Information on Infantile Colic on the World Wide Web

Shana D. Bailey, MSN, RN, CPNP, Jennifer P. D'Auria, PhD, RN, CPNP, & Jamie P. Haushalter, MSN, RN, CPNP

ABSTRACT

Introduction: The purpose of this study was to explore and describe the type and quality of information on infantile colic that a parent might access on the World Wide Web.

Methods: Two checklists were used to evaluate the quality indicators of 24 Web sites and the colic-specific content.

Results: Fifteen health information Web sites met more of the quality parameters than the nine commercial sites. Eight Web sites included information about colic and infant abuse, with six being health information sites.

Discussion: The colic-specific content on 24 Web sites reflected current issues and controversies; however, the completeness of the information in light of current evidence varied among the Web sites. Strategies to avoid complications of parental stress or infant abuse were not commonly found on the Web sites. Pediatric professionals must guide parents to reliable colic resources that also include emotional support and understanding of infant crying. A best evidence guideline for the United States would eliminate confusion and uncertainty about which colic therapies are safe and effective for parents and professionals. J Pediatr Health Care. (2013) *27*, 443-450.

KEY WORDS

Colic, infant, parent, Web

Shana D. Bailey, Pediatric Nurse Practitioner, Capitol Pediatrics & Adolescent Center, Knightdale, NC.

Jennifer P. D'Auria, Associate Professor, The University of North Carolina at Chapel Hill, Chapel Hill, NC.

Jamie P. Haushalter, Pediatric Nurse Practitioner, Department of Pediatrics, University of North Carolina School of Medicine, Chapel Hill, NC.

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Correspondence: Jennifer P. D'Auria, PhD, RN, CPNP, Carrington Hall, CB #7460, Chapel Hill, NC 27599; e-mail: jdauria@email.unc.edu.

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Excessive infant crying is one of the most common reasons that both new and experienced parents bring their infant to their primary care provider (Rosen, 2007). The persistent crying associated with colic may cause parents to experience elevated levels of stress and to lose confidence in their parenting skills (Cirgin Ellett, Appelton, & Sloan, 2009). To add to their stress, parents coping with a colicky infant often do not get the support and information they need from their primary care provider (Keefe, Karlsen, Lobo, Kotzer, & Dudley, 2006; Long & Johnson, 2001). Parents may consult the Internet for diagnostic answers and treatment about colic but are unaware of whether the information they find is accurate or safe (Cirgin Ellett & Swenson, 2005). It is the responsibility of primary care providers to know what health information is available to parents and to be able to guide parents toward the best information (Bouche & Migeot, 2008). Therefore the purpose of this study is to explore and describe the type and quality of information on infantile colic that a parent might access on the World Wide Web (Web).

BACKGROUND

Colic is inconsolable crying in an otherwise healthy infant that may begin at 2 weeks and generally begins to subside by 3 months of age (Roberts, Ostapchuk, & O'Brien, 2004). It is reported to occur in anywhere from 7% to 40% of full-term infants (Parker & Magee, 2010). The most commonly cited definition of infantile

colic is the "rule of 3's" (Wessel, Cobb, Jackson, Harris, & Detwiler, 1954)—that is, a healthy infant who cries for 3 hours per day, for 3 days a week, for more than 3 weeks. The pattern of crying in infantile colic is paroxysmal with peak episodes occurring during the late afternoon and evening hours. The cry of a colicky infant is different in type and intensity than a cry associated with normal infant fussiness. It is a very loud and high-pitched cry that is not relieved by normal parental interventions.

Definitions of infantile colic raise the issue of how much crying a normal infant exhibits. Brazelton (1962) found that infants 6 weeks of age had a median duration of crying of 3 hours a day. Normal patterns of crying in an infant included 2 hours a day for a 2-week-old, 3 hours a day for a 6-week-old, and 1 hour a day for a 3-month-old. The peak time for infant crying typically occurred between 3 and 11 PM. Common behaviors displayed by colicky infants include knees drawn up or legs stiffened, clenched fits, facial grimacing or flushing, and the appearance of passing gas (Shelov & Altmann, 2009). Pediatric experts recommend that an infant with inconsolable crying be evaluated by a health care provider to rule out any medical reason for the crying before diagnosing the infant with colic (Goldson & Reynolds, 2007).

