Mastoiditis is an infection of the skull’s mastoid bone, which is located just behind the ear. It is a serious complication of acute otitis media (AOM), a common infection in children that is generally viral in origin and self-limiting in nature. In most children with AOM, symptoms resolve within 2-3 days (Hoberman et al, 2011; Thorne et al, 2009). The other known complications of AOM are intracranial abscess, facial nerve paresis (partial paralysis) and sigmoid sinus thrombosis (Abdel-Aziz and El-Hoshy, 2010; Thorne et al, 2009; Scottish Intercollegiate Guidelines Network, 2003).

**Treatment strategies**

Before the advent of antibiotics, acute mastoiditis was the most common infectious condition needing hospital admission among infants and young children (Thorne et al, 2009). It is most commonly seen in preschool children aged less than four years (Abdel-Aziz and El-Hoshy, 2010).

With the introduction of stringent antibiotic guidelines, most countries generally follow a “wait and watch” approach to managing AOM (SIGN, 2003). Following this conservative strategy, some recent reports have suggested an increase in the incidence of mastoiditis in children; further studies are needed to establish the reason behind this increase (Thorne et al, 2009; National Institute for Health and Clinical Excellence, 2008; SIGN, 2003).

Mastoiditis presents with earache, discomfort, discharge, headache, loss of hearing, fever, redness and swelling behind the ear; the ear may stick out (Fig 1).

**Presentation and management**

Harry*, aged four months, previously healthy, presented unwell, with a 24-hour-history of fever up to 39°C and a swelling behind the left ear. He was reported to be up to date with childhood immunisations.

Initial observations showed a temperature of 38.6°C, a pulse rate of 127bpm, a respiratory rate of 44/min, saturations 99% in air and a central capillary refill time of two seconds. Harry was found to have an inflamed left tympanic membrane and the left pinna was pushed forward and outward with a tender swelling behind the ear. He did not have any meningism and was clinically stable. The rest of the systemic examination was normal.

The provisional diagnosis was left-sided mastoiditis secondary to left-sided AOM. In view of the clinical presentation and his age, Harry was admitted to the paediatric ward.

**Ongoing management**

Blood inflammatory markers were raised with a neutrophil count of 16.2 x 10⁹/mm³ and a C-reactive protein of 57mg/L. The patient was started on intravenous (IV) co-amoxiclav and continued on oral feeds.

He was referred to the regional paediatric ear, nose and throat services. A CT scan of the mastoid region confirmed left-sided mastoiditis with no intracranial involvement. A left cortical mastoidectomy with myringotomy was performed on the same day and IV antibiotics were continued for five days.

**Progress**

As Harry continued to improve, he was discharged home from the regional unit after five days with a course of oral antibiotics to complete. A review at the follow-up clinic showed he had recovered completely and his hearing test was normal.

**Conclusion**

This case illustrates the importance of being aware of this rare but serious complication following AOM in young children. As there is a risk of intracranial involvement, a CT scan is necessary and early surgical intervention is associated with a good prognosis. NT

* The patient’s name has been changed

**References**


Scottish Intercollegiate Guidelines Network (2003) Diagnosis and Management of Childhood Otitis Media in Primary Care. tinyurl.com/SIGN-otitis