Annotation

Acute otitis media—then and now

Opinion about acute otitis media has changed during the last 50 years, and so has its nature. In the early 1930s paediatricians were encouraged to incise ear drums if the drum was red and bulging. There were three main reasons for this. Firstly, it was the only treatment they had; secondly, it prevented acute mastoiditis and its complications; thirdly, parenteral infection was thought to be a major cause of gastroenteritis which in those days killed thousands of babies while the methods of the day exposed no pathogens in the stools. The operation of myringotomy (at least in my experience) seldom released pus; sometimes there was a drop of clear fluid but often nothing but a trace of blood. No anaesthetic was used. Incisions healed quickly.

Towards the end of the 1930s sulphanilamide and sulphapyridine came into use and put paid to paediatric paracentesis. The familiar 'acute mastoid' operation disappeared for it was no longer needed. At the same time erysipelas and Sydenham's chorea practically vanished, rheumatic fever declined, and staphylococci replaced streptococci in postoperative wounds. Chronic and recurrent otorrhoea diminished and the ENT surgeon was given better fields to plough, although subacute or chronic otitis without perforation seemed to become more common. However it had always been present and was regarded as a major cause of deafness especially in the USA where removal of adenoids was supplemented by a campaign for radium treatment of other pharyngeal lymphoid tissue.

Another phase opened as penicillin and other antibiotics further improved the outlook from 1945 onwards. Paediatricians and general practitioners initiated treatment and many otologists approved, saying something like: 'The treatment of acute otitis media in children is penicillin by injection. If this is not successful after 3 days, call me in.' Myringotomy thus passed into more competent hands and was reserved for complicated cases.

There has been no great change in this policy for more than 30 years although the nature of the illness may have altered, but so too has the nature of other illness changed—such as infection in surgical wards. However infection of ears remains much less threatening than it used to be. An 'acute ear' may be painful but it is not going to cause a fatal complica-

tion. More attention is given to the 'glue ear' which may in some instances follow suppression of acute inflammation by antibiotics. Irradiation of the nasopharynx never caught on in Britain although the Ministry of Health made facilities available to surgeons who asked for them. Curettage of adenoids continued to be impressively successful in some children but the day of the grommet had dawned.

Children still get acute attacks with fever and if they are old enough complain of pain in the ears, but in some of them and in the babies diagnosis rests on seeing a red tympanic membrane. Sometimes one is wrong; it is easy to make a mistake at night with an anxious mother trying to hold her crying baby's head still enough for an unsure doctor to see what lies beyond the tip of the smallest speculum. There is little light at the end of that tunnel. What seems to be an inflamed ear in the evening may look healthy the next morning. Does crying cause suffusion of the drum as well as of the eyes? I think so. Does the drum like the cheek flush with fever? Probably. A crescent of erythema along the lower edge of the membrane is common but not important; a pink segment generally fades away rather than growing to affect the entire membrane. Bulging is not usually seen. Previous inflammation may have made the membrane opaque so that it will take an otologist to detect concealed pus.

Where does this put the general practitioner or the hospital resident who believes that he is dealing with real otitis and not just a pink drum? In Holland an ENT surgeon, a general practitioner, and a statistician have tried to answer.¹ Their work is careful and their report convincing, although it is a pity that they did not name the antibiotics that were used, and that they excluded children younger than 2 years. To ask for microbiology as well would be to demand a luxury.

Children aged between 2 and 12 years with acute otitis media, seen by 12 general practitioners from January to May 1979 or from October to March 1980 were referred to an otolaryngologist in Tilberg, and treated by one of 4 regimens: myringotomy only, antibiotics only, both, or neither. Symptomatic treatment was used in all groups. Results—for example pain, discharge, number of analgesic suppositories used, temperature—were recorded by

general practitioners who did not inspect the ear drums. After 1 and 2 months and again after 1 and 2 (?) years the otologist (who did not know which treatment had been used) inspected the drums and recorded audiograms in children who were old enough.

Statistically considered there was no difference in outcome between the groups. Pain went quickly even when symptomatic treatment alone was used. There were minor differences but it was concluded that acute otitis in children could be treated with nose drops and analgesics only, reserving antibiotics and myringotomy for cases in which the otitis ran an irregular course or in which ear discharge continued for 14 days.

Ought we to adopt this line? To take the last first, I would not want to leave a discharging ear for 14 days without the help of a bacteriologist and an ENT surgeon. The major conclusion, that neither antibiotics nor surgery does appreciable good, must be accepted and should remind us of John Fry's similar findings published more than 20 years ago. The same conclusion should not be applied automatically in countries with poor hygiene and under-

nutrition, often associated with a shortage of antibiotics and a dearth of otolaryngologists.

Some illusions about otitis have faded during the last 50 years, but how old-fashioned it seems to fall back on symptomatic treatment. Can that too be improved? In the interests of the doctor who used to want to see the inflamed drum more than once we have done away with dropping warm oil into the external meatus. Some nasal decongestants used in adults are painfully powerful in children but we do know that ephedrine 0.5% in physiological saline does not impair ciliary action; its effect may not last a full 4 hours. As analgesic, paracetamol is popular but do we really know that it is the best pain-killer for otitis? Different pains require different remedies. Close observation might tell us.

Reference

- ¹ van Buchem FL, Dunk JHM, van' T Hof MA. Therapy of acute otitis media: myringotomy, antibiotics, or neither? *Lancet* 1981; ii: 883–7.

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