

# Observation Effective for Non-TB Lymph Nodes

BY BRUCE JANCIN

FROM THE ANNUAL EUROPEAN CONGRESS  
OF CLINICAL MICROBIOLOGY AND  
INFECTIOUS DISEASES

VIENNA — Management of nontuberculous mycobacterial lymphadenitis in immunocompetent children by observation alone—that is, natural healing—is an effective alternative to surgery and/or antibiotic therapy, a

large Israeli case series suggests.

All the standard pediatric and ENT textbooks describe complete surgical excision of the infected lymph node as the treatment of choice.

However, management with observation alone avoids a raft of shortcomings that come with surgery, including the expense of hospitalization and general anesthesia, along with the nontrivial risks of postoperative facial nerve palsy and

infection, Dr. Jacob Amir said at the meeting.

The outcomes achieved with the observational approach are quite acceptable, although total resolution takes months, added Dr. Amir, professor of pediatrics at Schneider Children's Medical Center of Israel, Petah Tikva.

He reported on 92 consecutive immunocompetent children with culture-proven nontuberculous mycobacterial

facial or cervical lymphadenitis whose parents opted for conservative management with observation only.

In 89 patients, the affected lymph nodes followed a closely similar course: First, the overlying skin turned violaceous in color; then, discharge of purulent material occurred for 3-5 weeks. In the other three patients, the swollen lymph nodes resolved without a change in skin color or a drainage phase.

Complete healing occurred in 65 children (71%) in 3-6 months; in another 25 (27%), by 9 months; and in the final 2, by 12 months. There were no complications.

Dr. Amir characterized the final aesthetic outcomes as "fair" in the 89 children with purulent discharge. At 2 years of follow-up, they had a flesh-colored, flat scar at the drainage site.

These favorable study results raise a philosophical question, in Dr. Amir's

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- The safety and effectiveness of Deflux in the treatment of children under 1 year of age have not been established.

#### Adverse Events

List of treatment-related adverse events for 39 patients from a randomized study and 170 patients from nonrandomized studies. (Follow-up for studies was 12 months).

Adverse Event Category	Randomized Study (n=39 DEFLUX patients)	Nonrandomized Studies (n=170 DEFLUX patients)
UTI(ii)	6 (15.4%) (ii, iii)	13 (7.6%) (ii, iii)
Ureteral dilation (iv)	1 (2.6%)	6 (3.5%)
Nausea/Vomiting/	0 (0%)	2 (1.2%)
Abdominal pain (v)		

- (i) Cases of UTI typically occurred in patients with persistent reflux.
- (ii) Patients in the nonrandomized studies received antibiotic prophylaxis until the 3-month VCUG. After that only those patients whose treatment had failed received further antibiotic prophylaxis. The patients in the randomized study received antibiotic prophylaxis 1 month post-treatment.
- (iii) All UTI cases were successfully treated with antibiotics.
- (iv) No case of ureteral dilation required intervention and most cases resolved spontaneously.
- (v) Both cases of nausea/vomiting/abdominal pain were resolved.

Although vascular occlusion, ureteral obstruction, dysuria, hematuria/bleeding, urgency and urinary frequency have not been observed in any of the clinical studies, they are potential adverse events associated with subureteral injection procedures. Following approval, rare cases of post-operative dilation of the upper urinary tract with or without hydronephrosis leading to temporary placement of a ureteric stent have been reported.



Healing was complete in 71% of children in 3-6 months, 27% by 9 months, and 2% by 12 months.

DR. AMIR

view: "What is successful treatment in a self-limited condition like nontuberculous mycobacterial lymphadenitis?"

The best answer would come from a randomized trial of natural healing versus surgery, he added.

Surgery has already been established as superior to antibiotic therapy in the only randomized trial ever conducted in children with nontuberculous mycobacterial lymphadenitis. In this Dutch multicenter trial, 100 affected children were randomized to surgical excision or at least 12 weeks of antibiotic therapy with clarithromycin plus rifabutin (Clin. Infect. Dis. 2007;44:1057-64).

Surgery was significantly more effective, with a 96% cure rate compared with 66% with antibiotic therapy. However, it is noteworthy that surgical complications occurred in 28% of patients, including staphylococcal wound infections in six children and facial nerve weakness in seven. And 78% of children in the antibiotic arm reported adverse events, Dr. Amir said.

In the Israeli conservative-management series, 90% of the infections were determined to be due to *Mycobacterium avium* complex or *M. haemophilum*. In the 1970s, *M. scrofulaceum* was the most common cause, but in the series reported by Dr. Amir, this species accounted for less than 10% of cases.

In young children, nontuberculous mycobacterial infections most often take the form of painless unilateral lymphadenitis, occurring chiefly in the submandibular, pre- and postauricular, and cervical areas or on the cheek. Affected children generally have no fever; they

