The Corner

I. Fernández Castiella, L. Navarro Montilla
Residentes de Pediatría del Hospital Universitario La Paz. Madrid

48. Complications of acute otitis media: recognizing acute mastoiditis

Doctor: Isabel Fernández Castiella. Residente de Pediatría del Hospital Universitario La Paz. Madrid

Mother: Laura Navarro Montilla. Residente de Pediatría del Hospital Universitario La Paz. Madrid

Doctor: Good morning, I am Dr. Williams. What brings you and your son here today?

Mother: Good morning Dr. You see, my son has had a fever for the last three days. At first, I thought it was just another cold because he also had a runny nose, but yesterday he started complaining about his left ear.

D: Okay, first of all, how old is he? Does he have any significant medical history, previous surgeries, medication allergies, or takes any regular medication?

M: He's three years old. He's otherwise healthy. He has never had surgery, has no known drug allergies and doesn't take any regular medication.

D: Great, coming back to his symptoms, you said he has been complaining about his left ear. Has he had any discharge from the ear, fever or any other symptoms like difficulty breathing or sore throat?

M: No. He just says it hurts badly, especially at night. Today he hardly wanted to eat and seemed much more irritable. He started with fever 48 hours ago and it is going worse.

D: Well, let me examine him.

Physical examination

Temperature 39.2°C, heart rate 125 beats/min, respiratory rate 24 breaths/min, oxygen saturation 99% on room air. The patient appeared alert, mildly irritable and well perfused. No skin lesions. No respiratory distress. Cardiac auscultation: regular, no heart murmur. Pulmonary auscultation: general good bilateral ventilation, no pathological breath sounds. HEENT: no pharyngeal exudates; left postauricular erythema, swelling and tenderness were noted, with anterior and inferior displacement of the pinna. Otoscopy: bulging, hyperaemic left tympanic membrane with loss of normal anatomical landmarks. No otorrhoea. Right ear examination unremarkable. Abdomen: soft, nontender to palpation, no hepatosplenomegaly.

D: The physical examination is consistent with acute otitis media, complicated with mastoiditis. This means there is an infection of the middle ear. Just behind the middle ear lies the mastoid bone, which contains multiple tiny air-filled spaces connected to the middle ear. Occasionally, the infection spreads into these air cells, causing inflammation of the mastoid bone. This condition is called acute mastoiditis.

M: Is that why the area behind his ear is swollen?

D: Exactly. As the infection spreads beyond the middle ear, it causes inflammation of the mastoid bone and the tissues behind the ear. That's why children often develop pain, redness and swelling behind the ear, and that is why the ear may appear pushed forward.

M: Does that mean the infection is much more serious?

D: Mastoiditis is the most common suppurative complication of acute otitis media. Although most children recover completely with appropriate treatment, it requires prompt medical attention.

M: How do you confirm the diagnosis?

D: The diagnosis is mainly based on the physical examination. However, we will perform blood tests and a CT scan to assess the extent of the infection and rule out complications that may require surgery.

M: What treatment will he need?

D: He will need to be admitted to hospital and start intravenous antibiotics immediately. We will also ask the Ear, Nose and Throat team to assess him. Many children improve with antibiotics alone, although some may require surgery if they do not respond or if complications are present.

M: Will he recover completely?

D: The prognosis is excellent in most children. With early diagnosis and appropriate treatment, the vast majority recover fully without long-term sequelae.

M: Okay Dr, I understand. Thank you so much.

KEY WORDS

Runny nose: rinorrea.

Bulging tympanic membrane: membrana timpánica abombada.

Postauricular swelling: tumefacción retroauricular.

Pinna displacement: desplazamiento del pabellón auricular.

Mastoid air cells: celdillas mastoideas.

Suppurative complication: complicación supurada.

Temporal bone CT scan: tomografía computarizada del hueso temporal.

Intravenous antibiotics: antibioterapia intravenosa.

Long-term sequelae: secuelas a largo plazo.

PLAY AUDIO
se puede escuchar en
www.pediatriaintegral.es