

When Your Breasts Might Not Work: Anticipatory Guidance for Health-Care Professionals

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ABSTRACT

There are many factors that can negatively impact a mother developing a copious milk supply and being able to exclusively breastfeed her infant. In this article, we present two case exemplars (glandular hypoplasia and breast reduction surgery) to illustrate that not all mothers may be able to develop a full milk supply, and that families should receive appropriate prenatal anticipatory education and guidance from childbirth educators and all health-care providers. Important considerations include the value of every drop of milk that the mother is able to produce, treating the milk as an important medical intervention, and developing a plan with the family for supplementation so the infant can receive adequate intake for growth.

The Journal of Perinatal Education, 30(1), 13–18, <http://dx.doi.org/10.1891/J-PE-D-20-00014>

Keywords: milk supply, glandular hypoplasia, breast surgery, anatomy, supplementation

Human milk/breastfeeding is the preferred form of infant nutrition for all infants. Efforts to promote and protect breastfeeding exist in the United States and globally. However, what is the role of health-care providers, including those who work in primary care centers and childbirth educators, when providing appropriate anticipatory prenatal guidance for women who have breasts that might not work? The first author of this article has over 25 years of experience as a clinician, researcher and educator in the field of human milk and breastfeeding. In her career, she has noted that women and their families do not receive appropriate antenatal assessment, education, and anticipatory guidance. There are many

factors that can negatively impact a mother developing a copious milk supply and being able to exclusively breastfeed her infant.

The second author of this article has been a pediatric primary care nurse for 17 years as well as a board-certified lactation consultant since 2017. She identified a mother who had glandular hypoplasia /insufficient glandular tissue (GH/IGT) when the infant was brought for her first pediatric primary care visit after birth. We were compelled to develop this article so that more attention is focused on assessment and appropriate antenatal guidance when women have risks that may prevent them from developing a normal milk supply. We are

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providing two case exemplars as evidence to bring awareness to the needs of these families. We will then provide recommendations for appropriate prenatal assessment and recommendations for anticipatory guidance. This information is of critical importance for childbirth educators and all health-care professionals.

GLANDULAR HYPOPLASIA CASE

The mother was a G1P1 who gave birth to a healthy full-term infant via vaginal birth. The infant was 7 pounds 11 oz and the mother reported that breastfeeding was “going fine” in the birth hospital.

She contacted the pediatric primary care office (PPCO) at day 4 of the infant’s life, reporting that the infant had no bowel movements since hospital discharge. She reported the infant had four bowel movements in the birth hospital. Staff from the PPCO requested that the mother bring the infant in for an office visit for further evaluation a day earlier than scheduled. The second author assessed the mother at the PPCO and found that the mother reported no breast changes during pregnancy or after birth. The IBCLC nurse at the PPCO noted that the mother had asymmetrical, tubular shaped breasts that were widely spaced. When the nurse questioned the mother about her breasts, the mother reported that she thought her breasts were shaped like this because she had scoliosis. The mother reported that no breast assessment was done in the birth hospital or prenatally.

The mother had not received any counseling about GH/IGT despite having recommended prenatal care. The nurse at the PPCO was aware that this can be devastating news for a mother to receive and she counseled her at length about GH/IGT and its implications for developing a complete milk supply for her child. The number one priority at this first visit was to ensure that the infant was adequately nourished and to implement strategies to help the mother build her milk supply.

The mother was assisted with pumping in the PPCO and was referred to rent a hospital grade pump with Initiation Technology to facilitate her milk production. The mother attempted to rent a hospital grade pump from a hospital outside of the Children’s Hospital of Philadelphia Network. The staff at

that hospital told the mother that a hospital grade pump would not make any difference in her supply, therefore the mother just chose to use her personal use pump. The mother systematically increased pumping frequency at home and was asked to return to the PPCO for frequent weight checks. The nurse from the PPCO made multiple phone contacts with the mother to assess how she was coping and how milk supply was developing. The mother tried a variety of herbal supplements to try to increase her milk supply.

In the first month, the mother was only able to exclusively breastfeed during the overnight hours and she reported that her baby appeared satisfied. She slept in the infant’s room for the first 2½ months in order to breastfeed during the nighttime hours. The mother was able to feed her infant with a combination of breastfeeding, pumping, and infant formula for a total of 3 months. However, because of her GH/IGT, at the end of that time she was predominantly using a breast milk substitute to feed her infant. When she went back to work, the effort of pumping for such little volume of milk became overwhelming so she ultimately decided to stop. The mother stated she “felt guilty that she stopped breastfeeding,” but when she tried to pump or breastfeed, she only got drops of milk. The mother sought out online support forums and asked us to share her case so that other mothers receive appropriate anticipatory prenatal assessment, education, and anticipatory guidance.

At her 6-month follow-up with her obstetric care provider, she voiced her concerns and experience about GH/IGT and breastfeeding. At this visit, the provider performed a typical breast examination as part of breast cancer screening. However, the mother stated that the provider really did not look at her breast or acknowledge her condition of GH/IGT. The provider further informed the mother that she had never heard of GH/IGT and that she would have to research it.

