

UC Davis
Dermatology

Title

Nipple thrush or dermatitis: a retrospective cohort study of nipple-areolar complex conditions and call for coordinated, multidisciplinary care

Permalink

<https://escholarship.org/uc/item/8zv331ww>

Authors

Sadovnikova, Anna

Fine, Jeffrey

Tartar, Danielle M

Publication Date

2023

Data Availability

The data associated with this publication are not available for this reason: N/A

Nipple thrush or dermatitis: a retrospective cohort study of nipple-areolar complex conditions and call for coordinated, multidisciplinary care

Anna Sadovnikova¹, PhD, IBCLC, MPH, MA, Jeffrey Fine², MPH, Danielle M Tartar³ MD, PhD

1. School of Medicine, UC Davis, Sacramento, CA 2. Department of Public Health Sciences, School of Medicine, UC Davis, Sacramento, CA 3. Department of Dermatology, UC Davis, Sacramento, CA

UC DAVIS
HEALTH

Department of Dermatology

Background

- Nipple thrush in lactating patients is characterized by nipple-areolar complex (NAC) pain, itch, and burning with breast pain.^{1,2,3}
- Expert opinion and single clinic chart reviews suggest that most cases of nipple thrush are actually contact or irritant dermatitis, nipple vasospasm, or subclinical mastitis often in the setting of improper breast pump use.^{1,2}
- The relationship between breast pump use, symptoms of nipple thrush, and thrush diagnosis has not been examined at the level of a health system.

Objective

Determine which elements of a lactating patient's clinical presentation, including breast pump use and symptoms, are associated with a diagnosis of nipple thrush.

Methods

- All NAC complaints of reproductive-age female-identifying patients at UCDMC between 2015 and 2019 were reviewed.
- Data about symptoms, diagnosis, specialty providing care, diagnostic considerations, and treatments were collected.
- Only lactating patients (204 encounters) with NAC complaints were included.

Discussion & Recommendation

The preponderance of nipple thrush diagnoses, or potential misdiagnoses, made clinically in the setting of breast pump use in patients with NAC irritation and pain illustrates the need for multidisciplinary, dermatology-involved care for lactating patients.

Results

Main Result

Patients who used a breast pump were more likely than those who were just nursing to be diagnosed with nipple thrush (Table 1).

Table 1. Odds of nipple thrush diagnosis increased with breast pump use

	OR	95% CI	P value
Nursing only (ref)	-	-	-
Nursing and pumping	11.8	1.3 - 110.1	.03
Pumping only	23.4	2.5 - 218.7	.0006

Table 2. Pumping patients presented with more NAC pain, itch, burn, and irritation than non-pumping patients.

Symptom	Total N	No data n (%)	Only nursing n (%)	Nursing/Pumping n (%)	Only pumping n (%)
Nipple pain	155	27 (17)	25 (16)	50 (32)	53 (34)
Breast pain	83	15 (18)	3 (7)	23 (28)	42 (51)
Nipple & breast pain	70	13 (19)	2 (3)	21 (30)	34 (49)
Itch	23	2 (9)	0 (0)	13 (57)	8 (35)
Burn	17	4 (24)	0 (0)	8 (47)	5 (29)
NAC irritation	80	14 (18)	4 (5)	35 (44)	27 (34)
Nipple & breast pain & NAC irritation	33	5 (15)	1 (3)	13 (39)	14 (42)

1. Thrush was usually (65/66, 98%) diagnosed without microscoping confirmation or fungal culture.
2. Dermatologists were rarely (5, 2%) involved in the management of lactating patients with NAC complaints
3. While nipple dermatitis was a rare diagnosis (14, 7%), NAC irritation was common (80, 39%).
4. Lactating patients (40, 20%) with NAC itch or burn were more often diagnosed with a nipple thrush (23, 58%) than dermatitis (9, 23%).

Contact

Anna Sadovnikova, PhD, IBCLC
UC Davis School of Medicine
Email: asadovnikova@ucdavis.edu

Full manuscript available in *Journal of the American Academy of Dermatology*

Funding support: NIH NICHD F30HD101295 & NIH NCATS UL1TR001860

References

1. Betts RC, Johnson HM, Eglash A, Mitchell KB. It's Not Yeast: Retrospective Cohort Study of Lactating Women with Persistent Nipple and Breast Pain. *Breastfeed Med Off J Acad Breastfeed Med* 2021;16:318–24. <https://doi.org/10.1089/bfm.2020.0160>.
2. Douglas P. Overdiagnosis and overtreatment of nipple and breast candidiasis: A review of the relationship between diagnoses of mammary candidiasis and *Candida albicans* in breastfeeding women. *Womens Health Lond Engl* 2021;17:17455065211031480. <https://doi.org/10.1177/17455065211031480>.
3. Jiménez E, Arroyo R, Cárdenas N, Marín M, Serrano P, Fernández L, et al. Mammary candidiasis: A medical condition without scientific evidence? *PLOS ONE* 2017;12:e0181071. <https://doi.org/10.1371/journal.pone.0181071>.