

MASTITIS AND BREAST ABSCESSES IN BREASTFEEDING: MILK CULTURE, ANTIBIOTIC TREATMENT AND FOLLOW UP

Obiettivo:

Breastfeeding represents a unique opportunity for improving both infant and maternal health. Lactational mastitis occurs in 2-10 % of breastfeeding women and 3% of them develop a lactational breast abscess. Most cases are due to *Staphylococcus aureus* and, recently, to methicillin-resistant *S. aureus* (MRSA). Primary aim of this study was to evaluate pathogens implicated in lactational pathologies and responses to antibiotic therapy. Secondary aims were to follow up breastfeeding and maternal-neonatal outcomes.

Metodi:

In this observational study 47 women with lactational pathologies were studied with a multidisciplinary approach: 22 cases of mastitis (group A) and 25 cases of breast abscess (group B) were enrolled at their first access in Hospital. Milk and breast abscess samples were collected into blood culture bottles and cultured on selective agar plates if positive.

Risultati:

Table 1 reports population characteristics. Table 2 shows breastfeeding features. Table 3 reports pathogens found in milk and breast abscess samples. Table 4 shows data about antibiotic treatment and maternal-neonatal outcomes.

Conclusioni:

In case of mastitis milk culture is very important to choose the appropriate antibiotic therapy. The first line antibiotic therapy for lactational abscess is Clindamycin. Needle aspiration with or without ultrasound guidance should represent the first line treatment in abscesses that require drainage. A multidisciplinary follow up could improve the continuation of breastfeeding to reduce complications and to improve maternal and neonatal health.

Table 1 POPULATION CHARACTERISTICS

	MASTITIS (n=22)	ABSCESSSES (n=25)	P value
Maternal Age	32.2±3.9	34.2±5.7	ns
Race			
Caucasian (n)	21	17	0.02
Asian(n)	1	2	ns
Arabian(n)	0	5	0.02
Latin-american(n)	0	1	ns
Married(n)	15	7	0.003
Educational degree			
Graduation(n)	13	7	0.02
Middle school diploma(n)	3	3	ns
High school diploma(n)	2	7	ns
Not detected(n)	4	8	
Ex smokers(n)	3	3	ns
BMI (kg/m ²)	20.8±2.8	20.9±3.5	ns
<i>Pregnancy Variables</i>			
Weight gain in pregnancy (kg)	12.8±3.4	11.8±4.2	ns
Pregnancy complications(n)	3	3	ns
Primiparous(n)	20	18	0.06
Prepartum training(n)	12	8	0.09
C-section(n)	1	6	0.05
Vacuum(n)	1	2	ns
Labour induction(n)	6	6	ns
Peridural analgesya(n)	10	7	ns
Gestational age at delivery(weeks)	39.6±1.2	39.5±1.1	ns
Birthweight(g)	3241.3±470.3	3262.7±410.9	ns
Skin to skin(n)	11	13	ns
Post partum complications(n)	0	0	
Neonatal complications(n)	Itterus 4	0	0.02
Lost at Follow up	3	7	

Table 2 BREASTFEEDING CHARACTERISTICS

	MASTITIS (n=22)	ABSCESSSES (n=25)	P value
<i>Breastfeeding characterists in hospital after delivery</i>			
Exclusive breastfeeding (n)	21	22	ns
Complementary feeding (n)	1	3	
Rooming in (n)	20	18	0.04
Nipple excoriation (n)	4	12	0.052
Nipple shields (n)	3	3	ns
Breast pump (n)	1	3	ns
Postpartum day at hospital dimission (days)	3.0 (2.2-11.0)	3 (2-8.0)	NS
<i>Breastfeeding characterists during mammary pathologies</i>			
Exclusive breastfeeding (n)	18	16	ns

Bottle-feeding (n)	0	2	ns
Complementary feeding (n)	4	7	ns
Breast pump (n)	9	10	ns
Postpartum days at mammary pathologies onset (n)	28 (3-154) 43±40	37 (13-78)	NS
Coexistence of mammary pathologies			
Candidiasis (n)	2	2	ns
Nipple excoriation (n)	9	3	0.01
Vasospasmo (n)	1	2	ns
Complication			
ABSCCESS (n)	2	/	
RECIDIVANTIS MASTITIS (n)	2	/	
BILATERAL MASTITIS (n)	2	/	
BILATERAL ABSCESSES	0	1	
FOLLOW UP (months)	10(1.5-21)	11.5 (2.5-21)	
STOP BREASTFEEDING (median months)	7 (10 days-21 months)	5.5 (2.5-13)	

Table 3 PATHOGENS IN MILK OR IN NEEDLE ASPIRATION SAMPLES

	MASTITIS (n=22)	ABSCESSES (n=25)	P value
S. Aureus MRSA (n)	9	19	0.02
<i>S. Aureus MRSA+ Clindamicina resistance</i> (n)	2/9	3/19	ns
S. Aureus MSSA (n)	2	3	ns
Streptococcus mitis (n)	3	0	0.053
Streptococcus salivarius (n)	2	0	ns
Streptococcus mutans / parasanguis	0	2	ns
E. faecalis (n)	4	1	ns
E.coli (n)	1	0	ns
Negative (n)	1	0	

Table 4 ANTIBIOTIC TREATMENT

	MASTITIS (n=22)	ABSCESSES (n=25)
First line therapy		
Amoxicillin+ac. Clavulanic (n)	10	13
Amoxicillin/Ampicillin (n)	4	2
Clindamycin (n)	8	6
Cephalosporin (n)	0	2
Azitromicina/ Claritromicina (n)	0	2
Second therapy after milk culture		
Modification of First therapy with <u>Penicillin</u>	9/14 (64%)	14/15 (93%)
Cephalosporin (n)	3	1
Clindamycin (n)	6	13/15
Modification of First therapy with <u>Clindamycin</u>	2/8	2/7
Cephalosporin (n)	1	0
Amoxicillin+ac. Clavulanic (n)	1	1
Levofloxacin(n)	0	1

<i>Modification of First therapy with Cephalosporin</i>	0	2	
Levofloxacin(n)	0	1	
Clindamycin(n)	0	1	
<i>Teicoplanin</i>	0	1	
<i>Third therapy</i>			
Vancomycin (n)	1	0	
Levofloxacin (n)	1	0	
Cephalosporin(n)	0	1	
Trimetoprim/sulfamethoxazole(n)	1	0	
MATERNAL ADVERSE EFFECTS	1	0	
Levofloxacin	1	0	
NEONATAL ADVERSE EFFECTS	0	0	
BREASTFEEDING DURING ANTIBIOTIC THERAPY			
Exclusive breastfeeding (n)	11	10	
Complementary feeding Bottle-feeding (n)	6	3	
Bottle-feeding (n)	2	6	
Lost at follow up	3	6	
Needle aspiration (n)	/	14	
Incision(n)	/	4	
Hospitalization (n)	6	4	