

Short Communication

Could we reduce the incidence of methicillin-resistant *Staphylococcus aureus* (MRSA) infection in *Otitis externa*

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The incidence of *MRSA* is once again on the agenda for the hospital management. This strain of microorganism presents a challenge for ENT doctors worldwide. Despite many strict measures taken all over the world, the figures appear to be rising; there has been a steady increase in the number of cases of nosocomial *MRSA* infections. We examined all external ear swabs samples taken from patients complaining of *Otitis externa* clinically, in the Royal Victoria Eye and Ear Hospital from 1st January, 2004 to 12th December, 2004. We analysed the results of the compared *MRSA O. externa* to previous study conducted 8 years ago in the same hospital.

Key words: *Otitis externa*, *MRSA* in *Otitis externa*, external ear infections.

INTRODUCTION

Otitis externa is the most common ear infection in the clinical practice of otolaryngology; it is an infection of the outer ear canal with the extension to the auricle with or without involvement of the ear drum. Most patients present with mild to severe otalgia, discharge, +/- hearing loss, +/- inflammation of the auricle. Currently different strains of *Staphylococcus* that have methicillin resistance, indeed the resistance to many antibiotics, are also seen in these microorganisms. *MRSA* is known to be susceptible to vancomycin, teicoplanin, fusidic acid, and minocycline (Hwang et al., 2002). The purpose of this study is to assess the percentage of *MRSA O. externa* and also the percentage of *Staphylococci* as a bacterial subgroup.

MATERIALS AND METHODS

Between 1st January, 2004 to 31st December, 2004, 1514 ear swabs were analysed and categorized. 1360 of these swabs were sent from our A and E department; 149 swabs were sent from outpatient department, and only 5 swabs were from inpatients. Swabs were classified according to the microbiological results including the type of micro-organism.

The results as follows:

Pseudomonas, 294; *Staphylococcus*, 214; *Streptococcus*, 131; *Diphtheroids*, 109; *Candida and aspergillus*, 65; *MRSA*, 32; mixed growth, 652. None among these were *MRSA* isolated. Other rare microorganisms such as *Proteus*, *E. coli*, *moraxella*, *klebsilla* and *clostridia* were 17.

32 positive ear swabs for *MRSA* correlate to 2.1% of all ear swabs indicating an incidence of 2.1% of *MRSA O. externa*. The incidence of *MRSA* to total population of *Staphylococcus* culture was almost 15%. In comparison to previous results conducted in 1998 in this hospital, *MRSA O. externa* accounted for 6% of the cases, although this was conducted over a period of 3 months only.

DISCUSSION

Full history and examination, routine culture and sensitivity in *O. externa* and where *MRSA* is cultured, appropriate precautions and treatment are mandatory. Treatment in *MRSA O. externa* is aural toilet, fusidic acid-beta-methasone 0.5% wicks where the organism was gentamicin-resistant, whereas aural toilet with aminoglycoside-steroid drops was sufficient if it is gentamicin-sensitive (Walshe et al., 2001); it is still the treatment of choice in our hospital. In summary, the incidence of *MRSA* otitis externa seems to be down from 6% to only 2.1%, a cut of nearly 66% over 6 years period.

Conclusion

MRSA infection in *O. externa* represents a challenge for

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all ENT doctors. Treatment with conventional topical ointments has not been promising, poor response has been documented and recurrent infection and discharge is the main symptom of complaint. More radical treatment is required where complete eradication of the pathogen is essential to achieve full recovery.

REFERENCES

- Walshe P, Rowley H, Timon C (2001). A worrying development in the microbiology of otitis externa, *Clin. Otolaryngol. Allied Sci.* 26(3):218-220.
- Hwang JH, Chu CK, Liu TC (2002). Changes in bacteriology of discharging ears. *J. Laryngol. Otol.* 116(9): 686-689.