A clear understanding of the etiology and pathophysiology of infantile colic does not exist. Proposed causes of infantile colic may range from gastrointestinal to biologic to psychosocial causes. Gastrointestinal causes may include gastrointestinal reflux, excess gas, constipation, differences in intestinal flora, or cow's milk allergy (Cohen-Silver & Ratnapalan, 2009). Colic can be a result of an immature nervous system in which infants cannot yet cope with excessive stimulation to adjust to their environment (Lobo et al., 2004; Rosen, 2007). Common biologic causes include overfeeding, underfeeding, immaturity of motor regulation, and maternal smoking. Potentially serious organic causes of colic in the infant may include such entities as meningitis, urinary tract infections, rectal fissure, otitis media, or hair tourniquet syndrome (Roberts et al., 2004). A sensitive infant temperament or parent psychologic disorder also may play a role in the etiology of infantile colic. Maternal depression and anxiety during pregnancy have been linked to increased infant crying. Independent from maternal depression, paternal depression during pregnancy has been found to be related to increased infant crying at 2 months of age (van den Berg et al., 2009).

Infant colic is a source of significant parental stress. Feelings of frustration, anger, depression, inadequacy, and hopelessness are common themes in research on parents who must cope with colicky infants (Cirgin Ellett & Swenson, 2005). The intractable infant crying, lack of sleep, and feelings of frustration may lead to marital strain and inattention to siblings during these critical early months (Cirgin Ellet & Swenson, 2005; Long & Johnson, 2001). In addition, the incidence of shaken baby syndrome is increased in infants with colic (Catherine, Ko, & Barr, 2008).

Most treatments for infantile colic are focused on strategies to reduce the intensity of crying or eliminate factors that seem to worsen infant crying. Commonly recommended strategies such as reducing infant stimulation have not been found to effectively treat colic (Garrison & Christakis, 2000). Controversy exists regarding the effectiveness of dietary treatments such as changing infant formula or altering breastfeeding (Cohen-Silver & Ratnapalan, 2009). Despite the lack of research evidence, the American Academy of Pediatrics recommends that mothers continue breastfeeding while eliminating any irritating foods from their diet (Shelov & Altmann, 2009). Alternative therapies such as use of probiotics, medications, herbal or homeopathic remedies, and spinal manipulation also have been studied. Probiotics have been found to reduce the median crying time in infants with colic; however, further study is needed to determine the type of probiotic therapy that may be of potential benefit (Savino, Pelle, Palumeri, Oggero, & Miniero, 2007). Simethicone has been recommended as treatment of colic because of its anti-gas properties; however, research findings do not support its effectiveness as a treatment (Rosen, 2007). Lactase also has been used to calm colicky infants; however, the effectiveness of lactase has not been substantiated (Miller, McVeagh, Fleet, Petocz, & Brand, 1990). Gripe water has been promoted as a popular remedy for colic and other causes of gastrointestinal upset. Gripe water contains dill seed, fennel, sodium bicarbonate, and water. In the past, mixtures of gripe water contained high levels of alcohol; however, alcohol is no longer permitted in commercial gripe water (Rosen, 2007). Chiropractic therapy such as spinal manipulation has been used with colicky infants, but research is inconclusive as to whether this treatment is beneficial to the infant (Cohen-Silver & Ratnapalan, 2009).

METHODS

Design and Search Strategy

A descriptive design was used to evaluate the type and quality of information about infant colic on the Web. A systematic search for information on infantile colic was conducted in January 2010 using the Google search engine, which is used by more than 70% of Internet users (Lewis, 2010). Search terms used to identify relevant information included "colic," "baby," "infant," and "colicky" in one- or two-word combinations. To be included in the study, the Web page had to be part of a Web site based in the United States and written in English, and it had to provide consumer-oriented information about infantile colic. The first 20 links retrieved from each search were printed and compared, and