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Letter to the Editor

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Turicella otitidis central venous-related bacteremia during pediatric acute lymphoblastic leukemia

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Sir,

We read with great interest the article by De Frutos M *et al.* [1] about 5 cases of otitis media due to *Turicella otiditis*, some of them complicated, as a case of mastoiditis that required surgery.

We agree with the authors [1] that some microorganisms isolated only anecdotally can become relevant pathogens, especially in immunosuppressed patients and therefore it is necessary to update the epidemiological surveillance with the description of new cases [1]. A suggestive report of central venous catheter (CVC)-related *T. otitidis* bacteremia is described and commented on the ground of an updated literature review. *T. otitidis* is a non-fermenting Gram-positive rod isolated almost exclusively from ear exudate fluids, although its clinical significance in both acute and chronic otitis is still controversial [2-5]. Isolated since two decades [2], its genoma has been sequenced [3]. *T. otitidis* habitat seems limited to the ear and surrounding areas, but it has been retrieved as an infrequent cause of bacteremia [2-5], especially in children with hematologic malignancies [2,4]. We discuss a rare case of CVC-related *T. otitidis* bacteremia in a child with acute leukemia, based on the available literature data.

A 11-year old child suffering from acute lymphoblastic leukemia was hospitalized due to fever, in the absence of organ signs of localization, and in particular of acute or chronic otitis, mastoiditis, sinusitis. Laboratory workup at hospital admission showed low hemoglobin of 9 gm% and high leukocyte count of 22.86 × 10^9/L with predominant neutrophil (82%), alanine aminotransferase level of 96 U/L (normal range, 21–72 U/L) and C-reactive protein raised at 158 mg/L.

During the last previous outpatient check-up, seven days before hospital admission, results of laboratory examinations showed a white blood cell count of 11.3 × 10^9/L with neutrophil ratio of 60%, hemoglobin of 11 gm% and a level of C reactive protein of 5 mg/L.

The patient had a temperature of 39.4°C, a heart rate of 123 beats/min, a respiratory rate of 24 breaths/min, a blood pressure of 90/60 mmHg, and a SaO_2 of 94%.

Microbial isolation has been obtained from the CVC blood culture after a 48-hour incubation in a Bactec Ped Plus /aerobes vial (Becton Dickinson Italia s.p.a.). Direct microscopy and Gram stain pointed out pleomorphic, asporigenous Gram-positive bacilli with a palisade appearance. Appropriate culture media (Agar Columbia with 5% mutton blood byBioMerieux Italy s.p.a.) and Agar chocholate PVX (by BioMerieux Italy s.p.a.) mantained in a CO_2 thermostat, allowed the growth of small rounded granular greysh-creamy transparent colonies of a 1.5 mm diameter.The identification was performed by the authomathized system Vitek2-VitekMS (by BioMerieux Italy s.p.a.) while the in vitro antimicrobial susceptibility assay by Kirby-Bauer was carried out on Mueller Hinton agar plus 5% defibrinated horse blood (by BioMerieux Italy s.p.a.). According to the European Committee on Antimicrobial Susceptibility Testing (EUCAST) guidelines, the following MIC s were obtained: benzilpenicillin 1.5 mg/L, ciprofloxacin 2mg/L, gentamicin 1.5 mg/L, vancomycin MIC 0.38 mg/L, clindamycin 0.5 mg/L, tetracycline MIC 1.5 mg/L, linezolid MIC 1 mg/L and rifampicin MIC 0.004 mg/L. No other microbiological tests were requested, in addition to peripheral blood cultures, because the boy did not present a precise organic symptomatologist which would have suggested further pertinent microbiological investigations.

Systemic intravenous rifampicin in association with vancomycin CVC lock therapy and the prompt CVC removal, allowed a prompt resolution of local and systemic signs and symptoms of infection, in the absence of complications and rcurrences, as observed in the subsequent, prolonged follow-up. Very few cases of systemic *T. otitidis* infection have

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been reported until now [2-5], usually in cancer patients [1], with only one case described in a child with a malignant hemopathy like ours [4]. Clinicians shold be aware of the opportunistic potential of *T. otitidis*, especially when immunocompromised hosts are of concern. In our experience, a timely CVC removal seemed more effective when compared with systemic-local antibiotic treatment based on the *in vitro* sensitivity testing.

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CONFLICT OF INTEREST

Authors declare no conflict of interest

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