

samples in age groups highlighted a relative homogeneity throughout the corresponding cohort.

Our study shows that PARV4 infection is readily detectable in French blood donors. Prevalence results using probe PARV4-O were comparable to those obtained in previous studies involving healthy persons originating from various countries (4–6). Conversely, the high prevalence obtained by using probe PARV4-N was unexpected because only 1 study demonstrated a higher value (45.7%) after the investigation of PARV4 DNA in bone marrow aspirates of AIDS patients from Italy (9).

This finding suggests a larger dispersion of PARV4 than expected initially in the general population and highlights the need for improvement in detection systems directed toward PARV4 DNA, particularly by inter-laboratory collaborations, in direct connection with studies investigating PARV4 genetic diversity. These considerations are consistent with the recent description of a new PARV4 genogroup in humans and characterization of highly divergent variants in bovine and porcine species (10). In addition, such data raise the question of the consequent persistence of PARV4 infection in healthy persons. Future studies need to explore both dispersion and potential clinical impact of PARV4 on infected hosts.

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## Otomastoiditis Caused by *Mycobacterium abscessus*, the Netherlands

**To the Editor:** Nontuberculous mycobacteria (NTM) are increasingly recognized as human pathogens (1). Otomastoiditis is a rare extrapulmonary NTM disease type first described in 1976; *Mycobacterium chelonae*–*M. abscessus* group bacteria, which are rapidly growing NTM, are the most frequent causative agents and the disease mostly affects children (1–3). In the Netherlands, *M. chelonae*–*M. abscessus* group isolates have been reported from the otologic samples of an average of 2 patients annually since 2006, as compared to 6 patients in the preceding 10 years. This emergence is not a likely result of improved laboratory facilities or awareness in clinicians because liquid culture and molecular identification techniques predate the rise in notification and Dutch guidelines advise against performing cultures for chronic otorrhea.

We identified 10 patients from the national reference laboratory database with otologic samples yielding *M. chelonae*–*M. abscessus* group bacteria during January 1995–June 2007. We resubjected these isolates to molecular identification by *rpoB* gene sequencing (4) and performed a medical file review.

The *rpoB* gene sequencing showed that *M. abscessus* was the causative agent in all 10 cases; *M. abscessus* seems to have a predilection to cause otomastoiditis. Closely related *M. bolletii* and *M. massiliense* (4) were not found. Early reports identified *M. fortuitum* or *M. chelonae* as causative agents, which may be because the taxonomy of the rapidly growing NTM has long been debated (2,4–7); many of these agents may have, in fact, been *M. abscessus*. All primary isolates were found susceptible to clarithromycin and resistant to fluoroquinolones and aminoglycosides in our agar dilution method (8), which is not the recommended method for rapidly growing NTM (1). Two patients acquired clarithromycin resistance during treatment.

Clinical data are summarized in the online Appendix Table (available from <http://www.cdc.gov/EID/content/16/1/167-appT.htm>) and match those of previous studies (3,5,6). All patients had a history of ear infections and tympanostomy tube placement, previously associated with NTM disease (7). Nine patients had used ototopical medication, including quinolone antimicrobial agents (n = 5), steroids, aminoglycosides (n = 2), or both (n = 2). Clinical signs were nonspecific, with persistent tympanic membrane perforation, chronic painless otorrhea resistant to antimicrobial drug therapy, and hearing loss.

The fact that this disease primarily affects children, with a mean age of 6 years, may be related to age-specific environmental exposures, e.g., playing in sand pits or swimming (9). Two patients with *M. abscessus* otomastoiditis are siblings (patients 5 and 6); a clonal relationship between the causative bacteria is possible and should be investigated by molecular typing tools.

Primary isolates were from biopsy material (n = 5) or otorrhea fluid (n = 5) and were positive for acid-fast bacilli by direct microscopy for 9

patients. Five patients had a computed tomography (CT) scan performed, which showed fluid in the mastoid (n = 4), bone erosion of the mastoid (n = 2), and mucosal swelling (all); the online Appendix Figure (available from [www.cdc.gov/EID/content/16/1/167-appF.htm](http://www.cdc.gov/EID/content/16/1/167-appF.htm)) displays typical findings.

The mean interval between first symptoms and diagnosis of *M. abscessus* otomastoiditis was 155 days for (range 14–360 days). Otorrhea unresponsive to antimicrobial drug therapy should raise a clinical suspicion of NTM otomastoiditis (3), especially in patients with bone destruction visible on CT images. In patients with otorrhea unresponsive to antimicrobial drug therapy, routine CT scanning and *Mycobacterium* spp. cultures, preferably from tissue biopsies (1), may reduce diagnostic delay and prevent further damage.

Patients with *M. abscessus* otomastoiditis received drug treatment for a mean duration of 3 months (range 28–150 days) and 1.8 episodes of surgery. Five patients with *M. abscessus* otomastoiditis received clarithromycin monotherapy, 5 received multidrug therapy with fluoroquinolones (n = 3), fluoroquinolones, rifampin, and ethambutol (n = 1), or meropenem (n = 1) (online Appendix Table).

Complications of surgery comprised delayed wound healing (n = 4) and fistula formation (n = 2; online Appendix Table). Two patients underwent incus removal and later chain reconstruction surgery (patients 7 and 8). In 1 patient, the infection spread and caused culture-proven cervical lymphadenitis, a retroauricular abscess, fistula, and facial nerve palsy.

