Robert B. Belafsky, MD, FACS
Howard J. Bresalier, DO, FOCOO
Harry Cantrell, MD, FACS
Roy D. Carlson, MD
Anthony Cultrara, MD
Mark E. Friedel, MD
Stephen P. Gadomski, MD, FACS

Ashmit Gupta, MD
Patrick J. Hall, MD, FACS
Steven M. Leoniak, MD
P. Todd Rowan, MD, FACS
Edward D. Scheiner, DO, FOCOO
David N. Schwartz, MD, FACS
Rasesh P. Shah, MD, FACS
Samir Shah, MD, FACS

SEROUS OTITIS MEDIA (THE GLUE EAR)/MYRINGOTOMY

1. **Why does the fluid collect?** The middle ear is connected with the back of the nose by a passage known as the **EUSTACHIAN TUBE.** It plays an important role in maintaining equal air pressure inside and outside the middle ear, or on both sides of the eardrum. When this tube is not functioning a partial or total obstruction occurs. As a result, the air in the middle ear is gradually absorbed by the mucous lining of the middle ear. The negative pressure, and vacuum, in the middle ear draws tissue fluid into the cavity from the mucosa. Initially, the fluid is thin and watery and gradually becomes thicker or glue-like. This is known as serous otitis media or glue ear.

2. **How common is it?** Glue ear is the most common cause of deafness in children and approximately 10% of all children will have this problem at one time or another.

3. **Why does it occur?** In infants and children the eustachian tube is more horizontal, smaller and wider than an adult's. Repeated upper respiratory infections, enlarged adenoids, allergy and weakness of the palate muscles can all contribute to obstruction of the tubes resulting in development of fluid in the middle ear.

4. **What are the symptoms and effects?** Often the only finding in children is partial deafness. The degree of such a hearing loss varies and it may remain undetected for a long time. Small children do not complain and a surprising number of parents fail to notice that the children are hard of hearing. Often children are accused of not paying attention and being naughty and stubborn or just not wanting to hear. The older child may complain of fullness in the ear, earache, popping, or deafness. The hearing may fluctuate and usually gets worse during and after a common cold. During the routine screening of hearing at school, some children are found to be suffering from this condition who are not suspected of having a hearing loss.

5. **Problems at school.** Depending on the degree of hearing loss the child may have difficulty in hearing the teacher. This is made worse by a noisy classroom when the child is sitting in the back of the class and the teacher speaks in a quiet voice. School progress is often affected. Other children may become withdrawn or even have temper tantrums.

6. **Practical help.** Once the condition has been recognized, and before it clears up, the child should be helped in a practical way to overcome his handicap. The teacher should be informed about the hearing loss so that the child may be seated in a favorable position in the classroom.

7. **What happens to the fluid?** In a vast majority of cases as the infection clears the tube will return to its normal function within a few weeks. Once the fluid has cleared the hearing will return to normal.

8. **Medical treatment.** Usually treatment consists of antibiotics to clear the infection and decongestants to help drain and dry the secretions during the acute state. Eardrops are of no value. If the condition does not clear up on these medications, in some cases Cortisone type medications can be tried. If the condition persists after several weeks despite medical treatment, surgical treatment may be necessary.

THE MYRINGOTOMY OPERATION

The surgical treatment for serous otitis media, or glue ear, is aimed at removing the fluid from the middle ear and preventing its recurrence. Children usually undergo this operation as an out-patient procedure in the hospital. General anesthesia is used and we are fortunate to have a staff of anesthesiologists from Children's Hospital with a vast experience in pediatric anesthesia. (The child's anesthesia prior to surgery). During the myringotomy operation, incisions are made in the eardrums with a very fine instrument. The fluid is then aspirated by suction. A plastic tube is inserted through the opening of the eardrum. This tube allows ventilation of the middle ear space, by-passing the function of the eustachian tube, and helps prevent the reformation of fluid. Sometimes the adenoids and/or tonsils are removed at the same time.

1. **What happens to the plastic tube?** The healing of the eardrum is so great that it pushes the plastic tube out. This usually occurs in about a year or so. The hole in the eardrum heals by itself. In extremely rare instances a hole may persist. These tubes cause no discomfort while in the eardrum. In rare instances, if the tubes stay in too long, they have to be removed.
2. **Will it happen again?** About 80% of the children respond to the initial surgical treatment. Should the fluid reaccumulate, it may be necessary to reinsert the tubes.
3. **What can happen if not treated?** Over many months the middle ear fluid gradually becomes very thick and increasing negative pressure results. This may produce permanent changes in the eardrum and middle ear resulting in permanent conductive deafness. Occasional cholesteatoma (skin cysts inside the ear) and other serious complications may arise.

POST-OPERATIVE INSTRUCTIONS

After the myringotomy operation your child should begin by only drinking clear liquids. If these are well tolerated, a full diet may be resumed. Full activities may be resumed the day after the operation. Following the myringotomy, yellowish mucous or even bloody fluid may drain from the ear. As long as this occurs, clean cotton should be kept in the ear. When the drainage ceases, it is unnecessary to keep anything in the ear. To avoid the possibility of bacteria entering the middle ear through the ventilation tube, physicians may recommend keeping ears dry by using ear plugs or other water-tight devices during bathing, swimming and water activities. However, recent research suggests that protecting the ear may not be necessary. Parents should consult with the treating physician about ear protection after surgery.