BREAST SURGERY CASE

This mother was a personal friend of the first author and presented antenatally reporting that as an adolescent she had breast reduction surgery. With verbal and observation assessment it was determined that the mother had the type of breast surgery where the entire areola was removed and reattached. The mother was counseled by the senior author of this article about her concern for the mother’s

TABLE 1

Risk Factors for Delay in Lactogenesis II/Achieving Complete Milk Supply

Risk Factors for Delay in Lactogenesis II	Risk Factors for Complete Milk Supply
First time mother	Breast surgery (especially breast reduction)
Maternal age over 30 years	Glandular hypoplasia/insufficient glandular tissue
Obesity	
Gestational diabetes/diabetes	
Pregnancy Induced Hypertension	
Polycystic Ovarian Syndrome	
Antenatal steroids	

ability to attain a full milk supply. All during her pregnancy, the mother was reassured by her health-care providers not to worry about her milk supply and that everything would be fine. The mother had a normal vaginal birth of a full-term healthy female infant. She initiated skin-to-skin contact and breastfeeding immediately after birth. As a result of the breast surgery, the mother's nipples did not evert very effectively. The infant had difficulty latching without a nipple shield. The first author recommended the mother rent the hospital grade pump with Initiation Technology to help develop her milk supply.

The first author did a home visit with the mother infant dyad after discharge from the birth hospital and brought a Baby Weigh Scale in order to document milk transfer. At day 4 of life during the home visit the infant was only transferring 2–4 mL of milk. At the birth hospital the mother reported that the infant had been breastfeeding and voiding and stooling. However, it was very evident at the home visit that the mother was not coming to full volume. With the support of a hospital grade pump, a Baby Weigh scale at home, and medication to increase milk supply, the mother ultimately provided milk and breastfed for 3 months. The maximal milk supply the mother was able to achieve with technology and medication assistance was 200 mL per day. The mother ultimately stopped breastfeeding upon return to work because “it was a lot of effort for not a lot of milk.” The mother reported emotional distress from her experience and disappointment that she had not received any counseling about breast function prior to her surgery, and that her health-care providers did not give appropriate anticipatory prenatal guidance.

These two cases exemplify gaps in the current practice paradigm and provide a call to action for childbirth educators and all health-care providers to improve prenatal lactation assessment,

education, and anticipatory guidance for all mothers. It is imperative that we accurately assess and effectively educate all families so that every mother can meet her personal breastfeeding goals (Spatz, 2018). Childbirth educators and health-care providers must educate families about potential factors that may impact milk supply.

FACTORS INFLUENCING MILK SUPPLY

Table 1, which was created by the first author, provides guidance for risk factors that can be identified prior to birth, so that families can be provided with appropriate anticipatory prenatal guidance. It is critical to be aware of the distinction between factors that can delay lactogenesis II versus those that will impact the mother's ability to develop a normal milk supply. All women and their families should receive proactive management instruction (Spatz, 2020).

Nommsen-Rivers and colleagues (2010) research demonstrates that a delay in lactogenesis II in first-time mothers is related both to maternal obesity and infants not feeding effectively at the breast. They found that 44% of women experienced a delay in coming to full volume (Nommsen-Rivers et al., 2010). In the United States, we are seeing increasing numbers of first-time mothers over 30 years of age and 50% of childbearing women who have high Body Mass Index (BMI), are overweight or obese. Women with the highest BMIs are at highest risk for delay in lactogenesis II and breastfeeding cessation (Preusting et al., 2017). For women who have risk factors for delay in lactogenesis II, they can be encouraged to pump early and pump often in addition to breastfeeding, in order to come to full

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volume more effectively. These families may need to provide temporary supplementation to their infant in small volumes. However, they should be closely monitored to ensure that the mother comes to volume by day 7 after birth (Spatz, 2020).

In the case of breast reduction surgery or GH/IGT, it is unlikely that these women will achieve a complete milk supply for their child. With breast reduction surgery, fat is removed from the breast to reduce breast size. Intertwined with the fat tissue is also secretory tissue, so that the more tissue that is removed, the more milk supply can be negatively impacted. Unfortunately, women may not receive counseling from their plastic surgeons at the time of breast reduction surgery that it may impact milk making capacity.

GH, also known as insufficient glandular tissue, is a condition where mothers do not have adequate secretory tissue to develop a full milk supply. There is no research on this condition, however a case report demonstrates that often this condition is not prenatally identified (Duran & Spatz, 2011). Women with GH will likely not be able to develop a copious milk supply. For these women, the use of technology (hospital grade pump and Baby Weigh scale to measure infant milk intake) should be essential care components (Froh et al., 2015).

However, women who have had breast reduction or have GH/IGT should receive anticipatory prenatal guidance if there is concern that they may not be able to exclusively breastfeed their infants. It is essential to provide realistic expectations so that the family can make informed decisions regarding alternative options to feed their infant to ensure adequate nutrition.

