Infant Teething Information on the World Wide Web: Taking a Byte Out of the Search

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ABSTRACT

Introduction: The purpose of this study was to describe and evaluate the quality of infant teething information on selected popular parenting Web sites.

Methods: Two checklists were used to evaluate the quality of the 16 parenting sites and infant teething-specific content included on each site.

Findings: Three of the 16 parenting sites did not contain teething-specific articles. Teething-specific content found on 13 of the 16 sites supported a connection between the process of teething and nonspecific symptoms with a perception that management is required. Popular management strategies included chewing on chilled objects, gingival massage, and the use of over-the-counter medications. Information about possible adverse effects of administering medications for infant teething was not found on the majority of sites. Eleven of the 16 sites advised parents to contact their primary care provider if they were uncertain about management for infant teething or whether the symptoms were related to illness.

Implications: Although infant teething has an evidence base from which parents and professionals can make safe decisions about symptoms and treatment, translating the evidence into professional practice and health-related information on the Internet remains a challenge. Parents and pediatric health providers would benefit greatly from the development of clinical practice guidelines summarizing our present-day understanding of teething symptoms and the limited evidence supporting the use of over-the-counter medications. J Pediatr Health Care. (2015) *29*, 38-45.

KEY WORDS

Infant, parent, teething, Web

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Infant teething continues to be one of the most common sources of concern for parents and health professionals alike. Teething can be a very frustrating and stressful time for parents, especially new parents who may not know how to identify signs of teething in their infant or relieve their infant's discomfort. Parents are increasingly searching the Internet to locate information about child health problems and specific treatments. Bianco, Zucco, Nobile, Pileggi, and Pavia (2013) found that more than 80% of parents who searched the Internet believed that the information they found improved their understanding of health-related issues, 23% used the Internet to supplement information they received from a physician, and more than 50% found the information useful. Thus the information parents locate may influence the decisions they make about their child's signs and symptoms and the

interventions they decide to use. Parental anxiety and uncertainty related to managing a teething, irritable infant might lead to the use of ineffective and potentially dangerous self-care measures. Pediatric health practitioners need to be able to guide parents to high-quality Web sites with reliable health information about common child health issues to supplement clinic-based services (Bouche & Migeot, 2008). Therefore the purpose of this study was to describe and evaluate the quality of infant teething information on popular parenting Web sites.

Parental anxiety and uncertainty related to managing a teething, irritable infant might lead to the use of ineffective and potentially dangerous self-care measures.

BACKGROUND

Teething is a normal developmental process in which the infant's primary (deciduous) teeth erupt through the gingiva when the tooth's crown is almost fully formed. The process of primary teething in infancy begins around 4 to 8 months of age and ends about 2 years later (Sarrell, Horev, Cohen, & Cohen, 2005; Tsang, 2010). It is believed that the cutting of teeth through bone and gums accounts for the pain commonly associated with teething. However, the teeth actually erupt as a result of force supplied by the growing pulp at the end of the tooth's root (Craddock & Youngson, 2004).

Teething signs and symptoms are not well understood and include a range of nonspecific findings. Nonspecific signs and symptoms commonly attributed to infant teething include agitation, biting, diarrhea, congestion, cough, ear pulling, drooling, fever, inflamed gums, loss of appetite, malaise, painful gums, perioral rash, runny nose, and sleep disturbance (Plutzer, Spencer, & Keirse, 2011; Sarrell et al., 2005; Tsang, 2010). Kiran, Swati, Kamala, and Jaiswal (2011) found that parents reported gingival irritation as the most common symptom of teething (95.9%), whereas a runny nose (27.3%) and fever (11.7%) were less commonly reported. The findings of two prospective studies supported the lack of significant associations among tooth eruption patterns and teething symptomatology (Macknin, Piedmonte, Jacobs, & Skibinski, 2000; Wake, Hesketh, & Lucas, 2000). In addition, research findings suggest that parental perceptions of the signs and symptoms of teething may not be reliable or valid (Owais, Zawaideh, & Bataineh, 2010; Sarrell et al., 2005; Wake et al., 2000).

Further complicating primary teething symptoms are other developmental changes that occur during the first year of life. A reduction in maternal immunity during the first 6 months of life may correlate with signs of systemic illness (e.g., irritability, fever, and diarrhea), and the developmental stage of separation anxiety may be expressed through wakefulness and crying (Sarrell et al., 2005; Sood & Sood, 2010). Thus uncertainty about what constitutes signs and symptoms of teething often leads to a diagnosis of convenience rather than exclusion (Plutzer et al., 2011).

A range of strategies is recommended for managing infant teething. These strategies may include nonpharmacologic, pharmacologic, and complementary/alternative medicine (CAM) options intended to reduce or resolve the majority of primary teething symptoms (Ashley, 2001; Tsang, 2010; Wake & Hesketh, 2002; Wake, Hesketh, & Allen, 1999). Nonpharmacologic measures include cooling the teething site to reduce inflammation and gum massage or chewing to relieve discomfort (Owais et al., 2010). Pharmacologic treatments commonly used for the pain and irritability associated with teething include topical anesthetic medications (e.g., Baby Orajel) and oral analgesic/antipyretic medications (e.g., acetaminophen or ibuprofen) for managing pain and other related symptoms. Several CAM remedies have been associated with managing teething pain such as herbal formulas, teas, and clove ointments. However, none of these CAM remedies have been proven to be effective and can cause problems when given with other medications (Tsang, 2010; Wirth, Hudgins, & Paice, 2005).

Parents and health professionals must carefully weigh the risks versus benefits of available remedies for infant teething. Schmitt (2011) on the Healthy Children Web site of the American Academy of Pediatrics recommends parental reassurance, massaging the gums, using teething rings, and acetaminophen for 24 hours for associated pain. The over-the-counter (OTC) oral pain relievers acetaminophen and ibuprofen can cause harm if not administered properly, and because of their antipyretic effects, they may mask worsening symptoms of an acute illness beyond teething. Teething gels are not recommended because they have been associated with a wide range of adverse effects (Lehr, Masters, & Pollack, 2012). Topical benzocaine, although generally considered safe when applied correctly to the infant's gums, has been linked to hypersensitivity localized reactions and a potentially life-threatening condition that causes hypoxia and methemoglobinemia (MHb; So & Farrington, 2008). Although MHb can occur quickly from the use of small amounts of benzocaine, the U.S. Food and Drug Administration (FDA) does not require warnings of MHb with topical benzocaine OTC products (Bong, Hilliard, & Seefelder, 2009; Lehr et al., 2012).