

# 'Witch's Milk'

## Galactorrhea in the Newborn

Diane J. Madlon-Kay, MD

• For a five-month period, infants examined on admission and discharge from the newborn nursery and at two-week and two-month well-baby visits were examined for breast nodule size and the presence of galactorrhea. Nine hundred eighty-four examinations were performed on 640 children. Forty-five examinations (4.6%) on 38 infants revealed galactorrhea. "Witch's milk" was noted at all ages studied, including 1.8% of examinations at 2 months of age. All the infants with galactorrhea were born at term, with neither sex predominating. Children with galactorrhea had breast nodules significantly larger than those of children without galactorrhea. None of these infants was hypothyroid. This study concludes that witch's milk is a common occurrence, associated with larger than average breast nodules, and may persist until 2 months of age in normal newborns.

(AJDC 1986;140:252-253)

Galactorrhea in the newborn was first described in the medical literature in the 17th century, when many superstitions surrounded this phenomenon.<sup>1</sup> Confusion about "witch's milk" continues today, with even its incidence uncertain. It is described as occurring in most newborns in one source,<sup>2</sup> and as a rare finding in another.<sup>3</sup> Galactorrhea in the newborn has recently even been suggested as an

Incidence of 'Witch's Milk' by Infant Age*		
Age, wk	No. (%) of Examinations With Milk Present	Total No. of Examinations
0-1†	34 (6.2)	552
2-5	8 (3.0)	265
6-10	3 (1.8)	167
Total	45 (4.6)	984

\* $P < .05$ .

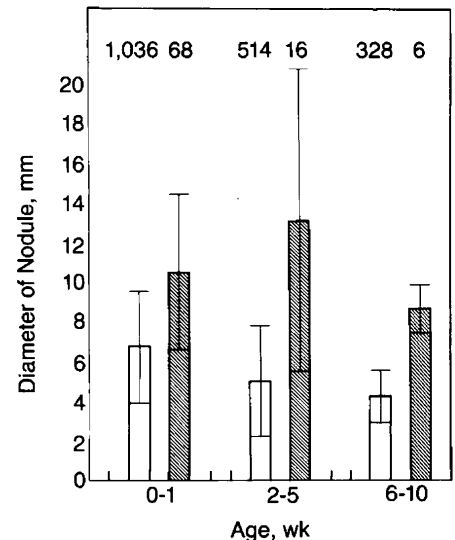
†Most infants this age were examined for galactorrhea more than once. Of 336 children examined, 30 had galactorrhea.

early sign of congenital hypothyroidism.<sup>4</sup>

This investigation attempted to resolve these as well as other questions about witch's milk. The incidence of galactorrhea and its relation to congenital hypothyroidism were studied. In addition, this report examined the correlation between witch's milk and breast nodule size. Finally, the age at resolution of galactorrhea was investigated.

### PATIENTS AND METHODS

The study took place at the Womack Army Community Hospital from February to July 1985. Examinations were performed by members of the family practice department or by a pediatric nurse practitioner. Infants examined on admission and discharge from the newborn nursery and at two-week and two-month well-baby visits were examined for breast nodule size and the presence of galactorrhea. The diameter of each breast nodule was measured separately, with either calipers or a tape measure, by picking up the breast tissue between finger and thumb.<sup>5</sup> If after firm palpation, secretion could be observed from either nipple, galactorrhea was considered to be present. All infants were screened for congenital hypothyroidism by state protocol.



Comparison of breast nodule size (mean  $\pm$  SD) in infants with (shaded areas) and without (open areas) "witch's milk." Numbers at top of columns indicate number of nodules.

### RESULTS

Thirty-eight (5.9%) of the 640 infants were found to have galactorrhea on one or more examinations over the five-month period of the study. Thirty-five of the 38 infants had a gestational age determined by the mother's last menstrual period. All of these 35 infants were born at term, with an average length of gestation of  $40.2 \pm 1.2$  weeks. Seventeen were male (45%) and 21 were female (55%). None of these infants had congenital hypothyroidism.

Of the 984 examinations performed, galactorrhea was noted in 45 (4.6%). Witch's milk was most likely to be present in the first two weeks of life (Table). However, galactorrhea was noted in three infants aged 6 to 10 weeks. One of these children was also examined at 12 weeks of age and found

Accepted for publication Nov 26, 1985.

From the Department of Family Practice, Dwight David Eisenhower Army Medical Center, Fort Gordon, Ga.

The opinions or assertions contained herein are the private view of the author and are not to be construed as official or as reflecting the views of the Department of the Army or the Department of Defense.

Reprint requests to Department of Family Practice, Dwight D. Eisenhower Army Medical Center, Fort Gordon, GA 30905-5650 (Dr Madlon-Kay).

to have persistent galactorrhea.

