

UNUSUAL LOCALIZATION OF A COMAMONAS KERSTERSII : A CASE REPORT

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Abstract : -

Comamonas kerstersii is a gram-negative, opportunistic and phytopathogenic bacterium. Usually in humans, this germ is responsible for intra-abdominal infections and some genital infections. It is also found in water, soil and especially plants. However, the otological location of this microorganism is unusual. We report a case of a 29-year-old housewife, with no particular history, coming in consultation for chronic right unilateral otorrhea.

The patient had received empirical treatment with a purulent otitis, but no satisfactory improvement. This situation leads us to perform a cytobacteriological examination by swabbing auricular flow. This assessment had found a kerstersii comamonas resistant to our first line anti-infective treatment. This causal germ was only susceptible to amikacin depending on the outcome of the antibiogram. Healing was notable after 5 days of local and general treatment adapted

Keywords : *Bacteriological examination, comamonas kerstersii, otorrhea*

INTRODUCTION

The family of comamonas was found since 1985 and the only species identified was the comamonas terrigena (1). Recent research has reported a subdivision of comamonas terrigena giving the comamonas kerstersii (2). Comamonas kerstersii is an opportunistic, plant pathogenic bacterium rarely responsible for human infections (2). Sometimes this germ is responsible for digestive and urogenital but no otological localization was mentioned (3,4). Usually, the microorganisms responsible for purulent otitis are streptococcus pneumoniae, haemophilus influenzae, moraxella catarrhalis, staphylococcus aureus and pseudomonas aeruginosa (5). In addition, the failure of probabilistic treatments during purulent otitis is related to the presence of unusual germs that have decreased sensitivity to penicillin including comamonas kerstersii (5)

Patient and Observation

It was a 29-year-old woman, housewife, with no particular history, who came for consultation for right unilateral otorrhea evolving for more than 3 months. The discharge was whitish, continuous, not fetid and not punctuated by the nasopharyngitis episode. This otorrhea was accompanied by ipsilateral hypoacusis but no tinnitus, earache, vertigo or facial paralysis. No neuromeningeal complication was observed and no digestive manifestations recorded. The general condition of the patient was still well preserved.

The otoscopic examination after aspiration of the secretion had individualized an inflammatory external auditory canal with desquamation but not narrowed. The tympanic membrane was perforated but not marginal. The rest of the clinical examinations were without abnormality.

The pure-tone audiometry result was in favor of right unilateral conductive hearing loss. Hearing acuity in the contralateral ear was well preserved. Morphological explorations of the nasopharynx were unremarkable.

The patient had benefited from probabilistic outpatient treatments at the correct dose, such as amoxicillin-clavulanic acid (FLEMING*) systemically combined with local rifamycin (OTOFA*). After 7 days of probabilistic treatments, we still observed the persistence of otorrhea and other signs associated with the above. This situation leads us to perform a cyto-bacteriological examination with antibiogram of the atrial discharge after 3 days of stopping first-line treatments. This bacteriological analysis found a comamonas kerstersii resistant to our first-line anti-infective treatment. This causative germ was only sensitive to amikacin according to the result of the antibiogram. We treated the patient with parenteral amikacin combined with local ofloxacin (OFLOCET*) for 5 days. A clinical improvement was already noticeable just 72 hours after the initiation of these adapted local and general treatments.

Discussion

The discovery of comamonas kerstersii during an otological infection was an exceptional situation. The first-line treatments during purulent otitis are molecules adapted to the germs usually encountered (5). The failure of probabilistic treatments requires a search for other causal pathogens in order to adapt and correct the choice of molecule used. The bacteriological study with antibiogram of any purulent otitis is very desirable at the present time, knowing the disparity of the microbes responsible for otological affections. Comamonas species are microbes rarely implicated in human diseases (6). The species comamonas kerstersii is a widely distributed germ in plants, water and soil. This species was recognized as a low pathogenic opportunist in humans (2). According to the literature, the species of comamonas have been identified especially in subjects with a history of pathologies weakening the immune defense such as diabetes, autoimmune disease or patients under heavy treatment (3). Remember that our patient has no particular flaws or any treatment. No notion of hospital stay was noted in the patient before the onset of her otological disease. Some authors have reported the discovery of comamonas kerstersii during digestive infections (peritonitis, perforated appendicitis) whose symptoms are composed of abdominal pain, fever and vomiting (3,7,8). No otological localization was mentioned and our patient had no digestive discomfort. Apart from this digestive localization, the authors had identified comamonas kerstersii in the genital organs during a clinical picture of salpingitis (9). No localization of this germ has also been reported in the ear responsible for purulent otitis.

According to different research, comamonas kerstersii was not mentioned among the microbes responsible for purulent otitis. This exception was responsible for the difficulty in managing purulent otitis, justifying the ineffectiveness of first-line probabilistic treatments. The isolation of comamonas during an ear infection is not necessarily associated with a serious condition either at the genitourinary level or at the level of the digestive system. The ear can be affected in isolation, that is to say in a healthy subject with no significant history. The clinical presentation of purulent otitis caused by comamonas is identical to the clinical manifestation of otitis caused by usually isolated germs. Moreover, the persistence of signs after probabilistic treatments already testifies to the presence of new bacteria requiring therapeutic adaptation.

Conclusion

Currently, we have seen several cases of purulent otitis resistant to conventional first-line treatments. Faced with this situation, a bacteriological study with antibiogram is essential in order to identify the germs newly responsible for purulent otitis such as comamonas kerstersii.

Conflicts of interest
 The authors do not declare any conflict of interest.
Contributions from authors

All authors read and approved the final version of the manuscript.



Source: ENT Department of the University Hospital Center of Andohatapenaka Antananarivo Madagascar

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