References

- Cox, A. J., Sargent, E. W. (1997) Sudden sensorineural hearing loss following nonotologic, noncardio-pulmonary bypass surgery. Archives of Otolaryngology – Head and Neck Surgery 123: 994–998.
- De la Cruz, M., Bance, M. (1998) Bilateral sudden sensorineural hearing loss following non-otologic surgery. *Journal* of Laryngology and Otology 112: 769–771.
- DuVall, M. B., Caparosa, R. J., Bailey, H. A. (1981) Sensorineural hearing loss in the unoperated-on otosclerotic ear. *Laryngoscope* 91: 197–204.
- Gordon, A. G. (1983) Hypoacusis after spinal anaesthesia. Lancet 2: 793.
- Gordon, A. G. (1997) Do musical hallucinations always arise from the inner ear? *Medical Hypotheses* **49**: 111–122.
- Gordon, A. G. (1998) Drug-induced musical hallucinations. Journal of Nervous and Mental Disease 186: 652-653.
- Hochermann, M., Reimer, Å. (1987) Hearing loss after general anaesthesia (a case report and review of literature). *Journal of Laryngology and Otology* **101:** 1079–1082.
- Judson, I. R., Wiltshaw, E. (1983) A near-death experience. Lancet 2: 561-562.
- Marneros, A., Beyenburg, St., Berghaus, A. (1997) Unilateral hallucinations and other psychotic symptoms due to otosclerosis. *Psychopathology* 30: 89–92.
- Panning, B., Mehler, D., Lehnhardt, E. (1983) Transient low frequency hypoacousia after spiral anaesthesia. Lancet 2: 582.
- Walsted, A. (1998) Effects of cerebrospinal fluid loss on the auditory system. Clinical and experimental investigations. *Danish Medical Bulletin* 45: 268–281.
- Watcha, M. F., White, P. F. (1992) Postoperative nausea and vomiting. Anesthesiology 77: 162–184.
- Yogendran, S., Asokumar, B., Cheng, D. C. H., Chung, F. (1995) A prospective randomized double-blinded study of the effect of intravenous fluid therapy on adverse outcomes on outpatient surgery. *Anesthesia and Analgesia* 80: 682.

Author's reply

I thank Mr Gordon for his illuminating and interesting commentary on our case. There are a few points in his letter I would like to address. Firstly, the ear has only a limited number of possible responses to insult of any kind, 'muffled hearing loss', 'tinnitus', 'fullness' are common accompaniments of any sudden hearing loss, and cannot be taken as definitive evidence of hydrops, although I do agree they are suggestive. Much of the literature Mr Gordon cites describe hearing changes after loss of CSF, which was not the situation in our reported case with no spinal anaesthesia and no opening of the dura. Thirdly, I have a very difficult time believing that musical hallucinations are an end organ phenomenon, a result of 'hyper irritable inner ear or incipient hydrops'. In my experience with these hallucinations, they are often complex musical arrangements, and many times patients will describe them as a tape recording. In fact, often they are songs from childhood, and at least two musician patients have been able to listen to them accurately enough to transcribe them in musical notation. It is difficult to comprehend how an irritable inner ear could produce music of this rhythmic arrangement. The most important point against a peripheral mechanism is that most of the cases I have encountered of musical hallucinations (four I can remember) have followed total ablation of the inner ear by a translabyrinthine removal of the inner ear, by definition excluding a peripheral mechanism, at least on the operated side.

Nevertheless, I do appreciate the insights Dr Gordon brings to this discussion and thank him for sharing his observations.

Manohar Bance,

Assistant Professor Otology/Neurology, The University of Toronto

Eye protection for ENT junior doctors

Dear Sir,

The importance of eye protection is well recognized in surgical fields (Bell and Clement; 1991, Berridge *et al*, 1993). Otolaryngology risks contamination in the operating theatre (Hinton *et al.*, 1991) and during ward procedures. Epistaxis is a common problem managed on the ward by junior doctors. Close proximity to a patient with epistaxis who may be sneezing or coughing inevitably results in a wide dispersion of blood. It would be reasonable to expect doctors packing noses to be provided with eye protection in expectation of this hazard. A recent audit of 20 SHO's working in different departments countrywide, including inner-city areas, was performed by telephone questionnaire.

Fourteen of those questioned said no protection was provided. Goggles or visors were provided for only six. However these were irregularly utilized and only one doctor regularly wore eye protection. Sixteen had been recently splashed in the face and eyes. Conjunctival transmission of hepatitis B can occur and a case of HIV contracted in this way has been documented (Gioannini *et al.*, 1988).

It is argued that no distinction should be made between high risk and ordinary patients and universal precautions should be adopted in operating theatres (Wastell, 1992). These practices should be maintained on the wards. Glasses are known to provide insufficient protection against blood splashes (Brearley and Buist, 1989) and a full face visor should be available for doctors managing epistaxis.

J. A. Carruth and L. K. V. Norman, Department of Otolaryngology, Southampton General Hospital, Tremona Road, Southampton SO16 6YD.

References

- Bell, K. M., Clement, D. A. (1991) Eye protection for the surgeon. Journal of the Royal College of Surgeons Edinburgh 36: 178–179.
- Berridge, D. C., Lees, T. A., Chamberlain, J., Jones, N. A. G. (1993) Eye protection for the vascular surgeon. *British Journal of Surgery* 80: 1379–1380.
- Brearley, S., Buist, L. J. (1989) Blood splashes: an underestimated hazard to surgeons. *British Medical Journal* 299: 1315.
- Gioannini, P., Sinicco, A., Cariti, G., Lucchini, A., Paggi, G., Giachino, O. (1988) HIV infection acquired by a nurse. *European Journal of Epidemiology* **4**: 119–120.
- Hinton, A. E., Herdman, R. C., Timms, M. S. (1991) Incidence and prevention of conjunctival contamination with blood during hazardous surgical procedures. *Annals of Royal College of Surgeons of England* **73**: 239–242.
- Wastell, C. (1992) Hospital procedures. The impact of HIV on surgical practice. Royal College of Surgeons of England, London.