IMPLICATION FOR PRACTICE FOR CHILDBIRTH EDUCATORS AND HEALTHCARE PROVIDERS

Thorough and detailed patient assessment and history should be obtained during the prenatal period. Health-care providers need to identify risk factors that may result in a delay of lactogenesis II or influence the mother's ability to develop a complete milk supply. The health-care provider should assess

the mother and her family's personal breastfeeding goals. If there are concerns regarding coming to full volume, open and transparent conversations should occur to determine alternative feeding plans to ensure the infant receives adequate nutrition.

At the birth, the mother should be prepared to breastfeed immediately after birth. At the same time, she should initiate pumping with a hospital grade pump with Initiation Technology in order to have access to colostrum and ensure coming to volume. This is the only pump technology with proven research outcomes (Meier et al., 2016; Torowicz et al., 2015). In addition to breastfeeding every 1 to 3 hours based on infant feeding readiness cues, the mother should pump as many times per day as feasible to facilitate stimulation of prolactin receptor sites in her breast. Research on mothers of preterm infants demonstrates that when mothers pump within 1 hour, they produce more milk at both 1 week and 3 weeks postbirth (Parker et al., 2012; Parker et al., 2015). Further research on mothers with term infants with congenital anomalies confirms these findings (Spatz et al., 2015; Torowicz et al., 2015). Therefore, since these are women at risk for milk supply concerns, the same principles of early, frequent pumping with the correct computer chip technology is recommended. Mothers should also be encouraged to pump both breasts simultaneously (double pumping). Double pumping is associated with higher prolactin levels, more efficient release of oxytocin, and improved breast emptying (Prime et al., 2012). Research also demonstrates that as a mother's milk supply is established, the mother will maintain the same patterns of oxytocin release and milk flow during her entire breastfeeding experience (Prime et al., 2011). It is important for childbirth educators and health-care providers to teach families the physiology and science of lactation. By empowering families with the research, the families are able to make better informed decisions about how to effectively and proactively manage their milk supply.

The mother should be encouraged to hold her infant skin to skin as many hours of the day as feasible to facilitate direct breastfeeding and enhance milk production (Wambach & Spencer, 2021). During the first few days of breastfeeding, it is likely that the mother will have sufficient volume of milk to satisfy the infant. Stool output will be the best indicator that breastfeeding is going well.

At day 4–5 however, assessment of milk supply is needed to determine if mother has come to volume. Pre- and postweights with a scale that is

accurate to + 2 g will allow the practitioner to determine if the infant is feeding effectively and to determine the mother's 24-hour milk production (Froh et al., 2015). By day 5, ideally the mother should be producing 500 mL per day.

At the first visit to the pediatric care provider, a weight assessment should be done as well as a determination of maternal milk supply, and goals for provision of milk. Even if the mother cannot provide a complete milk supply for her child, the pediatric primary care provider (PPCP) should reinforce the tremendous benefits of every drop of milk that the mother is able to produce. It is essential that all PPCPs complete a comprehensive maternal history at the first newborn visit. PPCPs should also visibly examine the breasts for anatomical concerns for all mothers who are breastfeeding their infants at the time of the first office visit for the newborn.

If milk supply issues are suspected prenatally, childbirth educators and health-care providers should have an open transparent conversation with the family about options for supplementation. Some families may find that supplementing their infant with infant formula is acceptable, but others may wish to seek alternative sources of human milk (Martino & Spatz, 2014). As health-care providers and childbirth educators, we need to be educated on how informally milk sharing can be done in the safest possible fashion. The Food and Drug Administration advises against informal milk sharing. However, many families choose to engage in this practice for personal or religious beliefs (Bressler et al., 2020; Spatz, 2016). As part of informed decision-making, families should be aware of all of their options (Martino & Spatz, 2014; Spatz, 2016). If inadequate milk supply is determined at the time of the PPCP visit, it is the responsibility of the PPCP to have an open and transparent conversation with the family about supplementation options.

Childbirth educators have an important role in empowering families to reach their personal breastfeeding goals. Childbirth educators can encourage their families to have proactive conversations with their health-care providers prior to birth. It is important to value the contribution of any breastfeeding, even if it can not be exclusive. Proactive anticipatory guidance can help the mother optimize her personal milk making capacity (Spatz, 2020). Development of an alternative feeding plan to ensure adequate nutrition of the infant is also essential. Families should have the opportunity to make an informed feeding choice about the use of infant formula and/or informally shared milk.

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As the interest in breastfeeding continues to grow in the United States, more families are choosing to initiate breastfeeding. It is important to understand that not all mothers will have the anatomical/physiological capacity to achieve a full milk supply. These families currently are not receiving appropriate research-based anticipatory guidance. We must change the current practice paradigm so that all women have a positive lactation journey, even if their breasts may not function to their fullest capacity.

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DISCLOSURE

The authors have no relevant financial interest or affiliations with any commercial interests related to the subjects discussed within this article.

FUNDING

The author(s) received no specific grant or financial support for the research, authorship, and/or publication of this article.

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