1985,¹² but there is still controversy about the efficacy of some measures. In extreme cases, when there is very little or no useful hearing in a single affected ear, destruction of the inner ear—labyrinthectomy—has long been recognised as effective¹³⁻¹⁵ and may almost be guaranteed to prevent further vertigo. When hearing must be preserved several so called conservative procedures are available. For most otologists decompression of the endolymphatic sac is the first option. The sac is accessible deeply behind the ear, through the mastoid, where it lies between the posterior fossa dura and the temporal bone, anteromedial to the sigmoid sinus. Whether the sac is simply exposed (and thereby decompressed), or drained into the mastoid air cell system, or its lumen shunted into the subarachnoid cerebrospinal fluid space probably makes little difference to the results: about four fifths of patients may expect considerable or total relief from attacks of vertigo.^{3 5 16} A tiny percentage may have further damage to hearing. In the early stages of Menière's disease, when the hearing level fluctuates, the hearing may be improved, although there are statistical snares in this justification for early surgical intervention. How this operation works is uncertain (even whether it works has been questioned¹⁷). Some tests of cochlear function in association with dehydration or with fluid loading may possibly predict the outcome.⁹

Hearing may also be preserved, while the unruly labyrinth is disconnected from the brain, by cutting the vestibular nerve—through the middle cranial fossa or through the posterior fossa.^{18 19} The risk to the patient is greater than from simple surgery of the saccus, but relief from vertigo is more certain.¹⁶ Other procedures that some otologists use include drainage of the saccule through the stapes footplate,²⁰ and shunting of the cochlear duct (containing endolymph) into the perilymph space of the scala tympani,²¹ but both these operations carry a high risk of hearing loss.

Bilateral disease presents a different challenge as patients may become continuously unsteady from vestibular deficit rather than intermittently vertiginous, and hearing loss often becomes the most disturbing component of the disability.

HAROLD LUDMAN

Consultant Otolaryngologist,
National Hospital for Neurology and Neurosurgery,
London WC1N 3BG

- 1 Hallpike CS, Cairns H. Pathology of Menière's syndrome. *J Laryngol Otol* 1938;53:625-55.
- 2 Balkany T, Sires B, Arenberg I. Bilateral aspects of Menière's disease: an underestimated entity. *Otolaryngol Clin North Am* 1980;13:603.
- 3 Goldenberg RA, Justus MA. Endolymphatic mastoid shunt for Menière's disease: Do results change over time? *Laryngoscope* 1990;100:141-5.
- 4 Haye R, Quist-Hansen S. The natural course of Menière's disease. *Acta Otolaryngol (Stockh)* 1976;82:289-93.
- 5 Smith WC, Pillsbury HC. Surgical treatment of Menière's disease since Thomsen. *Am J Otol* 1988;9:39-43.
- 6 Brookes GB, Morrison AW, Rajamanickam R. Unilateral Menière's disease: Is the contralateral ear normal? *Am J Otol* 1985;6:495-9.
- 7 Paparella MM. The cause (multifactorial inheritance) and pathogenesis (endolymphatic malabsorption) of Menière's disease and its symptoms (mechanical and chemical). *Acta Otolaryngol (Stockh)* 1985;99:445-51.
- 8 Schuknecht HF, Gulya AJ. Endolymphatic hydrops—an overview of classification. *Ann Otol Rhinol Laryngol* 1983;106(suppl):1-20.
- 9 Morrison AW. Predictive tests for Menière's disease. *Am J Otol* 1986;7:5-10.
- 10 Snow JB, Suga F. Control of the microcirculation of the inner ear. *Otolaryngol Clin North Am* 1975;8:455-66.
- 11 Alford BR. Committee on hearing and equilibrium, report of subcommittee on equilibrium and its measurement. Menière's disease: criteria for diagnosis and evaluation of therapy for reporting. *Trans Am Acad Ophthalmol Otolaryngol* 1972;76:1462-4.
- 12 Pearson BW, Brackmann DE. Committee on hearing and equilibrium guidelines for reporting treatment results in Menière's disease. *Otolaryngol Head Neck Surg* 1985;93:579-81.
- 13 Cawthorne TE. The treatment of Menière's disease. *J Laryngol Otol* 1943;58:363.
- 14 Schuknecht HF. Ablation therapy for relief of Menière's disease. *Laryngoscope* 1956;66:859-70.
- 15 Cawthorne TE. Membranous labyrinthectomy via the oval window for Menière's disease. *J Laryngol Otol* 1957;71:524-7.
- 16 Primrose WJ, Smyth GDL, Kerr AG, Gordon DS. Vestibular nerve section and saccus decompression: An evaluation of long-term results. *J Laryngol Otol* 1986;100:775-84.
- 17 Thomsen J, Bretlau P, Tos M, Johnsen NJ. Endolymphatic sac-mastoid shunt surgery a nonspecific treatment modality? *Ann Otol Rhinol Laryngol* 1986;95:32-5.
- 18 Silverstein H, Norrell H, Haberkamp T. A comparison of retrosigmoid EAV, retrolabyrinthine, and middle fossa vestibular neurectomy for treatment of vertigo. *Laryngoscope* 1987;97:165-73.
- 19 McElveen JT, Shelton C, Hitselberger WE, Brackmann DE. Retrolabyrinthine vestibular neurectomy: a re-evaluation. *Laryngoscope* 1988;98:502-6.
- 20 Fick IAV. Decompression of the labyrinth. *Arch Otolaryngol* 1964;79:447-58.
- 21 Schuknecht HF. Cochlear endolymphatic shunt. *Am J Otol* 1984;5:546-8.

