vertical transmission of 10.7%, we estimate that there would be 446 cases a year of infection in newborns (with colonisation of the nose, throat and/or eyes) based on the total births in 2015 (<http://www.ine.es/prensa/np980.pdf>), and that this figure would increase to approximately 750 if throat and eye swab specimens had been obtained and analysed routinely.

The rapid detection and treatment of infected newborns allowed the prevention of additional cases of conjunctivitis and future respiratory infection. We ought to highlight that in our study, all newborns received ocular prophylaxis immediately after birth. Although this intervention probably contributed to reducing the vertical transmission of *C. trachomatis*, it is only partially successful⁴ and less effec-

tive compared to its use against *Neisseria gonorrhoeae*. In addition, the risk of neonatal ophthalmia due to *C. trachomatis* is currently greater compared to the risk due to *N. gonorrhoeae*, as the former is more prevalent in pregnant women.^{3,5} For all the above reasons, the health authorities in some countries recommend screening pregnant women (which requires definition of the target population based on the prevalence of infection by age groups) and treating those infected, while the usefulness of neonatal prophylaxis remains under debate.^{1,3,6} Screening during pregnancy would allow the prevention of complications in the mother (pelvic inflammatory disease, sterility, etc.) and reduce the burden of disease in newborns, as maternal infection would be controlled before delivery.

In conclusion, based on our findings, we estimate that at least 1 in 1000 newborns in Spain acquires a *C. trachomatis* infection during birth, despite the routine implementation of ocular prophylaxis in newborns.

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Diagnosis of three cases of thyroid cancer in one year[☆]



Diagnóstico de 3 casos de cáncer de tiroides en un año

Dear Editor:

Although thyroid cancer is the most frequent malignancy of the endocrine system, it is very rare in children. Ninety percent of paediatric cases correspond to differentiated thyroid cancers (DTCs). Secondary thyroid cancer is the most frequent type in children previously treated with head and neck irradiation. The Spanish Registry of Child Tumours (Registro Español de Tumores Infantiles, RETI-SEHOP) reported an incidence of 3–4 cases per 10⁶ children

in the 1980–2013 period, similar to the incidence reported by the International Agency for Research on Cancer (ACCIS) in Europe. The Registry also described an increase in the annual incidence that has also been observed in the United States.¹ Thyroid cancer in children usually presents as a nodule in the thyroid or regional lymphadenopathy. Compared to adults, the disease tends to be more advanced at the time of diagnosis, with metastases in regional cervical lymph nodes and distant metastatic disease (lungs), and a greater rate of recurrence.² Traditionally, treatment has consisted of total thyroidectomy, excision of local and regional metastases, administration of radioactive iodine (I¹³¹) and thyroid-stimulating hormone (TSH) suppression, which achieved high cure rates. However, long-term longitudinal studies have revealed an increased mortality in survivors due to secondary cancers in patients that received radiation therapy.³ Due to the low incidence of this cancer, trials have not been conducted to optimise treatment, which is based on data from retrospective studies and, more recently, in the 2015 guidelines of the American Thyroid Association (ATA).⁴

We present the cases of 3 patients with a diagnosis of differentiated papillary thyroid cancer in 2011. The patients presented with a thyroid nodule or cervical

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