Infant Gastroesophageal Reflux Information on the World Wide Web

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ABSTRACT

Introduction: The purpose of this study was to describe the type and quality of health information about infant gastroesophageal reflux (GER) that a parent may find on the World Wide Web.

Methods: The data collection tool included evaluation of Web site quality and infant GER-specific content on the 30 sites that met the inclusion criteria.

Results: The most commonly found content categories in order of frequency were management strategies, when to call a primary care provider, definition, and clinical features. The most frequently mentioned strategies included feeding changes, infant positioning, and medications. Thirteen of the 30 Web sites included information on both GER and gastroesophageal reflux disease. Mention of the use of medication to lessen infant symptoms was found on 15 of the 30 sites. Only 10 of the 30 sites included information about parent support and coping strategies.

Discussion: Pediatric nurse practitioners (PNPs) should utilize well-child visits to address the normalcy of physiologic infant GER and clarify any misperceptions parents may have about diagnosis and the role of medication from information they may have found on the Internet. It is critical for PNPs to assist in the development of Web sites with accurate content, advise parents on how to identify safe and reliable information, and provide examples of high-quality Web sites about child health topics such as infant GER. J Pediatr Health Care. (2016) *30*, 165-172.

KEY WORDS

Internet, health information, infant, gastroesophageal reflux, parent, Web

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Conflicts of interest: None to report.

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0891-5245/$36.00

Published online December 11, 2015.

http://dx.doi.org/10.1016/j.pedhc.2015.11.004

Gastroesophageal reflux (GER), commonly referred to as "spitting up," is a normal physiologic occurrence that is experienced by up to 85% of infants within the first 2 months of life (Czinn & Blanchard, 2013). The most common symptoms of GER are regurgitation and vomiting; however, infants with GER can have increased bouts of crying and fussiness. In most infants, physiologic reflux will spontaneously resolve within the first year of life. Dealing with infants who exhibit "spitting up" on a regular basis can be a challenging situation for parents, especially first-time parents who are learning how to identify and interpret their infant's cues.

Parents with an Internet connection have a world of health information at their fingertips. In a recent survey, 98% of parents reported using the Internet to access child health information, and 80% reported using a

public search engine to begin their search (Pehora et al., 2015). Although parents have easy access to health information on the Internet, there are potential shortcomings related to finding accurate and relevant health information. The overabundance of information found on the Internet may lead to confusion and frustration in already distressed, often new parents who may be dealing with an infant who has GER. The purpose of this study is to describe the type and quality of health information about infant GER that a parent may find on the World Wide Web (Web). The findings will help health professionals take a more active role in guiding parents to the best information about infant GER and also in developing new strategies for communicating health information to parents.

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BACKGROUND

Gastroesophageal reflux is defined as the passive backward flow of gastric contents upward into the esophagus that can occur with or without regurgitation or vomiting (Lightdale & Gremse, 2013). The physiologic and anatomic factors that predispose young infants to reflux include (a) a short and narrow esophagus that permits the backward flow of gastric contents into the esophagus; (b) a weak lower esophageal sphincter that does not close adequately, leading to regurgitation; and (c) delayed gastric emptying time, contributing to an increase in reflux (Czinn & Blanchard, 2013). Gastroesophageal reflux disease (GERD) is defined as reflux of gastric contents associated with pathologic symptoms or complications such as failure to thrive, weight loss, feeding and sleeping problems, and chronic respiratory problems (Czinn & Blanchard, 2013).

Approximately 60% of infants have daily episodes of regurgitation in the early months of life, peaking at 4 months of age, with the majority of these episodes resolving on their own by 12 to 15 months of age (Rosen, 2014). The diagnosis of uncomplicated GER generally includes a careful history of the infant's symptoms and a physical examination. In general, a lack of ill physical effects from spitting up and the improvement of symptoms with lifestyle modifications support a diagnosis of uncomplicated GER.

The terms GER and GERD are often used interchangeably in the medical literature. However, it is important to distinguish GER from GERD to avoid labeling an otherwise health infant or "spitter" as having a "disease," which has created an epidemic of misdiagnosis and overprescribing of pharmacologic therapy for a physiologic condition (Sherer, Zikmund-Fisher, Fagerlin, & Tarinia, 2013). According to the 2009 joint recommendations of the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition and the European Society for Pediatric Gastroenterology, Hepatology, and Nutrition guidelines (NASPGHAN/ESPGHAN guidelines; Vandenplas et al., 2009), the definition of GER includes episodes of regurgitation or vomiting lasting less than 3 minutes, occurring after meals, and causing minimal symptoms. GERD was defined as the presence of gastric reflux causing "troublesome symptoms or complications" (Vandenplas et al., 2009, p. 499).

Parental education about lifestyle modifications is considered first-line therapy for uncomplicated infant GER (Lightdale & Gremse, 2013). These modifications may include feeding changes such as burping the infant after ingestion of every 1 to 2 ounces during feedings, using thickened formula or expressed breast milk, and formula changes. For bottle-fed infants, thickening formula or expressed breast milk with rice cereal may decrease episodes of infant reflux; however, this approach will increase the caloric density of the formula. Thickened formula or expressed breast milk should not be used in preterm infants because it can increase the risk for necrotizing enterocolitis (Clarke & Robinson, 2004). When parents thicken infant formula or expressed breast milk, it is important for providers to educate them about the need to cross-cut the bottle's nipple to allow for sufficient flow and also to inform them about the potential for greater ingestion of air (Hegar, Rantos, Firmansyah, DeSchepper, & Vandenplas, 2008). In infants with GERD who present with more pathologic symptoms, a sensitivity to cow's milk protein may be suspected or coexist along with GERD (Czinn & Blanchard, 2013). Parents should be advised to discuss this possibility further with their health care provider before changing formulas or changing a breastfeeding mother's diet.

Positioning therapy is commonly recommended for infants with GER and includes keeping the infant in a completely upright position or placing him or her in the prone position after a meal. Because the risk for sudden infant death syndrome (SIDS) is increased during the first year of life, prone positioning should only occur when the infant is awake and observed by a parent or caregiver (American Academy of Pediatrics, 2011). The 2009 NASPGHAN/ESPGHAN guidelines recommend avoiding the semi-supine position in infants after feedings. Additional lifestyle changes may include avoiding smoke exposure and tight-fitting diapers or clothes.

Although GER is usually a normal physiologic process, it can be a source of significant stress for parents and caregivers of infants experiencing reflux (Rosen, 2014). The 2009 NASPGHAN/ESPGHAN guidelines