Bleeding tonsils

Beware the "bleeding quinsy"

Spontaneous tonsillar haemorrhage is an uncommon but serious complication of tonsillitis. Several recent reports have described patients who lost large amounts of blood from peripheral vessels.¹⁻⁵ Less common, but more catastrophic, is the bleeding that may occur after erosion of the great vessels of the carotid sheath.⁶

In a large group of patients considered to be at risk of spontaneous tonsillar haemorrhage Griffies *et al* described bleeding in eight out of 754 with tonsillitis.¹ Bleeding stopped spontaneously in three and was controlled by local measures in the rest, although blood loss ranged from 250 ml to 700 ml. Other patients have required emergency tonsillectomy: McCormick and Hassett described a 2 year old child with tonsillitis who lost 550 ml (over half his circulating blood volume),² and Skinner and Chui described two similar cases.³ John *et al* also removed a tonsil for persistent bleeding; their patient subsequently developed measles.⁴ Infectious mononucleosis is another cause of tonsillar haemorrhage.¹⁵

All these cases arose from peripheral tonsillar vessels. Stevens has recently reminded us of the fact that spontaneous tonsillar haemorrhage may also arise from the great vessels of the carotid sheath.⁶ The internal carotid artery is most often affected, though the external carotid artery and internal

jugular vein are also at risk. The characteristic presentation is a sudden severe haemorrhage from the nose or mouth (or even the ear).⁷ If the patient survives the initial bleed recurrent massive haemorrhage occurs and may be associated with formation of a false aneurysm. The possibility of a true aneurysm of the carotid artery presenting as a quinsy must also be borne in mind.⁸

Any patient with spontaneous tonsillar haemorrhage whose bleeding is severe enough to warrant surgical intervention or who has a suspected peritonsillar or parapharyngeal abscess or neurological signs (Horner's syndrome or paralysis of cranial nerves IX, X, XI, or XII) should undergo carotid arteriography.¹ If the bleeding is from a peripheral tonsillar vessel tonsillectomy is the treatment of choice. If the internal carotid artery is implicated it needs to be ligated. If, however, cross circulation through the circle of Willis cannot be shown on angiography gradual clamping of the carotid artery or carotid ligation plus extracranial-intracranial bypass may be safer. Back bleeding from the circle of Willis is a potential problem that could be overcome by the transluminal insertion of steel coils,⁹ although implanting coils into a potentially infected vessel may carry its own risks.

