QUICK LESSON

Breastfeeding: Effect on the Mother

Description/Etiology

Breastfeeding is an evidence-based, healthy, safe, and nutritious method for feeding infants that supports optimal growth and development. Breastfeeding offers numerous benefits for mothers, including reduced postpartum bleeding and rapid uterine involution (i.e., return of the uterus to its prepregnancy size) from the release of oxytocin; gradual and natural postpartum weight loss without dieting due to the increased caloric expenditure required for milk production; reduced risk for postpartum depression; a facilitation of mother-infant bonding with decreased risk for child-abuse; ovulation suppression, which may postpone postpartum fertility; a reduced risk for cardiovascular diseases (e.g., hypertension, hyperlipidemia), diabetes mellitus type 2 (DM2), osteoporosis, premenopausal breast cancer, and ovarian cancer; and a decreased financial expenditure because infant formula is not purchased. However, many conditions and factors can interfere with breastfeeding, including nipple soreness, breast engorgement (i.e., congested blood vessels and swelling), plugged ducts (e.g., due to milk stasis or galactoceles), mastitis (i.e., infection of breast tissue), thrush (i.e., oral candidiasis or oral thrush in the infant; nipple candidiasis or nipple thrush in the mother), insufficient milk supply, inverted/retracted or flat nipples, maternal fatigue and frustration, and lack of social support from the partner and family. Treatment of these complications or adverse effects focuses on resolution of signs and symptoms. Antibiotics may be prescribed for treatment of mastitis.

Facts and Figures

According to data from the United States Centers for Disease Control and Prevention (CDC), approximately 83% of infants born in the U.S. in 2016 began breastfeeding at birth, 57% were breastfeeding at 6 months, and 36% continued breastfeeding up to 12 months of age. Breastfeeding rates improve when prompt and sustained contact between mother and baby are promoted during the hospital stay through skin-to-skin contact within one hour after birth and having mothers and infants room together during their stay, which is called rooming-in.The percent of healthcare facilities in which at least 90% of infants receive skin-to-skincontact following vaginal delivery increased from 40.8 % to 54.4% during the period 2007–2011. The percent of facilities in which at least 90% of infants room-in during their stay increased from 30.8% to 37.1% during the period 2007–2011.

Risk Factors

Risk factors for complications or difficulty with breastfeeding include improper positioning or latching-on techniques; excessive negative pressure on the nipple; inappropriate suckling release; cracked or macerated nipples; sensitivity to nipple creams; incorrect use of breast pumps, nipple shields, or shells; inadequate drainage of breast milk that results in engorgement; changes in feeding frequency and duration; wearing tight bras; stress and fatigue; use of manual pumps or antifungal creams; history of mastitis, diabetes mellitus, or immune deficiency; use of antibiotics, steroids, or illicit drugs; smoking tobacco; and vaginal candidiasis at the end of pregnancy.

Signs and Symptoms/Clinical Presentation

Signs and symptoms associated with

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› nipple pain include tenderness, bruising, swelling, discoloration, blistering, pinching, itching, burning, cracking, and bleeding
› lactation mastitis include malaise, fever, chills, warm and/or tender breast, a firm area of the breast, dizziness, vomiting, pain with breastfeeding, and/or reddened,swollen area of the breast
› breast engorgement include hardness, fullness, swelling, tenderness, and warmth, or flat nipples
› plugged ducts include a palpable lump, tenderness, warmth, redness, and tiny, white dots at duct of a nipple
› nipple candidiasis include pain, burning, and itching

Assessment

› **Patient History**
• Assess risk factors for complications or difficulty with breastfeeding
› **Laboratory Tests That May Be Ordered**
• Analysis and culture of expressed milk may show elevated leukocytes (> 10^6/mL), bacteria (> 10^3/mL), or sodium levels (> 60 mEq/mL) if the mother has infective mastitis

