

Mastitis Prevention Strategies

María Eugenia Flores-Quijano

Instituto Nacional de Perinatología "Isidro Espinosa de los Reyes"
Mexico City, Mexico
maru_fq@yahoo.com

Key Messages

- Mastitis prevention strategies include general recommendations to protect the women's immune system and milk microbiota
- Breastfeeding counselling on adequate lactation practices and the correct breastfeeding technique are of crucial importance to promote frequent and effective milk extraction and reduce any risk associated with mastitis
- Counselling must also include information on breast care and mastitis sign recognition in order for women to seek professional help on time when needed

Clinical mastitis is often a cause of breastfeeding cessation, but other earlier or more subtle manifestations such as pain when feeding and perceived reduced milk flow are also causes for early weaning and breastfeeding termination [1], therefore mastitis prevention is an important measure to promote continued and successful breastfeeding.

Previous studies have documented risk factors for mastitis, which need to be considered in order to put forward adequate preventive measures. Some of these factors fit into a non-modifiable category, placing women with these characteristics in a high-risk group that needs extra attention and support [2]. However, most of the factors associated with the occurrence of mastitis are modifiable. Some of them may directly alter the microbiota, such as the irrational use of antibiotic therapy associated with Caesarean delivery or recurrent throat infections [3], unnecessary antifungal medications and nipple ointments [2], or even the use of not properly sterilized breast pumps that could be the source of pathogenic bacteria [2]. Other factors induce changes in the maternal immunological system that may predispose

for mastitis. For instance, in women living in underprivileged communities in Africa, reduced plasma levels of some micronutrients including vitamin A, zinc, and antioxidants, such as vitamin E and selenium, have been associated with subclinical mastitis [4, 5]. Also, psychological stress and fatigue have consistently been associated with this condition [6].

Additionally to the above-mentioned factors, breastfeeding practices and techniques that women choose, as well as factors that hinder appropriate ones such as milk oversupply, the separation of the mother from the baby, or factors that may hurt the breast or nipple such as the use of a tight bra, the presence of tongue or lip tie in the baby, and the improper use of breast-pumps create conditions or a breastfeeding environment that may cause blocked ducts, engorgement (build-up of milk in the breast), and increase the risk for mastitis [7]. Some inadequate practices that lead to infrequent and incomplete milk removal are [8]: scheduled feedings, purposely short duration of feeding, missed feedings, early introduction of formula milk or food (mixed feeding), and pacifier use. An incorrect breastfeeding

Adequate practices and correct techniques that may help prevent mastitis

| Adequate practices | Correct techniques |
|--|---|
| <ul style="list-style-type: none"> • Initiate breastfeeding very soon after birth (no longer than 24 hours) • Exclusive breastfeeding • Free demand, not scheduled feedings • Let baby finish suckling and extracting milk from one breast before changing to the other one • Delay the use of pacifier | <p>Woman's position:</p> <ul style="list-style-type: none"> • Teach correct and comfortable positions to sit or lie for breastfeeding <p>Baby's position</p> <ul style="list-style-type: none"> • Head and body are aligned • Face facing the chest, nose opposite the nipple • Whole body facing the mother <p>Position of the mouth on the breast (correct latch):</p> <ul style="list-style-type: none"> • Way in which the woman takes and presents the breast • Recommendation: hand forms a "C" • Stimulate the search reflex and to open mouth widely • It is not necessary to place a finger near the nose |

technique may not only cause nipple damage, but also prevent optimal milk drainage from the breast. At the same time, it has been hypothesized that nipple cracks and nipple injuries may not only provide a point of entry for microorganisms, but could also be early clinical signs of mastitis [3].

In terms of mastitis prevention, there are some general recommendations that protect women's immune system and their milk microbiota, these may include: strategies that improve or maintain an adequate nutrition status; provide guidance on how to cope with stress and fatigue [9]; promote the rational use of antibiotics during pregnancy, parturition, and postpartum, and limit the unnecessary use of breast ointments during

lactation. Additionally, the use of selected probiotics has recently been proposed as a novel preventive intervention especially for the high-risk group of women [10].

Nevertheless, a crucial intervention to prevent mastitis, even in the more susceptible women, is to promote the best conditions for breastfeeding and provide pertinent counselling on important matters such as: (I) adequate breastfeeding practices, (II) the correct technique to comfortably sit or lie and place the baby to the breast, (III) how to take care of the breasts, and (IV) very importantly, information on how to recognize early signs of mastitis, so affected patients get proper treatment if needed.

References

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