

Novel approach to treating glue ear could save children from surgery

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A new trial is underway to determine if a short course of oral steroids can improve the hearing of children suffering from glue ear, thanks to a £1.3M research grant awarded to scientists at Cardiff University.

[Glue ear](#) is the most common reason for childhood surgery, with approximately 25,000 operations carried out each year in the UK. Also known as otitis media with effusion (OME), the condition is caused by an accumulation of sticky fluid in the middle ear and affects around 80% of [children](#) by the age of four.

For most children, glue ear gets better by itself. But for thousands of children each year it results in [deafness](#) that can affect speech, social development and learning. This in many cases leads to depression, as well as behavioural and attention disorders.

With a substantial award from the National Institute for Health Research Health Technology Assessment (NIHR HTA) Programme, researchers from Cardiff University's School of Medicine are now able to explore the use of steroids in treating this pervasive condition. Professor Chris Butler, Institute Director at Cardiff University's Cochrane Institute of Primary Care & Public Health, and leader of the study, said:

"Glue ear is an important cause of deafness and the most common reason for children to have an operation in the UK. If [oral steroids](#), which are commonly used as a treatment for asthma in children, prove to be effective, we will be able to offer parents a new treatment choice to improve their child's quality of life and that may avert the need for an operation. Such an approach is also likely to result in significant savings for the NHS."

Sarah Jones, a mother from Cardiff, reflects on her young daughter's experience of suffering from glue ear:

"My daughter was diagnosed with glue ear when she was seven months old and this resulted in mild hearing loss through her early years. This delayed her speech and language development and greatly affected her socially. I was forever apologising for her shyness and having to 'translate' what little she did say because people couldn't understand her."

"It was awful thinking of her being stuck in a confused muffled world. She is five years old now and thankfully with time, speech and language therapy and understanding teaching staff she is coming through the other side of it and is such a little chatterbox. Fortunately we've not had to consider grommet surgery for her but had we got to that point I know that I would most definitely prefer to have the choice of a non-invasive treatment."

Currently, children suffering with recurrent and chronic glue ear will be offered hearing aids, or a surgical operation to insert grommets into the eardrum to improve ventilation. Both have risks and side effects, are costly, and require repeated visits to hospital clinics.

The development of an alternative non-surgical treatment for glue ear, that can be used to treat children in the first four years of life by GPs, could potentially spare children and their families the need for an invasive surgical procedure.

Many oral medications, including antibiotics, antihistamines and decongestants do not work for glue ear. There are, however, sound scientific grounds for believing that steroids might be beneficial for this condition. Yet trials conducted so far have been either too small, of poor quality, or haven't assessed hearing as a research outcome. Consequently, researchers at Cardiff aim to elucidate the long and short term benefits of this potential treatment.

The OSTRICH trial (Oral Steroids for Resolution of otitis media with effusion OME in Children) starts in March 2013 and will be conducted over a three-year period. It aims to recruit 380 participants from six hospital sites. The sample will be large enough to determine whether oral steroids produce a meaningful improvement in children's hearing and thus obviate the overreliance on grommet operations.

More information: [The OSTRICH study](#)
[OSTRICH project summary](#)

Provided by Cardiff University

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