

Clinical: Success curing common ear conditions.(Micromedics EarPopper)

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EQUIPMENT REVIEW

The Micromedics EarPopper is a cost-effective device, says Dr Peter Ilves. The cost of excess use of antibiotics, secondary care referral and surgery throughout the world, in cash and human terms, is significant for the treatments of a range of ear conditions such as middle ear effusion, otitis media with effusion (OME), aerotitis/barotitis and Eustachian tube dysfunction.

OME is a very common condition mostly affecting children aged one to three years old. At any point in time, up to one third of them will be suffering from it and nine out of 10 children will have been diagnosed at some stage before school age.

The figures vary around the world, but give some idea of the scale. However, most cases resolve spontaneously, requiring little or no intervention with parental reassurance playing a great part in this process.

'Watchful wait'

A two- to three-month 'watchful wait' seems reasonable in most cases. In unresolved cases, chronic otitis media may occur with more permanent side-effects. The poor outcomes could include speech delay, behavioural disorders and recurrent symptomology.

It is at this point that the EarPopper comes on the scene.

Micromedics produced the device on the basis of a technique called Politzerisation or the Politzer manoeuvre.

Adam Politzer from Vienna studied the movement of air in the Eustachian tube using a manometer and published his first results in 1861. By 1863, he had designed the Politzer bag.

The EarPopper is a few light years ahead of that, though still lays credit in Politzer's court. It is a simple unit that comes in two versions; the professional for the desktop in your surgery or clinic, and one for home use.

Also, there are caps for the device, which are disposable. The unit sits proudly on the desk and is four inches in length, lightweight and sits neatly in the hand. The power supply is delivered via a 9V battery, which I understand will last some time. I was impressed that the battery door, which is secured with a micro screw, has the relevant screwdriver supplied.

Then it is a matter of inserting it into your nose, closing off the other nostril, pressing the button, feeling the air flowing up your nose and swallowing. It is a little more professional than that, but not far off.

You repeat the manoeuvre for both sides alternately with five-minute intervals.

Unusual sensation

The sensation takes a little getting use to; at first you feel your middle ear cavity expand with air, a most curious event, with a worrying decrease in hearing with the initial swallow. However, after repeated swallows the pressure levels equilibrate and normality returns.

It is advisable to prepare patients for this, particularly children, to ensure that panic does not set in. It is important to ensure that there is a good seal for the device. In the instructions, which are very clear, you are given hints and tips as to doing this well. In some cases there will be no response and it may be a good idea to give up at this point.

The specific indications are for OME, serous otitis media, Eustachian tube dysfunction and frequent airline travellers, scuba divers and other activities involving air/barometric pressure changes.

Contraindications are severe ear infection, URTI, heavy nasal congestion or cold symptoms without consultation.

The main evidence base appears to come from a four-year study, which showed that out of 94 children (aged four to 11) there was improvement in 74 per cent of cases in the EarPopper groups, as opposed to 24 per cent in the control group.

The study was presented in two parts in 2005 with good statistical significance.

To be used widely, especially in primary care, further guidance is needed in the UK and I would be keen to await the involvement of NICE or, at the very least, our local ENT service.

I would say that more research would be useful because the study was slightly limited and not used under the age of four years. Yet this is a great device and, if it does what it says as effectively as indicated on the packet, the ENT budget will be greatly helped and patients will be happier with lower-grade intervention.

- An independent review by Dr Ilves, a GP in south west London