Diagnosis and treatment of uncomplicated acute sinusitis in children

Agency for Healthcare Research and Quality (AHRQ)

Record Status
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Citation

Authors' objectives
This report deals with uncomplicated acute sinusitis, which is typically defined by symptoms that have persisted for less than 30 days. The following research questions were used to guide the analysis:

1. What is the evidence for the efficacy of various antibiotics in children with a diagnosis of acute sinusitis? 2. What is the evidence for the efficacy of various ancillary regimens that do not include antibiotics in the treatment of children with acute sinusitis? 3. What is the diagnostic accuracy and concordance of clinical symptoms, radiography and other imaging methods, and aspiration for the diagnosis of acute sinusitis in children?

Authors' conclusions
This report examined the available evidence from randomized trials and nonrandomized studies on the diagnosis and management of acute sinusitis in children. The major conclusion is that, compared with the frequency of this very common condition, the amount of high-quality evidence is remarkably limited. There is very little evidence on how to accurately diagnose acute sinusitis in childhood. Plain film radiography shows only modest concordance with clinical diagnosis, and the concordance depends largely on how a clinical diagnosis is defined. Other imaging modalities and irrigation have no clear role in the diagnostic management of the syndrome. There is no consensus on which clinical signs and symptoms are most useful for diagnosing this condition, and very limited attention has been given to this issue.

Although one small trial found antibiotics to be superior to placebo, its applicability to settings in which sinusitis is defined by different criteria is uncertain. The available evidence also suggests that the various antibiotics used for pediatric sinusitis do not differ in their efficacy rates. In the absence of a gold standard for diagnosis, trials involving several hundred children would be needed to show such differences. Finally, there is no convincing evidence to support the use of ancillary treatment with decongestant-antihistamines and very limited evidence on the use of steroids.

This investigation clearly documents the paucity of the evidence and identifies important questions that need to be addressed in future studies. The paucity of primary data may be due to the difficulties when studying a pediatric population of applying the necessary rigorous methodologies that are needed to generate high-quality information. Obviously, more evidence-based research on this common infection is needed.

Project page URL
http://archive.ahrq.gov/clinic/epcarch.htm

Indexing Status
Subject indexing assigned by CRD

MeSH
Anti-Bacterial Agents; Child; Sinusitis /drug therapy /diagnosis