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ORIGINAL ARTICLE

Complications of otitis media – a potentially lethal problem still present☆

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KEYWORDS
Otitis media;
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Abstract
Introduction: It is an erroneous but commonly held belief that intracranial complications (ICCs) of chronic and acute otitis media (COM and AOM) are past diseases or from developing countries. These problems remain, despite improvements in antibiotic care.
Objective: This paper analyzes the occurrence and clinical characteristics and course of the main ICCs of otitis media (OM).
Methods: Retrospective cohort study of 51 patients with ICCs from OM, drawn from all patients presenting with OM to the emergency room of a large inner-city tertiary care hospital over a 22-year period.
Results: 80% of cases were secondary to COM of which the incidence of ICC was 0.8%; 20% were due to AOM. The death occurrence was 7.8%, hearing loss in 90%, and permanent neurological sequelae in 29%. Patients were 61% male. In the majority, onset of ear disease had occurred during childhood. Delay of diagnosis of both the initial infection as well as the secondary ICC was significant. ICCs included brain abscess and meningitis in 78%, and lateral sinus thrombosis, empyema and otitic hydrocephalus in 13%, 8% and 1% of cases, respectively. Twenty-seven neurosurgical procedures and 43 otologic surgery procedures were performed. Two patients were too ill for surgical intervention.

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Conclusion: ICCs of OM, although uncommon, still occur. These cases require expensive, complex and long-term inpatient treatment and frequently result in hearing loss, neurological sequelae and mortality. It is important to be aware of this potentiality in children with COM, especially, and maintain a high index of suspicion in order to refer for otologic specialty care before such complications occur.

PALAVRAS-CHAVE
Otite média;
Complicações intracranianas;
Meningite;
Abscesso cerebral

Complicações das otites média – um problema potencialmente letal ainda presente

Resumo
Introdução: É uma crença comum, porém errônea, que complicações intracranianas (CICs) de otite média tanto aguda (OMA) quanto crônica (OMC) sejam doenças do passado ou de países em desenvolvimento. No entanto, esses problemas continuam, apesar de melhorias na terapia antimicrobiana.
Objetivo: Analisar a ocorrência, as características clínicas e a evolução das principais CICs secundárias às otites médias (OM).
Método: Estudo de coorte retrospectivo de 51 pacientes com CIC secundárias a OM, provenientes do pronto-socorro de um Hospital Universitário ao longo de um período de 22 anos.
Resultado: No total, 80% dos casos de CICs foram secundários a OMC, cuja incidência foi de 0,8%, e apenas 20% foram secundárias a OMA. A letalidade foi de 7,8%, perda auditiva em 90%, com sequela neurológica permanente em 29%. Dentre os pacientes, 61% eram do sexo masculino. Na maioria, o início da doença otológica tinha ocorrido durante a infância. A demora no diagnóstico, tanto da infecção primária como da complicação secundária, foi significativa. CICs, incluindo abscesso cerebral e meningite, corresponderam a 78%, e trombose do seio lateral, empiema e hidrocefalia otítica em 13%, 8% e 1% dos casos, respectivamente. Foram realizados 27 procedimentos neurocirúrgicos e 43 cirurgias otológicas. Dois pacientes não apresentavam condições clínicas para a intervenção cirúrgica.
Conclusão: CICs de OM, embora incomuns, ainda ocorrem. Esses casos exigem tratamento hospitalar oneroso, complexo e de longo prazo, e frequentemente resultam em perda auditiva, sequelas neurológicas e mortalidade. É importante estar ciente dessa potencialidade especialmente em crianças com OMC e manter um alto índice de suspeita, encaminhar para avaliação otológica e antecipar a ocorrências de tais complicações.

Introduction

Otitis media (OM) is one of the most prevalent infectious diseases worldwide: over 80% of children have acute OM (AOM) once before age 3, and 40% have 6 or more recurrences by age 7.[1] Globally, OM is the third most important cause of hearing loss (HL), with a prevalence of 30.82 per 10,000.[1,2] In developed countries, OM accounts for the largest number of non-well-child doctor visits and is the primary reason for childhood antibiotic prescriptions. Children spend a mean of 90 days on antibiotics for OM in their first two years of life.[3]

AOM, which is generally self-limited, has an incidence of 10.9%. Chronic OM (COM) is more difficult to diagnose and treat and has an incidence of 4.8%,[4–6] OM complication rates are as high as 12.5%[6,7] and can be extracranial and/or intracranial. The most common extracranial complications of OM include facial paralysis, subperiosteal abscess, mastoiditis, and labyrinthitis. The most common intracranial complications (ICCs) of OM are meningitis, cerebral abscess, lateral sinus thrombosis (LST), extradural abscess, otitic hydrocephalus, and encephalitis.[8–11] Reported incidences for these complications (summarized in Table 1) range widely.

Despite the introduction of effective antibiotic therapy, the rate of ICC from OM is still about 8%. Anaerobic bacteria play a significant role.[12] Thirty percent of complications from OM are intracranial; of ICCs, 5–26% result in mortality.[13–15] ICCs of AOM usually develop rapidly and are often recognized and treated promptly, with reasonable recovery of function.[16] Conversely, early COM is often unrecognized and untreated, and it may take years to develop complications, which are often hard to diagnose and are much more severe and life-threatening.

There is persistent inaccuracy in diagnosis of AOM by primary care physicians (PCPs) – pediatricians, family physicians, general practitioners, emergency room physicians,