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Letters to the Editor

Cost of Antibiotic/steroid ear drops

Dear Sir,

I would like to comment on the article 'Antibiotic/steroid ear drop preparations: a cost effective approach to their use' which appeared in the Journal in November 1990.

I am surprised that Betnesol N. is not considered suitable for the treatment of infection with Pseudomonas aeruginosa, and that Gentisone H. C. is considered 'the least expensive preparation to be most effective'.

A computer search in the bacteriology department of this hospital yielded 102 isolates of Ps. aeruginosa from ear swabs in the calendar year 1990. Of these eight were resistant to both Neomycin and Gentamicin, four to Neomycin but not Gentamicin and four to Gentamicin but not Neomycin. All were sensitive to Polymixin B/Colistin. These figures suggest that Neomycin and Gentamicin are equally effective against Ps. aeruginosa, so that on purely cost grounds Betnesol N would be the preparation of choice.

Secondly, resistance *in vitro* does not necessarily mean that the antibiotic will not be effective *in vivo*, as the concentration achieved in the ear is many times greater than that on the culture plate. For example, in the last two months I have successfully treated two patients with Betnesol N despite culture results showing resistance to Neomycin.

The first was a 68 year old woman with a longstanding central perforation of the right tympanic membrane, velvety middle ear mucosa and a profuse mucopurulent discharge from which a Neomycin-resistant Pseudomonas was cultured. Nevertheless the ear was dry when reviewed after two weeks of Betnesol N, three drops tid.

The second was a 50 year old man with otitis externa, again due to Ps. aeruginosa which was resistant to Neomycin on culture. This ear also was found to be inactive after three weeks treatment with Betnesol N.

There is a belief that topical Neomycin is prone to causing hypersensitivity reactions, but I have never found this to be a problem, at least when used as Betnesol N.

Yours faithfully,

Ewen Flint, F.R.C.S.,
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Reply

Dear Sir,

I very much welcome Mr Flint's comments in support of the least expensive preparation providing optimal treatment for patients with otorrhoea. In reply to the first point concerning the effectiveness of neomycin against Pseudomonas aeruginosa. The data source used to acquire this information, as stated in the article, was from a standard textbook—Kucers, A., Bennet, N McK. (1987) The Use of Antibiotics, 4th Edition, London: Heinemann, p. 619–1044. It is for this reason that we considered Gentisone HC to be more effective than Betnesol-N and it is thus difficult for me to comment further. This study did not include an analysis of microbial antibiotic sensitivities in the Nottingham area. However, the study was specifically designed to heighten the awareness of the clinician to the variation in cost of very similar preparations and I believe Mr Flint's interest and the evidence provided by his Medical Micriobiology Department, show that the least expensive preparations for this condition are adequate for optimal treatment of otorrhoea, given the right conditions.

Mr Flints second point, concerning the successful treatment of otorrhoea in two patients with *in vitro* resistant organisms with a 'supposedly' unsuitable antibiotic preparation, lends weight to the argument set out by Browning *et al.*, (1988) where the question as to whether the steroid component of the ear drop preparation is of more importance than the antibiotic component is posed. No studies that I have found adequately answer this question. This point was mentioned in the discussion section concerning the clinical efficacy.

Yours faithfully,

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Reference

Browning, G. G., Picozzi, G. L., Calder, I. T. and Sweeney, G. (1988) Controlled Trial Of Medical Treatment Of Active Chronic Otitis Media. *British Medical Journal [Clin Res]*, **264:** 1024.

Routine fluid replacement in children undergoing tonsillectomy

Dear Sir,

The Short Communication 'Role of Routine Fluid Replacement in Children Undergoing Tonsillectomy' by Wilson *et al.* (*JLO* 1990; **104:** 801–802) analyses a small series of 50 children and concludes 'There would seem to be no role for intravenous fluid replacement in children undergoing uncomplicated tonsillectomy'. We do not agree.

The results of the measured parameters (some of which do not relate to whether intravenous fluids are given or not) were analysed statistically and the authors clearly state 'no parameters measured reached statistical

significance' and yet certain conclusions have been drawn.

We believe intravenous fluids are of benefit:

1. A continuing infusion maintains intravenous access for convenient, painless, parenteral therapy *e.g.* fluid and electrolytes for vomiting, blood for bleeding (which is now a rare event using diathermy tonsillectomy), antibiotics for infection, medications for asthma and so on. If sudden blood loss occurs, pre-existing intravenous access obviates the delay in inserting a cannula in the shocked patient.

2. Intravenous fluid replacement during and after operation maintains circulating blood volume. Dehydration may be contributed to by pre-operative fasting, insensible fluid loss (more likely in a hot climate), vomiting and in certain cases unexpected excessive blood loss.

There are compelling reasons for routine fluid replacement and maintenance of intravenous access which outweigh the possible complications and extra cost.

Yours faithfully,

Bruce Benjamin,
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David Baines,
Staff Anaethetist
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Sydney, Australia.

Reply,

Dear Sir,

The idea for a study on the role of routine fluid replacement in children undergoing tonsillectomy was as a result of a visit to Bruce Benjamin in Australia. It was decided therefore to undertake a controlled study in the British situation. Although Mr Benjamin and his Colleagues disagree with our findings; they are our findings and we report them as such. It seems entirely reasonable to draw conclusions from negative information. We did not find that the measured parameters used gave any statistical significance between those who received a drip and those children who did not. The reasons why the Australian team feel that fluids are of benefit are set out in their letter and indeed we discussed this in our article. However, we did not find those suppositions to be correct on analysis.

It may be argued that the situation in Australia is different to the situation in the United Kingdom especially in terms of climate. I think that is only partially true as British Children's Hospitals are usually hot, dry environments. We did in fact measure the temperature and relative humidity on the wards and I suspect that they do not differ greatly from those in Australia. It is always difficult to give up practices which are believed to be important for the safety of ones' patients and it would seem entirely reasonable that in cases where one would suspect that fluid loss may be excessive, or the child has special medical problems, then a drip should be erected. However, for the vast majority of children who are otherwise well, and undergoing routine dissection tonsillectomy, we did not find intravenous infusion of fluid to be helpful in their management.

Yours faithfully,

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