

Nia's Painful Breast: Breast Anatomy, Lactation, and Mastitis

by

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Part I – Breast Anatomy

Nia didn't notice any changes at first. She was too tired, too busy, and too focused on other parts of her body. The days after hospital discharge had been full of crying, diapers, spit-ups, endless costume changes (both for her and her week-old son), sleepless nights, and an onslaught of visitors eager to give advice. Her body ached, the abdominal incision pulling every time she rolled over in bed or got up to feed the baby. She was still a little lightheaded when she stood up too quickly, and the swelling in her feet, though better than before the C-section, made it hard to get around.

When Leo's tiny foot kicked out and struck her right breast, Nia was surprised at how much it hurt. When he finally fell asleep, she unlatched him, lay him safely on his back in his bassinet, and went to look at herself in the mirror. Sure enough, an area of her right breast was dark, warm, firm, and tender to touch. It was no wonder Leo had been able to elicit pain. Nia sighed. She would have to call the office for her obstetrician/gynecologist (OB/gyn), although she dreaded it. Her follow-up appointment was not for another week, and the staff always seemed rushed and dismissive.

Questions

1. What is the function of the mammary gland?
2. Describe the location and anatomy of the prepubertal mammary gland.
3. Describe the structural changes that occur to the mammary gland during:
 - a. Puberty
 - b. Menstruation
 - c. Pregnancy

Part II – Lactation

As she dialed Dr. Ahmed, her OB/GYN, Nia tried to remember the specifics of how many times Leo fed that day and when her breast symptoms started. Breastfeeding had been difficult from the beginning. The C-section was unplanned, and Nia was unable to put Leo to the breast until several hours after he was born. Then Leo needed some formula to raise his blood sugar. It took several days for Nia's milk to come in, days of Leo screaming while popping on and off the breast, unsatisfied. And now that the milk had arrived, it was almost like it was too much. Leo would cough, choke, and spit up. When he would unlatch, the milk would still be spraying, and Nia was leaking constantly between feeds. At least the breast pump she ordered through her health insurance finally came in the mail. Seeing an opportunity to collect and freeze extra milk for her return to work, Nia had started pumping several times a day between feeds. Keeping up with the feeding and the pumping and the washing of the pump parts was an around-the-clock endeavor, but Nia knew the benefits of breastmilk and was determined to make it work. But now she had this awful breast swelling and tenderness. And as she spoke to the triage nurse, Nia noticed she was shivering. A quick temperature check confirmed it: 103 °F (39.4 °C). She had a fever on top of everything else.

Questions

1. Which hormones are involved in lactation?
2. Describe the positive feedback loop of lactation.
3. What is colostrum? How does it differ from transitional and mature milk?
4. What is meant by “milk coming in” (lactogenesis 2) and on what day does this usually occur?
5. How much milk does an infant need per day?
6. Nia has an oversupply of milk. Why might this have happened?

