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 interlaboratory 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.

Mhammed Touinssi, Nadège Brisbarre, Christophe Picard, Coralie Frassati, Bertrand Dussol, Rathviro Uch, Pierre Gallian, Jean-François Cantaloube, Philippe de Micco, and Philippe Biagini

Author affiliations: Université de la Méditerranée, Marseille, France; M. Touinssi, N. Brisbane, R. Uch, P. Gallian, J.-F. Cantaloube, P. de Micco, P. Biagini; Service Immuno-génétique-HLA, Etablissement Français du Sang Alpes-Méditerranée, Marseille (C. Picard, C. Frassati); and Centre de Néphrologie et de Transplantation Rénale, CHU, Marseille (B. Dussol)

DOI: 10.3201/eid1601.090517

References


Address for correspondence: Philippe Biagini, UMR CNRS 6578 Equipe Emergence et Coévolution Virale, Etablissement Français du Sang Alpes-Méditerranée et Université de la Méditerranée, 27 Blvd Jean Moulin, 13005 Marseille, France; email: philippe.biagini@efs.sante.fr

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 otosclerotic.

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 (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) 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 ototraheal 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.

Jacco van Ingen, Frank Looijmans, Piet Mirck, Richard Dekhuijzen, Martin Boeree, and Dick van Soolingen

Author affiliations: Radboud University Nijmegen Medical Centre, Nijmegen, the Netherlands (J. van Ingen, F. Looijmans, R. Dekhuijzen, M. Boeree); National Institute for Public Health and the Environment, Bilthoven, the Netherlands (J. van Ingen, D. van Soolingen); and Academic Medical Centre, Amsterdam, the Netherlands (P. Mirck)

DOI: 10.3201/eid1601.090473

References

6. van Dingen@rivm.nl

Address for correspondence: Jakko van Ingen, RIVM/LIS, National Mycobacteria Reference Laboratory (pb22), PO Box 1, 3720BA Bilthoven, the Netherlands; email: jakko.van.ingen@rivm.nl

**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 ρ) 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 (ρ = 0.70) 2 weeks before the declared ILI (DILI). When excluding the terms for *aviar* (avian) and *vacuna* (vaccine), the correlation peak (ρ = 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 (ρ = 0.74); for conditions associated with influenza the correlation was for *neumonia* (Spanish for pneumonia, accentuated or unaccented) 2 weeks after the DILI (ρ = 0.84). The queries for *varicela* (Spanish for chickenpox) showed a maximum correlation (ρ = 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.

**Antonio Valdivia**

Author affiliations: Hospital Universitario de La Princesa, Madrid, Spain (A. Valdivia); and Instituto de Salud Carlos III, Madrid (S. Monge-Corella).

DOI: 10.3201/eid1601.091308

**References**


Address for correspondence: Antonio Valdivia, c/Quevedo, no. 8, piso 1º C, Alcalá de Henares 28807 Spain; email: tonyvald@hotmail.com

†These authors contributed equally to this article.

**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*.*

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

*TT, ventilator 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, vertigo; LV, 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-auricular abscess drainage; LY, cervical lymph node excision; W, delayed wound healing.