

Is Routine Culture and Sensitivity Essential for the Management of Otitis Externa?

Sir,

Infective otitis externa is a common otological condition seen in general practice. Culture of swabs remains the main laboratory investigation in the etiological confirmation and subsequent management. However, by the time culture reports are available most patients would have responded positively to empirical antimicrobials given. Furthermore diagnostic microbiological services are not readily available to most general medical practitioners. This retrospective study reports the most common microorganisms causing otitis externa in our patients and their antibiogram. We believe this information will be useful in general practice in the correct choice of empirical antimicrobials for the effective management of external ear infections.

Records of 65 patients with acute external ear infections who required admission to USM were analyzed. The age group of patients ranged from 2 months to 88 years with the majority being children below 10 years of age (49.23%). This is not surprising as these infections produce maximum morbidity among children requiring hospitalization. Adults are usually treated as out-patients. Twelve patients had bilateral ear infections making the total ears treated to be 77.

In the 61.04% of cases where culture and sensitivity was done the predominant pathogen isolated was *Staphylococcus aureus* (42.53%), followed by *Pseudomonas aeruginosa* (19.15%). This is contrary to most previous reports where *P. aeruginosa* was implicated as the principal pathogen^{1,2}. Other bacteria isolated included *Streptococcus pyogenes* and *Proteus* species. A mixed flora was grown in 21.25% of cultures where the predominant pathogen was again *S. aureus*.

Ninety-five per cent of *S. aureus* were found to be

sensitive to cloxacillin and gentamicin and 90% to fusidic acid. However, we found that only 65% were treated with cloxacillin, 15% with gentamicin and none with fusidic acid. Thirty-five per cent were treated with ampicillin though none were sensitive to ampicillin. The antibiotic sensitivity of pseudomonas isolates were 88.88% to gentamicin, 66.66% each to cefaperazone and polymixin. We found that only 44.44% of these cases were treated with gentamicin and 11.11% with cefaperazone. None were treated with polymixin. The results of this study indicate that there is very little relationship between the antibiotic treatment given and the sensitivity pattern of the microbial pathogens isolated.

Hence we conclude that routine culture and sensitivity of ear swabs in external ear infections is less useful³ and not cost effective. Systemic antibiotics are not needed in majority of the cases. The mainstay of the treatment is relief of pain & itching, elimination of microbiological agents and reduction of inflammation and edema. This can be achieved with aural toilet by suction clearance, topical antibiotics and anti-edema measures. When the clinical situation is indicative of systemic antibiotic therapy, gentamicin or cloxacillin would be the correct choice as seen from the antibiogram of our isolates.

R Indudharan, MS (ENT), DipNB (ORL)*,
A Subramania, PhD**, Department of
Otorhinolaryngology* and Microbiology**, School
of Medical Sciences, Universiti Sains Malaysia,
16150 Kubang Kerian, Kelantan

References

1. Ruth M, Ekstrom T, Aberg B, Edstrom S. A clinical comparison of hydrocortisone butyrate with oxytetracycline/hydrocortisone acetate-polymixin B in local treatment of acute external otitis. *Eur Arch Otorhinolaryngol* 1990;247(2) : 77-80.
2. Agius AM, Pickles JM, Burch KL. A prospective study of otitis externa. *Clin Otolaryngol* 1992;17(2) : 150-4.
3. Yelland M. Otitis externa in general practice. *Med J Aust* 1992;156 : 325-30.