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**References:** 1. American Academy of Pediatrics. Committee on Quality Improvement, Subcommittee on Urinary Tract Infection. Practice parameter. The diagnosis, treatment, and evaluation of the initial urinary tract infection in febrile infants and young children. *Pediatrics*. 1999;103(4):843-852. 2. Elder JS, Shah MB, Batiste LR, Eaddy M. Part 3: endoscopic injection versus antibiotic prophylaxis in the reduction of urinary tract infections in patients with vesicoureteral reflux. In: Hensle TW. Challenges surrounding vesicoureteral reflux: fuel for a paradigm shift in treatment. *Curr Med Res Opin*. 2007;23(suppl 4):S15-S20. 3. Chi A, Gupta A, Snodgrass W. Urinary tract infection following successful dextranomer/hyaluronic acid injection for vesicoureteral reflux. *J Urol*. 2008;179:1966-1969. 4. Elmore JM, Kirsch AJ, Heiss EA, Gilchrist A, Scherz HC. Incidence of urinary tract infections in children after successful ureteral reimplantation versus endoscopic dextranomer/hyaluronic acid implantation. *J Urol*. 2008;179:2364-2368. 5. Cerwinka WH, Scherz HC, Kirsch AJ. Endoscopic treatment of vesicoureteral reflux with dextranomer/hyaluronic acid in children. *Adv Urol*. Published Online: May 14, 2008 (doi:10.1155/2008/513854). 6. DEFLUX® [Package Insert]. Edison, NJ: Oceana Therapeutics (US), Inc; 2009. 7. Data on file. Oceana Therapeutics (US), Inc.

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# Myringotomy Tubes Work With Cochlear Implant

BY MARY ANN MOON

FROM THE ARCHIVES OF OTOLARYNGOLOGY  
AND HEAD AND NECK SURGERY

**M**yringotomy tubes can be placed before, during, or after cochlear implants are placed, without putting the patient or the success of the cochlear device at undue risk, according to a study of 62 children.

Moreover, the presence of myringotomy tubes might actually protect the implanted ear if it is still susceptible to recurrent acute otitis media, thus sparing the patient from additional procedures, said Dr. Christopher F. Barañano and his associates at the University of Alabama at Birmingham.

The investigators performed what they described as the first independent study to analyze the overall management of pediatric ears that have both myringotomy tubes and cochlear implants (CIs), during the entire course of implant candidacy, placement, and follow-up.

The role of myringotomy tubes in CI is controversial. Fearing that the tubes raise the risk of complications, "some surgeons strive to avoid myringotomy tubes and to establish tympanic membrane integrity before proceeding with CI, while others treat recurrent acute otitis media with myringotomy tubes before [implantation] despite CI candidacy," they noted.

Dr. Barañano and his colleagues reviewed the records of 189 CI cases treated at their hospital between 1998 and

2008. They found 62 children (78 ears) with ipsilateral myringotomy tubes. The mean patient age was 3.2 years, and mean follow-up was 58 months.

In 32 ears, the tubes were spontaneously extruded, and in another 14 the tubes were removed before CI was undertaken. Tubes were left intact in the remaining 32 ears at the time of CI.

The researchers found that in 11 ears in which a myringotomy tube had been

extruded or removed before CI, the placement of new tubes was soon required to manage recurrent otitis. In addition, in three ears in which myringotomy tubes had been removed before CI, severe otitis with mastoiditis developed within several months. New tubes were inserted, and no further sequelae developed, they said (*Arch. Otolaryngol. Head Neck Surg.* 2010;136:557-60).

In all, 26 patients developed otorrhea,

which resolved with standard outpatient medical therapies. Four patients had perforation of the tympanic membrane.

This low rate of complications "made us realize that we could handle these patients like our other patients with recurrent acute otitis media," Dr. Barañano and his associates wrote. ■

**Disclosures:** No financial conflicts of interest were reported.

*Continued from previous page*

have leukocytosis, an elevated C-reactive protein or erythrocyte sedimentation rate, or other systemic symptoms.

Dr. Amir and his coinvestigators decided to conduct a systematic study of observational management after making two key observations: Children whose parents eschewed more aggressive interventions in favor of natural healing eventually seemed to experience total resolution, and kids who underwent total surgical excision of their infected node often returned several months later with another infected lymph node, necessitating another round of treatment.

Dr. Amir noted that the observation-only approach represents outside-the-box thinking for otolaryngologists. A recent survey of 200 American pediatric otolaryngologists showed that 59% managed children with nontuberculous mycobacterial lymphadenitis using surgical excision plus adjunctive antibiotics, 24% resorted to surgical excision alone, and 17% used antibiotics without surgery. Most remarkably, in his view, 59% of the time the pediatric otolaryngologists treated children based only on the clinical picture, without identifying an etiologic organism (*Int. J. Pediatr. Otorhinolaryngol.* 2010;74:343-6). ■

**Disclosures:** Dr. Amir reported having no financial conflicts of interest.

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*Clostridium difficile*-associated diarrhea (CDAD) has been reported with use of nearly all antibacterial agents, including azithromycin, and may range in severity from mild diarrhea to fatal colitis. CDAD must be considered in all patients who present with diarrhea following antibiotic use. Careful medical history is necessary since CDAD has been reported to occur over two months after the administration of antibacterial agents. If CDAD is suspected or confirmed, ongoing antibiotic use not directed against *C. difficile* may need to be discontinued, and appropriate management and treatment of *C. difficile* should be instituted as clinically indicated.

Overall, the most common treatment-related adverse reactions in:

- **Adult patients** receiving a single 2-g dose of Zmax were diarrhea/loose stools (12%), nausea (4%), abdominal pain (3%), headache (1%), and vomiting (1%).
- **Pediatric patients** receiving the recommended Zmax dose of 1 mL/lb were diarrhea (8%), loose stools (5.6%), vomiting (3.3%), abdominal pain (3%), rash (2.8%), nausea (1.7%), and anorexia (1.2%).

A more concentrated (60 mg/mL) formulation of Zmax was studied in investigational clinical trials and discontinued. Pediatric patients taking this more viscous formulation of Zmax experienced vomiting (11.9%).

**Reference:** 1. Zmax [prescribing information], New York, NY: Pfizer Inc; 2009.

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