Dynamic Chiropractic

PEDIATRICS

Otitis Media

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Otitis media (OM) is a generic name for several conditions that can affect the middle ear, including inflammation of the middle ear, ranging from acute to chronic and with or without symptoms. Acute otitis media (AOM) is characterized by symptoms of pain and fever. Otitis media with effusion (OME) is typified by the presence of fluid in the middle ear without signs or symptoms of infection.

Otitis media is the leading reason for visitation to the pediatrician's office. This is probably true for first time visits by frustrated parents to chiropractic offices. From 1975 to 1990, office visits for otitis media have increased by 150 percent to 24.5 million visits, or 81 percent of the pediatric profile for children under the age of 15. The leading age group for OM is children under the age of two.

In 1991, the management costs for each episode were $406 per patient; direct and indirect surgical treatment costs were $2,174. These costs included physician office visits, prescription medications, and parents' time lost from work.

The usual treatment for OM is a 10 day regiment of the antibiotic amoxicillin. In this author's clinical experience, it is not unusual to take a history on a child under the age of two and discover that they have been on antibiotics for half of their short lives. A recent trend which is even more frightening is the increase of children who have been recommended that they maintain a low daily dose of antibiotics for months after no signs of OM are present. With this direction, why should it surprise us that we face an epidemic of bacteria resistance, leaving an alarming number of drugs on the market ineffectual.

In 1994, George Washington University and the University of Minnesota reviewed 33 studies evaluating the efficacy of various antibiotics for the treatment of AOM. Using the statistical technique of meta-analysis, they discovered that drugs have only about a 14 percent advantage over the body's own immune system.

This extrapolates to treating six children (who will not benefit from chemical treatment) to help a seventh child. Not knowing who needs the treatment and who doesn't is a problem for the medical community.

If the medical community is failing to appropriately rule out which children would not benefit from chemical treatment, we have an even larger pandemic usage of drugs for the treatment of OME. Recommendation for the management of OME was published by the U.S. Department of Health and Human Services in the July 1994 Clinical Practice Guideline (CPG), number 12.

The guideline strongly suggests the observation of OME. In approximately 60 percent of children, middle ear fluid goes away without treatment within three months; in 85 percent, it goes away within six months. The use of antibiotics may only speed up 14 percent of the fluid that will dissipate and may decrease the chance of middle ear infection. The disadvantages are that the fluid may not go away; there may be unwanted drug side-effects; and drug-resistant strains of bacteria

may develop. Surgical use of tubes is not considered an initial treatment.

Specific requirements were necessary to even consider the child as a candidate. Those requirements were 4-6 months of bilateral effusion and bilateral hearing deficit. The disadvantages of insertion of tympanotomy tubes were: the risk involved with anesthesia; the repeated surgery needed to replace tubes that fell out; and changes in the eardrum (tympanosclerosis in 51 percent and postoperative otorrhea in 13 percent of the children).

Other factors that the CPG concluded to predispose the child to a higher risk for OME were infants who were bottle-fed, those subjected to passive smoking, and those attending group child care facilities.

Chiropractic Considerations

The chiropractic evaluation must include a thorough evaluation of the entire cervical spine for vertebral subluxation. A close examination of the C1-C4 region should be undertaken. The cervical plexus receives motor fibers that can be traced from the eustachian tubes (tensa veli palatine) to the superior cervical sympathetic ganglion. Often doctors assume that C1 or C2 is the involved segment and they neglect to examine the entire cervical spine.

Prior to the adjustment, motion and static palpate the vertebral segment directly under the suspected segment. Confirm with motion palpation that a larger vertebra (e.g., C2) has not been chosen because it is easier to contact. Secondly, static palpation often reveals taut and tender fibers over the atlas. Do not misconstrue this finding as the involved segment without confirming the analysis with motion palpation. In rare occasions, a sacral segment (e.g., S2, S3) may be the involved subluxation site (or is involved in conjunction with a cervical subluxation). This is due to parasympathetic association.

Frequency and length of care will vary from patient to patient. A weak immune system will have a longer response period (sometimes several months, if not loner, to chiropractic care). The doctor should communicate to the parents that environmental and lifestyle changes (e.g., passive smoking, poor diet, etc.) may lengthen the child's response time. Inform parents that along with chiropractic care, you will be advising them regarding lifestyle changes.

The child with a previous history of antibiotic usage is often a difficult case. All these children have a depressed immune system and their bodies need time to rebuild their own natural defenses.

The bottle-fed infant definitely has a greater risk to OM. Many theories have arisen why this may contribute to OM. Most authorities believe that there is some influence to the function of the eustachian tubes. Some discussion has been given to the following factors: a decreased angle (slant) of the infant being fed; different suckling response on the nipple of the bottle; and being fed on the same side depending on the left/right-handedness of the caretaker. One suspect is the fluid residue which may lead to a breeding ground for bacteria.

Day care facilities appear to be a breeding ground for illness, further contributing to a child struggling to regain a strong immune system. Although many parents don't have options, you may want to suggest ideas to reduce the child's risk. Find a smaller center, or better yet a home where this child will only be with the caretaker's children. In a more serious situation, attempt to have the child cared for by a family member (e.g., grandparent) or a caretaker who will watch only their child.

Also beware of the Monday sick child. This may be the result of a weekend of late nights, no naps, poor diets, or a stay in the church nursery.

Teething may often give the appearance of AOM. The child will exhibit irritability, pulling the ear on the side of the tooth breaking through, crying, ever, and mild cold symptoms. Inform parents what to expect during these periods and closely monitor the child in your office.

Review the eating habits of the family. Often, you will discover that the child has a poor diet, with the balance weighing heavily towards dairy, fruit juices, fast foods and sweets.

Spinal hygiene is another factor. Inquire to the habits of the child. Children sleeping on their stomach will place constant rotational stress on the cervical spine. Repetitive trauma to the forehead as the child is learning to master the skills of walking, rough laying, and falls all warrant closer evaluation of the child's spine.

The chiropractic community has much to offer to families when it comes to health care for children. Although we may not be able to help all children with OM/OME, if chiropractic care could help the six out of seven who are exposed needlessly to drugs, we have an ethical responsibility to pursue this problem.

To receive copies of the Clinical Practice Guideline, as well as the Quick Reference Guide for Clinicians, Managing Otitis Media with Effusion in Young Children (AHCPR Publication No. 94-0624), call toll free (800) 358-9295.

(Correction -- The April 7 article on pregnancy written by Judy A. Forrester, DC should have been titled, "The In-Utero Constraint Technique, the Webster In-Utero Constraint Technique.")

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JULY 1997