Eight patients were eventually cured, defined by symptomatic improvement and in some cases confirmed by negative cultures. Two patients were still receiving treatment at the time of data collection. Five patients had persistent conductive hearing loss after treatment (42%; range 30–80 dB; online Appendix Table).

American Thoracic Society guidelines for treatment of soft tissue and bone infections caused by *M. abscessus* advocate 4–6 months of therapy with a macrolide, an aminoglycoside and cefoxitin or a carbapenem, based on in vitro drug susceptibility test results, combined with surgical debridement when possible (1). Treatment regimens in this study deviated in duration and content; clarithromycin monotherapy is likely to invoke resistance (1) and no evidence supports fluoroquinolone use (1). Moreover, use of parenteral agents was limited; its reasoning was not generally captured during file review.

*M. abscessus* otomastoiditis is a serious, potentially emerging condition that affects children who have had previous infections, tympanostomy tubes, and ototopical antimicrobial drug or steroid use in the Netherlands. The diagnostic delay and treatment regimens warrant improvement to prevent deterioration, additional episodes of surgery, acquired drug resistance, and to prevent or limit permanent hearing loss.

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## Diseases Tracked by Using Google Trends, Spain

**To the Editor:** We read the article by Pelat et al. (1) with great interest and decided to explore whether this tool could be applicable for non-English and non-French speaking countries and, more specifically, for Spain. We compared the Google queries related to influenza-like illness (ILI) and chickenpox described by Pelat et al. (1), and constructed additional queries with symptoms and conditions frequently associated with ILI.

The weekly queries from January 2004 through February 2009 were downloaded from Google Insights for Search (2). We studied the correlation (Spearman  $\rho$ ) of these queries with the data from the national reporting of notifiable diseases, available from the Spanish National Epidemiology Center website (3), assuming a maximum difference of 4 weeks.

The queries for *gripe* (Spanish for influenza) showed a maximum correlation ( $\rho = 0.70$ ) 2 weeks before the declared ILI (DILI). When excluding the terms for *aviar* (avian) and *vacuna* (vaccine), the correlation peak ( $\rho = 0.81$ ) was likewise observable 2 weeks before the DILI. The maximum correlation observed for symptom queries was for *tos* (Spanish for cough) 2 weeks before the DILI ( $\rho = 0.74$ ); for conditions associated with influenza the correlation was for *neumonía* (Spanish for pneumonia, accented or unaccented) 2 weeks after the DILI ( $\rho = 0.84$ ). The queries for *varicela* (Spanish for chickenpox) showed a maximum correlation ( $\rho = 0.96$ ) 1 week after the declared illness, as observed by Pelat et al. (1).

In conclusion, our study points out the utility of Internet queries for the surveillance of ILI and chickenpox in Spain. In the case of ILI, this information can be used as an early warning tool used complementarily to

standard surveillance systems. More detailed studies are necessary regarding the usefulness and limitations of this tool in Spain, as well as in other contexts.

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### Letters

Letters commenting on recent articles as well as letters reporting cases, outbreaks, or original research are welcome. Letters commenting on articles should contain no more than 300 words and 5 references; they are more likely to be published if submitted within 4 weeks of the original article's publication. Letters reporting cases, outbreaks, or original research should contain no more than 800 words and 10 references. They may have 1 Figure or Table and should not be divided into sections. All letters should contain material not previously published and include a word count.

Appendix Table. Clinical data of patients with otomastoiditis caused by *Mycobacterium abscessus*\*

Patient no.	Age, y/sex	Predisposing factors	Side	Symptoms	Cultures/pos/(AFB)	Days to diagnosis	Treatment (n = mo)	Outcome
1	2/M	TT, OD	Right	O, H, P, F, M	5/2 (-)	147	XW-X-X, AD, 1RE3ECipCla	Cured, H
2	10/F	TT	Right	O, H, P, fi, M	5/1 (+)	330	XW-X-X, 2CipCla	Cured
3	4/M	TT, OD	Left	O, H, P, F, M	2/1 (+)	60	X, 3Cla	Cured, H
4	4/M	TT, OD	Left	O, P	2/1 (+)	14	1Cla-8Cla	Failure
5	5/M	TT, OD	Left	O, H	3/3 (+)	100	4Cla	Cured
6	3/M	TT, OD	Right	O, H, P, M	4/3 (+)	60	X, 5Cla-X	Cured
7	10/F	TT, OD	Right	O, H, P, M, L	1/1 (+)	360	2CipCla-X, CR	Cured
8	12/M	TT, OD	Right	O, H, P, A, fi, M, F, L	12/8 (+)	270	X- XW-RD, 1ClaMox-X, LY-CR	Cured, H
9	6/F	TT, OD	Left	O, H, A, F, M,T,V, L	4/2 (+)	90	X-X-XW1Cip-X, 5ClaMer, AD	Failure, H
10	5/F	TT, OD	Left	O, H, P,M, V, L	7/3 (+)	120	X-1Cla	Cured, H

\*TT, ventilation tubes; OD, otic drops; O, chronic otorrhea; H, hearing loss; P, tympanic membrane perforation; A, otalgia; F, fever; fi, fistula; M, mastoiditis; F, facial nerve palsy; V, tinnitus; V, vertigo; L, lymphadenitis (culture proven); X, surgery; RD, radical debridement; CR, chain reconstruction; Cla, clarithromycin; Rb, rifabutin; Cip, ciprofloxin; R, rifampicin; E, ethambutol; Mer, meropenem; Mox, moxifloxacin; AD, retro-audicular abscess drainage; LY, cervical lymphnode excision; W, delayed wound healing.