Treatment Goals

› **Promote Symptomatic Relief And Educate About Breastfeeding Difficulty and Complications**
• Assess anxiety level and for knowledge deficits regarding infant feeding. Assess the needs of the mother and partner, if available, by listening actively, answering questions,and being sensitive to cultural, educational, and age differences. Acknowledge the mother's right to decide which feeding method is appropriate for her and her infant
• Provide emotional support and educate the patient (and partner and/or primary family support, if available, so they can provide more informed support to the mother) about breastfeeding techniques and potential problems, including education on
– getting adequate rest and reducing stress to facilitate milk let down
– varying the position for nursing in order to fully empty the breast
– avoiding skipping feedings, sudden weaning, and wearing tight or under-wirebras
– drinking plenty of fluids, especially 2–3 L of water per day
– eating a balanced diet with healthy snacks between meals; requesting referral to a nutritionist for education and assistance with meal planning if needed
– cleansing nipples with water only and avoiding using soap or chemicals
– inserting a finger in the infant's mouth to break suction if necessary during breastfeeding
– applying cold compresses to reduce swelling, and taking analgesics prescribed by the treating clinician for breast pain and inflammation
– pumping breast milk if there are temporary contraindications to breastfeeding
– performing the following for sore nipples:
- Expose sore nipples to dry air as much as possible, especially after breastfeeding. Express breast milk on the sore nipples to help them heal
- Apply warm water compresses, lanolin ointment, or hydrogel dressings to the nipples
– performing the following for mastitis:
- Continue breastfeeding with both breasts, if possible, or use a pump
- Complete the prescribed course of antibiotics
- Report the development of a breast abscess, which may require drainage or incision
– performing the following for breast engorgement or plugged ducts:
- Frequently breastfeed or pump to release pressure
- Apply heat to the affected area and massage before breastfeeding
– performing the following for thrush:
- Wash hands and clothing thoroughly and apply prescribed medications
- Boil items that have come in contact with breasts/breast milk or the infant's mouth, limit consumption of sugar and carbohydrates, consider taking acidophilus, and discard old pacifiers
– performing the following for inverted/retracted nipples:
- Use a breast pump before breastfeeding
- Wear breast shells during the last weeks of pregnancy and between feedings

- Educate about the signs of poor latching on (i.e., pain and absence of audible swallowing); request referral to a lactation specialist for education about proper latching on technique, if appropriate (for more information, see *Red Flags* , below)
- Teach breastfeeding mothers how to express and store their milk, including expressing by the use of a hand or mechanical pump. Educate that breast milk can be refrigerated for up to 5 days and frozen for up to 6–12 months, should be thawed in the refrigerator and not the microwave oven. To warm the bottle of breast milk, the bottle should be placed in a container of warm water until the milk in the bottle is warm enough for the infant to drink. Test the temperature of the milk prior to feeding the infant to avoid burning the inside of the infant's mouth
  - Educate regarding breastfeeding-related return-to-work issues, including advocating for break time to pump breast milk, being aware of statutory laws and regulations and employer policies regarding pumping or breastfeeding in the workplace and whether or not employers are required to provide time and private space,and gradual weaning and/or formula supplementation. (For more information on breastfeeding and returning to work, see the *Evidence-Based Care Sheet: Breastfeeding: Working Mothers (United States)*)
  - Ask about the breastfeeding mother's comfort level with breastfeeding in public areas, and educate regarding local laws for breastfeeding in public
- Request referral to a social worker for identification of breastfeeding support groups

Food for Thought

› For many women, breastfeeding is a learned skill that develops through trial and error, instruction, emotional support, encouragement, problem-solving, perseverance, and practice. Researchers report that greater breastfeeding success occurs when pre- and postnatal breastfeeding education, anticipatory guidance, and professional support to strengthen self-confidence and self-efficacy are implemented (Perez-Blasco et al., 2013; CDC, 2013; Schafer, 2017)

› Cochrane reviewers found a lack of evidence to support the efficacy of a number of interventions for prevention of mastitis, including breastfeeding education and pharmacologic and alternative therapies (Toomey, 2019)

› In order to provide enough calcium for breast milk, a woman will lose about 3-7% of her bone mass while breastfeeding. This bone loss is regained after weaning and does not seem to increase the risk of osteoporosis later in life

› The rate of child abuse/neglect is significantly higher in mothers who do not breastfeed compared with mothers who breastfeed (American Association of Pediatrics, 2012)

› There is limited quality evideice for the use of the galactagogue domperidone, a dopamine receptor antagonist that may increase milk production, which is not approved for any human use in the United States, although it is sometimes obtained illegally for the purpose of increasing milk production in lactating mothers (Sewell, 2017)

Red Flags

› Breastfeeding is not advisable when the mother
- has untreated, active tuberculosis
- has untreated varicella or the presence of herpes simplex lesions on the breast
- has untreated brucellosis
- has HIV infection
- is infected with human T-cell lymphotropic virus type I or II
- is receiving radiation therapy
- is taking chemotherapeutic agents such as antimetabolites
- is taking antiretroviral medications
- is taking illicit drugs
- has an infant with galactosemia

› Domperidone is associated with significant cardiac arrhythmias (Sewell, 2017)

› Refer the breastfeeding mother to a lactation specialist if
- the infant does not latch on within 12 hours of birth or swallow audibly; does not produce > 6 wet diapers and > 3 bowel movements over 24 hours; loses ≥ 10% of birth weight during the first week of life; or has Down syndrome, cleft lip or palate, or a neurologic disorder
- the mother has breast or nipple abnormalities, reports having no breast changes during pregnancy, or has a history of an endocrine disorder, fertility disorder, or breast surgery

What Do I Need to Tell the Patient/Patient's Family?

› Educate the mother to consult with the treating clinician prior to taking any medication and to avoid smoking, using illegal drugs, and heavy consumption of alcohol; educate breastfeeding mothers who drink alcohol to avoid breastfeeding for 2 hours following alcohol consumption

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