

## Letters to the Editor

Preference is given to the letters commenting on contributions published recently in the *JRSM*. They should not exceed 300 words and should be typed double-spaced.

### Glue ear

Rippere makes some unacceptable statements (November 1993 *JRSM*, p 681). Most otolaryngologists in the UK are aware of the influence of respiratory allergy in some children with glue ear. Unfortunately, the beneficial effect of reduction of environmental allergens (house dust mite) is small in nasal allergy and none in glue ear. Therefore the choice of treatment for glue ear in allergic subjects is between drug therapy or surgery. Surgery produces a far more certain and rapid improvement in glue ear compared to medical treatment. Insertion of grommets has nothing to do with 'the doctors' omnipotence fantasies'.

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### Botulinum toxin

The recent communication of Brin and Blitzer (August 1993 *JRSM*, p 493) and earlier of Quinn and Hallett<sup>1</sup> and Schantz and Johnson<sup>2</sup>, regarding dose standardization of botulinum toxin (haemagglutinin complex) raises an important issue. The doses of botulinum toxin manufactured by USA (BOTOX<sup>TM</sup>) and UK companies (DYSPORT<sup>TM</sup>) are each measured in absolute mouse (LD<sub>50</sub>) units, but clinical data suggest that a mouse unit of DYSPORT<sup>TM</sup> is approximately four to fivefold less potent than a mouse unit of BOTOX<sup>TM</sup>. This discrepancy could cause confusion and lead to use of incorrect doses in countries where both materials are marketed, with serious implications for the safety of patients. Our studies show that the different mouse units obtained may result in part from the differences in assay conditions.

We agree with the above mentioned correspondents that there is a need for measurements which accurately reflect the biological activity of different preparations of botulinum toxins in clinical use and we agree that the mouse bioassay is, at present, the assay of choice. However, we do not agree that the mouse unit is the correct unit of bioactivity measurement for this toxin. The use of 'animal units' for measuring the potency of biological materials has long been recognized as unsatisfactory and has led to the development of standard preparations<sup>3</sup>.

Thus, we suggest that there is an urgent need for an appropriate International Standard for botulinum toxin to replace the mouse unit for expressing the potency of these products. Our in-house assays have shown that good agreement of relative potencies can be achieved by use of a common reference standard, even between assays based on different responses. We have initiated the development of such a standard and subject to validation by international collaborative study anticipate its eventual availability to manufacturers and regulatory authorities.

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### References

- 1 Quinn N, Hallett M. Dose standardisation of botulinum toxin. *Lancet* 1989;330:964
- 2 Schantz EJ, Johnson EA. Dose standardisation of botulinum toxin. *Lancet* 1990;335:421
- 3 Miles AA. Biological standards and the measurement of therapeutic activity. *Br Med Bull* 1951;7:283-91

### MRI as a single screening procedure for acoustic neuroma

I read with interest the report by Robson and colleagues (August 1993 *JRSM*, pp 455-7) suggesting that magnetic resonance imaging (MRI) screening as a single screening procedure for acoustic neuroma was a cost-effective approach. The costs of the relevant screening tests quoted by the authors include £55 for evoked response audiometry and £285 for a standard MRI scan. An approach to the diagnosis of acoustic neuroma which we have found effective in Melbourne, has been to screen all cases with suspicious symptoms using Brainstem Evoked Responses (BER) and to proceed to MRI scanning as a secondary test, where the BER testing suggests a retrocochlear problem. Using this approach, the number of MRI scans that have to be carried out is greatly reduced. The concern that does arise is that brainstem audiometry may not be completely reliable in excluding acoustic neuromas, in the rare instance where the neuroma arises from the vestibular branch and doesn't interfere with the auditory projections in the early stages. These lesions may be detected by either repeating BER testing after a period of follow-up, or by proceeding to the secondary investigation of MRI scan in patients with intractable vertigo who don't respond to treatment for Ménière's syndrome. The great majority of patients with acoustic neuroma have some auditory symptoms at the time of presentation, and in these patients, brainstem audiometry provides a reliable screening investigation.

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### Ears safe for diving

I would like to thank Phyllis Troia from the Divers' Alert Network at Duke for introducing me to a new method of ear clearing (the Frenzel manoeuvre). I will include it in my list of techniques which might help the trainee diver. On a personal note, I tried this several times and have not found it easy to clear my ears. I will endeavour to master it and teach it, however, as the point about valsalva and an air embolism is a good one. Fortunately, ear clearing problems happen on the way down and air emboli happen on the way up when the middle ear is venting spontaneously into the nasopharynx.

Lastly, I have discovered that the Otovent device (inflating balloons with the nose) commonly used to try and dissipate glue ears in children, makes a very good visual aid when showing trainee SCUBA divers how the eustachian tubes work!

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### Ears for flying and diving

I was most interested in the meeting reports (October 1993 *JRSM*, p 605) on the effect of pressure difference on the function of the inner ear and the various manoeuvres to equalize the difference.

Swallowing function can play an important part in this process. I treat patients suffering from stress-affected swallowing in my dental phobia clinic. Here are two exercises which I have found useful in restoring variable function.

After teaching patients how to relax their swallow<sup>1</sup> (by gently undulating the tongue from the tip backwards, without clenching the masticatory or facial muscles), and then to swallow strongly with the tongue hunched as far back in the mouth as possible (ie 'between the ears'). There appears to be an improvement to both posture and function of the muscles of swallowing and mastication with often 'popping and/or clearing of ears'.