Haemorrhage caused by erosion of the internal carotid

artery was quite common in the preantibiotic era.¹⁰ Because the "bleeding quinsy" is now so rare it should not therefore be forgotten and never underestimated.

MARK G WATSON

Senior Ear, Nose, and Throat Registrar,
Royal Infirmary, Sunderland SR2 7JE

- 1 Griffies WS, Wotowic P, Wildes TO. Spontaneous tonsillar hemorrhage. *Laryngoscope* 1988;98:365-8.
- 2 McCormick MS, Hassett P. Spontaneous haemorrhage from the tonsil. *J Laryngol Otol* 1987;101:613-6.

- 3 Skinner DW, Chui P. Spontaneous tonsillar haemorrhage. *J Laryngol Otol* 1987;101:611-2.
- 4 John DG, Thomas PL, Semeraro D. Tonsillar haemorrhage and measles. *J Laryngol Otol* 1988;102:64-6.
- 5 Kelly PC, Sanders M. Tonsillar hemorrhage. *N Y State J Med* 1974;74:2021-2.
- 6 Stevens HE. Vascular complication of neck space infection: case report and literature review. *J Otolaryngol* 1990;19:206-10.
- 7 Harrison DFN. Two cases of bleeding from the ear from carotid aneurysm. *Guy's Hospital Reports* 1954;103:207-12.
- 8 Henry RC. Aneurysm of the internal carotid presenting as a peritonsillar abscess. *J Laryngol Otol* 1974;88:379-84.
- 9 Tovi F, Leiberman A, Hertzanu Y, Golcman L. Pseudoaneurysm of the internal carotid artery secondary to tonsillectomy. *Int J Pediatr Otolaryngol* 1987;13:69-75.
- 10 Salinger S, Pearlman SJ. Hemorrhage from pharyngeal and peritonsillar abscesses. *Archives of Otolaryngology* 1933;18:464-509.

The yellow card: mark II

More reports are always needed

The United Kingdom's yellow card scheme for spontaneous reporting of adverse drug reactions has been one of the most successful of the national reporting schemes. Since the scheme started in 1964 the Committee for the Safety of Drugs and its successor, the Committee on Safety of Medicines, have collected over 200 000 reports of suspected adverse reactions, and the annual reporting rate has increased from an initial total of 1415 to some 19800 in 1989. Nevertheless, the committee is always looking for ways to improve reporting, and this issue of the *BMJ* includes a copy of a new yellow card designed to elicit more useful information.

Yellow cards are widely available in prescription pads, the *British National Formulary*, the *Monthly Index of Medical Specialities*, the *ABPI Data Sheet Compendium*, and in the pharmacy departments of all United Kingdom hospitals. Doctors are asked to report all suspected adverse reactions for newly marketed drugs (identified by an inverted black triangle in the *British National Formulary*) and serious or unusual reactions to established medicines. Sixty per cent of all reports to the Committee on Safety of Medicines come from general practitioners, 20% from hospital doctors, and 20% from the pharmaceutical industry. There is, of course, considerable underreporting.

Lumley *et al* studied some 100 general practitioners in 24 practices and found that yellow cards were completed for only 13% of eligible suspected adverse reactions.¹ Nevertheless, although general practitioners may be less than perfect in reporting suspected adverse reactions, hospital doctors, who presumably see most of the severe illness in the United Kingdom, have been even poorer in their use of the system. In a comparison of reporting schemes in several countries Griffin showed that the United Kingdom had the lowest percentage of reports of suspected adverse reactions originating from hospitals, although it also had one of the highest overall reporting rates when expressed per thousand doctors or per million population.²

