

BACKGROUND

- The lactating breast is at risk for several conditions requiring surgical evaluation and intervention, yet there is a paucity of literature to guide clinical decision making.
- Mastitis and associated complications are a significant source of morbidity for breastfeeding dyads.

OBJECTIVE

We sought to characterize the presentation and treatment of lactational phlegmon, a previously undescribed complication of mastitis that may require surgical management.

METHODS

We conducted a retrospective cohort analysis of women referred to a single breast surgeon for lactational mastitis between July 2016 and October 2018. Cases were categorized as uncomplicated mastitis, mastitis with phlegmon, or mastitis with abscess. Demographic variables and treatment details were extracted via chart review, and compared using ANOVA or the Pearson Chi-square test. Analyses were performed using JMP v13.0 (Cary, NC).

RESULTS

Figure 1. Clinical appearance of lactational phlegmon. A tender mass was palpable in the medial left breast in the erythematous region.



Table 1. Distribution of demographic and clinical variables according to diagnosis

Variable	Total Cohort	Complicated Mastitis (CM)			3-group p-value	UM vs CM p-value	P vs A p-value
		Uncomplicated Mastitis (UM) N=27	Phlegmon (P) N=10	Abscess (A) N=15			
Age							
Mean (SD)	31.6 (5.3)	30.7 (5.8)	32.9 (3.7)	32.3 (5.1)	0.437	0.203	0.721
Median (range)	32 (20-41)	31 (20-41)	32.5 (27-41)	33 (21-40)			
Number of weeks postpartum							
Mean (SD)	12.8 (20.1)	14.2 (14.2)	5.7 (3.3)	14.9 (32.4)	0.473	0.606	0.294
Median (range)	6.5 (1-130)	9 (2-52)	5 (1-11)	5 (1-130)			
Race/Ethnicity							
White/NH	37 (71.2%)	19 (70.4%)	7 (70.0%)	11 (73.3%)	0.976*	0.897	0.856
Other	15 (28.8%)	8 (29.6%)	3 (30.0%)	4 (26.7%)			
Parity							
Primiparous	29 (55.8%)	17 (63.0%)	4 (40.0%)	8 (53.3%)	0.447	0.278	0.513
Multiparous	23 (44.2%)	10 (37.0%)	6 (60.0%)	7 (46.7%)			
Breastfed prior child							
Yes	16 (30.8%)	9 (33.3%)	4 (40.0%)	3 (20.0%)	0.021*	0.677	0.275
No	36 (69.2%)	18 (66.7%)	6 (60.0%)	12 (80.0%)			
Pumping							
Yes	23 (44.2%)	8 (29.6%)	3 (30.0%)	12 (80.0%)	0.004	0.028	0.012
No	29 (55.8%)	19 (70.4%)	7 (70.0%)	3 (20.0%)			

Figure 2. Ultrasound demonstrated a heterogeneous, complex fluid collection with soft tissue edema and stranding.



Table 2. Treatment patterns by diagnosis.

Variable	Total Cohort	Complicated Mastitis (CM)			3-group p-value	UM vs CM p-value	P vs A p-value
		Uncomplicated Mastitis (UM) N=27	Phlegmon (P) N=10	Abscess (A) N=15			
# total encounters							
Mean (SD)	3.2 (2.1)	2.2 (1.3)	4.6 (2.5)	4.1 (2.0)	<0.001	0.0001	0.625
Median (range)	3 (1-10)	2 (1-5)	4.5 (2-10)	4 (1-7)			
# total days antibiotics							
Mean (SD)	12.0 (7.2)	9.7 (5.9)	15.0 (9.7)	14.2 (6.2)	0.046	0.014	0.821
Median (range)	10 (0-30)	10 (0-30)	10 (0-30)	10 (10-30)			
# diagnostic imaging tests							
Mean (SD)	0.7 (0.7)	0.4 (0.5)	1.3 (0.7)	1.0 (0.5)	<0.001	<0.0001	0.255
Median (range)	1 (0-2)	0 (0-1)	1 (0-2)	1 (0-2)			
# procedures							
Mean (SD)	0.6 (0.9)	0	1.3 (1.2)	1.3 (0.6)	N/A	N/A	0.935
Median (range)	0 (0-4)		1 (0-4)	1 (1-3)			

CONCLUSIONS

- Similar to the inflammatory phenomena observed in appendicitis and diverticulitis, phlegmon can occur in the lactating breast as a result of stasis and obstruction.
- Lactational phlegmon presents as a persistent, tender mass in a ductal distribution, with correlative ultrasonographic findings.
- Surgical evaluation is warranted as a subset of phlegmons may coalesce into an abscess necessitating drainage and/or require biopsy of a persistent mass.
- Attempted aspiration does not appear to have an appreciable treatment effect, but an extended antibiotic course may be warranted.
- Like phlegmons occurring elsewhere in the body, breast phlegmons warrant regular follow-up until clinical and radiographic resolution.
- Complete clinical resolution may take up to one month or more.
- Earlier interval imaging may be obtained with high clinical suspicion for underlying lesion as lead point for obstruction.