The breast nodules of infants with galactorrhea were significantly larger than those of infants without galactorrhea ( $P < .001$ ) (Figure). This difference was noted at all infant ages. The children with galactorrhea also had a transient increase in breast nodule size at 2 to 5 weeks of age. In contrast, nodule size steadily decreased in infants without witch's milk.

#### COMMENT

Confusion and controversy have surrounded the subject of witch's milk since the 17th century. Initial reports advised nurses and midwives to express the infants' breasts "to prevent the stagnating Liquor from causing Disorders."<sup>1</sup> These recommendations were probably based on superstition more than any scientific reasoning. It was a popular belief among midwives and grandmothers in several countries that if witch's milk was not frequently and thoroughly expressed from the infants' breasts, it would be stolen by witches and goblins for use in special brews.<sup>1</sup>

In the 19th century, reports began to

appear of inflammation and breast abscesses resulting from this practice. Since that time, any interference with the newborn's breasts has been strongly discouraged.<sup>1,3</sup> Some authors report that witch's milk is now a rare finding because of this change in practice.<sup>3,6</sup> The possibility of unusual causes of the galactorrhea, such as congenital hypothyroidism<sup>4</sup> or a medication side effect,<sup>7</sup> has been emphasized.

In contrast, other sources, including a standard textbook,<sup>8</sup> describe witch's milk as occurring in most newborns and disappearing in a few weeks.<sup>2</sup> This is a confusing situation for the clinician, particularly when he notes galactorrhea in an infant older than 1 month of age.

This investigation found that galactorrhea occurred at a rate between these two extremes, with 5.9% of the infants having witch's milk. Galactorrhea, therefore, occurs much more frequently than congenital hypothyroidism, and should not be considered a reliable sign of that disease. In fact, none of these infants had congenital hypothyroidism.

Although galactorrhea occurred

most frequently in the youngest children, 1.8% of infants aged 6 to 10 weeks had persistent witch's milk. The clinician should, therefore, not be unduly alarmed by this finding. Maternal hormones are not a likely cause of galactorrhea in these infants. In fact, little is known about the endocrinology of witch's milk and the relative importance of neonatal prolactin and maternal estrogens in this phenomenon.<sup>2,6,9</sup>

Although witch's milk has been described in premature infants,<sup>2</sup> all the infants with galactorrhea in this study were born at term. No sex predominated in the infants with galactorrhea. Breast nodule size was significantly greater in infants with galactorrhea, which is probably due to breast engorgement with secretions.<sup>2</sup>

These findings should be reassuring to physicians that the infant with galactorrhea has neither an evil eye cast upon him nor a rare endocrinopathy.

I thank Susan Corcoran, Shirley Booth, and the Womack Family Practice Residents for their help in collecting patient data for this investigation. Wayne Timmerman prepared the Figure.

1. Forbes TR: Witch's milk and witches' marks. *Yale J Biol Med* 1950;22:219-225.
2. McKiernan JF, Hull D: Breast development in the newborn. *Arch Dis Child* 1981;56:525-529.
3. Bluestein DD, Wall GH: Persistent neonatal breast hypertrophy. *AJDC* 1963;105:292-294.
4. Macaron C: Galactorrhea and neonatal hypothyroidism. *J Pediatr* 1982;101:576-577.

5. Farr V, Mitchell RG, Neligan GA, et al: The definition of some external characteristics used in the assessment of gestational age in the newborn infant. *Dev Med Child Neurol* 1966;8:507-511.
6. Dossett JA: The nature of breast secretion in infancy. *J Pathol Bacteriol* 1960;80:93-99.
7. Van der Steen M, Du Caju MVL, Van Acker

- KJ: Gynaecomastia in a male infant given domperidone. *Lancet* 1982;2:884-885.
8. Bates B: *A Guide to Physical Examination*. New York, Harper & Row Publishers Inc, 1983, p 487.
9. Guyda HJ, Friesen HG: Serum prolactin levels in humans from birth to adult life. *Pediatr Res* 1973;7:534-540.

#### References

#### In Other AMA Journals

##### ARCHIVES OF PATHOLOGY & LABORATORY MEDICINE

##### Peanut Lectin Binding Sites in Human Fetal Colon

Rebecca A. Coapman, MD, Harry S. Cooper, MD (*Arch Pathol Lab Med* 1986;110:124-127)

##### Bilateral Cystic Nephroblastomas and Botryoid Sarcoma in a Child With Dandy-Walker Syndrome

Toshihiko Kinoshita, MD; Yasuhiro Nakamura, MD; Masaharu Kinoshita, MD; Seiichi Fukuda, MD; Hirobumi Nakashima, MD; Takeo Hashimoto, MD (*Arch Pathol Lab Med* 1986;110:150-152)