Spontaneous reporting schemes have been useful in identifying new drug hazards. Examples include hepatotoxicity and pulmonary fibrosis with amiodarone, Guillain-Barré syndrome with zimeidine, arthralgia with mianserin, and severe gastrointestinal and skin reactions with benoxaprofen.³ The Committee on Safety of Medicines has made many attempts to publicise the yellow card scheme, including reports in *Current Problems*, sent to all prescribers, and at one time annual reviews of yellow card reports published in the *BMJ*.⁴⁻⁶ More detailed reviews of the accumulated data and their uses have also been published,⁷⁻¹⁰ and Griffin and Weber have analysed in greater detail the demography of voluntary schemes, both

in the United Kingdom and elsewhere, and have emphasised the pitfalls in comparing data from different national systems.¹¹⁻¹³ Reviews of the data have also been produced by independent investigators, such as the studies of hepatic reactions associated with ketoconazole¹⁴ and of extrapyramidal reactions to metoclopramide.¹⁵

The spontaneous reporting scheme developed over 25 years previously has thus proved an economical way of generating meaningful information about many drugs and particularly about otherwise rare events that may be drug induced. Its value would be greatly enhanced were more hospital doctors to take the opportunity for reporting. Studies are under way to see whether direct reporting by hospital pharmacists (with the approval of the prescribing doctor) will enhance the value of reports coming from hospitals. Additionally, anaesthetists are taking part in a study of a special anaesthetic yellow card designed to facilitate reporting of adverse events that occur in operating theatres and recovery rooms and might be drug induced. The Committee on Safety of Medicines wants to encourage all prescribers to report suspected reactions using either the original yellow cards in widespread circulation or the new card, as enclosed with this issue. These new cards provide space for additional information and if completed satisfactorily will help the committee to evaluate the suspect reaction.

D H LAWSON

Consultant Physician,
Royal Infirmary,
Glasgow G4 0SF

- 1 Lumley CE, Walker SR, Hall GC, Staunton N, Grob PR. The under-reporting of adverse drug reactions seen in general practice. *Pharm Med* 1986;1:205.
- 2 Griffin JP. Survey of the spontaneous adverse drug reporting schemes in fifteen countries. *Br J Clin Pharmacol* 1986;22:835.
- 3 Rawlins MD. Spontaneous reporting of adverse drug reactions. *Q J Med* 1986;59:531.
- 4 Anonymous. CSM Update. Annual review of yellow card reports. *BMJ* 1986;293:641.
- 5 Anonymous. CSM Update. Non-steroidal anti-inflammatory drugs in serious gastrointestinal adverse reactions. 2. *BMJ* 1986;293:1190.
- 6 Anonymous. CSM Update. Withdrawal of nomifensine. *BMJ* 1986;293:41.
- 7 Rawlins MD. Spontaneous reporting of adverse drug reactions. 1. The data. *Br J Clin Pharmacol* 1988;26:1.
- 8 Rawlins MD. Spontaneous reporting of adverse drug reactions. 2. Uses. *Br J Clin Pharmacol* 1988;26:7.
- 9 Bem JL, Breckenridge AM, Mann RD, Rawlins MD. Review of yellow cards (1986): report to the Committee on Safety of Medicines. *Br J Clin Pharmacol* 1988;26:679.
- 10 Castleden CM, Pickles H. Suspected adverse drug reactions in elderly patients reported to the Committee on Safety of Medicines. *Br J Clin Pharmacol* 1988;26:347.
- 11 Griffin JP, Weber JCP. Voluntary systems of adverse reaction reporting. Part 1. *Adv Drug React Acute Pois Rev* 1985;4:213.
- 12 Griffin JP, Weber JCP. Voluntary systems of adverse reaction reporting. Part 2. *Adv Drug React Acute Pois Rev* 1986;6:23.
- 13 Griffin JP, Weber JCP. Voluntary systems of adverse reaction reporting. Part 3. *Adv Drug React Acute Pois Rev* 1989;8:203.
- 14 Lake-Bakaar G, Scheuer PJ, Sherlock S. Hepatic reactions: association with ketoconazole in the United Kingdom. *BMJ* 1987;294:419.
- 15 Bateman DN, Rawlins MD, Simpson JM. Extrapyramidal reactions with metoclopramide. *BMJ* 1985;291:930.