Answer to Photo Quiz: *Mycoplasma hominis*

(See page 511 in this issue [[doi:10.1128/JCM.00347-14](https://doi.org/10.1128/JCM.00347-14)] for photo quiz case presentation.)

Florence Morel,^a Lamine Abdenmour,^b Hayat Belaid,^b Aurélie Renvoisé,^{a,c} Vincent Jarlier,^{a,c} Alexandra Aubry^{a,c}

AP-HP, Hôpital Pitié-Salpêtrière, Bactériologie-Hygiène, Paris, France^a; AP-HP, Hôpital Pitié-Salpêtrière, Neuro-chirurgie, Paris, France^b; Sorbonne Universités, Université Pierre et Marie Curie (Université de Paris 06), INSERM U1135, Centre for Immunology and Microbial Infections, Team 13, Paris, France^c

Figure 1 in the photo quiz shows the typical aspect of *Mycoplasma hominis* colonies on a selective medium for culture of *Mycoplasma* spp. (A7 mycoplasma agar), i.e., a “fried-egg morphology” composed of a dense central zone and a less dense peripheral zone. The “non-Gramability” of these punctate colonies, coupled with their aspect and their ability to grow on a chocolate agar plate but not on a blood agar plate, was highly indicative of the species *M. hominis* (1). Bacterial identification of the strain was performed by 16S rRNA gene sequencing as previously described (2); we obtained a 472-bp sequence, which was found to match with 100% similarity that of *M. hominis* (GenBank accession no. [JN935871.1](https://doi.org/10.1128/JN935871.1)). *M. hominis* belongs to the genus *Mycoplasma*. As a consequence of lacking a cell wall, a characteristic feature of these bacteria, mycoplasmas do not stain by the Gram stain. *M. hominis* is known to be a commensal bacterium of the genitourinary tract of healthy adults. This organism mostly causes urogenital infections but may also cause extragenital infections (3). It has also been reported as causing pneumonia, osteomyelitis, wound infections, and bacteremia. The latter infections were commonly associated with trauma or manipulation of the genitourinary tract (3). *M. hominis* central nervous system infections are very rare. Most cases have been reported to occur in neonates, due to colonization of the genitourinary tract of pregnant women. Among adults, 11 cases of *M. hominis* brain abscess have been published (4, 5), with the abscess occurring in 9 patients following a craniotomy and in 2 patients following childbirth. Among the nine patients with abscess following craniotomy, six experienced head trauma. The mean time to *M. hominis* isolation for these cases was 13.5 days, suggesting that patients acquire *M. hominis* brain abscess while in the hospital; the route of infection remains unclear but may be due to a transient bacteremia caused by manipulation of colonized oropharyngeal tracts (such as orotracheal intubation) or a contiguous infection secondary to traumatic disruption of the colonized upper airway (6). Only three cases of meningitis caused by this bacterium have been reported in the literature, with the infection always occurring after neurosurgical procedures (7). Treatment of *M. hominis* central nervous system infections is not well established, in terms of either the antibiotic(s) or the duration of treatment. Tetracyclines are generally considered the drug of choice, with clindamycin and fluoroquinolones as an alternative (8). In our case, only cerebrospinal fluid (CSF) samples from the collection bag yielded *M. hominis*-positive culture whereas cultures of CSF samples collected from the

proximal stopcock were negative. So, the external ventricular drain device was considered colonized without ventriculitis or meningitis. Therefore, the external ventricular drain device was substituted as a treatment. All CSF samples collected for control were negative. Microbiologists should be aware that *M. hominis* is a real pathogen of the central nervous system among patients who have undergone neurosurgical procedures and should consider this in cases of isolation of “non-Gramable” punctate colonies growing on agar plates (1).

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Address correspondence to Alexandra Aubry, alexandra.aubry@upmc.fr.

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