“Lactational Mastitis & Breast Abscess Management, An Introspection.”

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I. Introduction
LM & BA, Retains The Commonest Clinical Presentation Status, During First 3-6 Months Of Delivery, Occurring With Variable Prevalence Rates Of 1 In 5-10 Childbirths, In Different Parts Of The Globe.

The Present Study Deals With The Various Preventive Aspects For-
A. Development Of ‘Lactational Mastitis’ (LM) & Its
B. Conversion Into ‘Breast Abscess’ (BA)

& The Subsequent Management Of Resultant ‘Breast Abscess’ (BA)
By Different Techniques, For Comparative Result Outcomes, In Consideration Of BCT-BCS With Regards To Morpho-Physiology Aspects, Long/Short Term MorBidity Safety Profiles, Tumour/Malignancy Conversion & Others Considerations. [1][2]
II. Lactational mastitis & breast abscess

AN OVERVIEW

- **Mastitis** Breast Tissue Inflammation, Is Categorized Into-
  - Puerperal Mastitis- Popularly Known As ‘Lactational Mastitis’ (LM). While
  - ‘Non-Puerperal / Non-Lactational Mastitis / Granulomatous’ Varieties Are Better Known By Alternative Names Such As Duct Ectasia, Subareolar Abscess And Plasma Cell Mastitis, Zuska’s Disease And Others.

Chronic Cystic Mastitis Is A Different (Older) Name For Fibrocystic Disease Of Breast.

CLASSIFICATION Since 1980s, Mastitis Has Been Divided Into Non-Infectious And Infectious Sub-Groups. However, Recent Research Suggests That It May Not Be Feasible To Make Divisions In This Way. As Evident By Demonstrable Fact, That Types And Amounts Of Potentially Pathogenic Bacteria In Breast Milk Are Not Correlated To The Severity Of Symptoms. Many Healthy Breastfeeding Women Wishing To Donate Breast Milk Have Potentially Pathogenic Bacteria In Milk But No Symptoms Of Mastitis.

- LACTATIONAL MASTITIS Is An Inflammatory Process Affecting The Lactating Breast, Usually Of Bacterial Aetiology & Affects The Breast Parenchyma, Causing Localised Pain, Tenderness, Erythema And Engorgement, And May Be Accompanied By Systemic Features Such As Fever, Malaise, Rigors, Nausea And Vomiting. Mild Cases Of Puerperal Mastitis Are Often Called Breast Engorgement, Galactocele Etc The Distinction Is Overlapping And Possibly Arbitrary Or Subject To Regional Variations.

- BREAST ABSCESS A Localised Collection In The Breast Tissue That Results In A Painful Breast Lump, Is Potentially Secondary To Bacterial Mastitis & Is Rapidly Progressive, If Not Managed Expeditiously, Effective Management Is Essential To Control The Discomfort And Reduce The Likelihood Of Discontinuation Of Breastfeeding, Which May Occur As A Consequence Of Mastitis.

- It Has Also Been Suggested That Blocked Milk Ducts Can Occur As A Result Of Pressure On The Breast, Such As Tight-Fitting Clothing Or An Over-Restrictive Bra. Although There Is Sparse Evidence For This.
- Supposition Mastitis May Occur When The Baby Is Not Appropriately Attached To The Breast While Feeding, When The Baby Has Infrequent Feeds Or Has Problems Sucking The Milk Out Of The Breast.
- Nipple Areola Complex (NAC) Lesions- Sores, Cracks, Fissures, Infection, Inflammation, Candidiasis Etc Are Important Causative/Precipitating Factors For LM & BA Development. Risk factors- Women Who Are Breastfeeding Are At Risk For Developing Mastitis Especially If They Have Sore Or Cracked Nipples Or Have Had Mastitis Before While Breastfeeding Another Baby. Also, The Chances Of Getting Mastitis Increases If Women Use Only One Position To Breastfeed Or Wear A Tight-Fitting Bra, Which May Restrict Milk Flow.

But For Some Women It Can Take Several Months And There Is An Increased Risk Of Rebound Lactation And Mastitis Before Hormone Levels Settle.
"Lactational Mastitis & Breast Abscess Management, An Introspection."

Avoiding Stress Is Important Because The Same Hormones Are Also Stress Hormones. Even After Hormone Levels Settle It Takes Some Time For The Breast Gland To Rebuild To Its Nonlactating State And It May Be Particularly Prone To Mastitis During This Time.

- **Most Cases Of Post Weaning Mastitis Or Breast Engorgement** Resolve With Relatively Little Treatment. Recurrent Post Weaning Mastitis On The Other Hand Can Be An Indication Of A Developing Hyperprolactinemia Or Thyroid Disorders And Endocrinological Examination Must Be Considered.

- **Cold Compresses, Lactation Inhibiting Herbs Or Medication** Can Be Used.
- **Salvia Officinalis** Is Commonly Used For Weaning (Veldhuizen-Staas C. 2007) But No Peer Reviewed Literature Is Known On This Subject.
- **Chasteberry Extract** Can Improve Prolactin Levels Which May Reduce Risk Of Recurrence But No Data Is Available For Use In Mastitis.
- **Prolactin Lowering Medication** Has Been Frequently Used For Weaning In The Past But Is Much Less Used Since **Parlodol (Bromocriptine)** Approval For Weaning Has Been Withdrawn In The US Over Safety Concerns. While The Question Of Bromocriptin Safety For Weaning Purposes Was Never Completely Resolved It Became Apparent That It Was Not Very Effective In The Prescribed Dose And Did Rarely Justify The Unpleasant Side Effects.
- **Other Prolactin Lowering Medications** (Cabergoline, Lisuride) Are Effective And Appear Safe But Are Not Widely Used For Weaning.

- **Non-Puerperal Mastitis** Is Known To Occur On Average 2 Years And Almost Exclusively Up To 6 Years After Pregnancy. It Is An Extremely Rare Condition And Believed To Be In Many Cases Related To An Autoimmune Reaction To Milk Proteins FollowingIncomplete Inhibition Of Milk Secretion And Hyperprolactinemia. Distinction Between Puerperal (But Post-Weaning) And Non-Puerperal Mastitis Is Somewhat Arbitrary.

**Aetiology- Direct Trauma To The Breast Tissue** (Breast Injury) e.g During Sports Activities, Weight Lift Or Due To Seat Belt Injury. **Mastitis Can Also Develop Due To Contamination Of A Breast Implant Or Any Other Foreign Body** For Example After Nipple Piercing. In Such Cases, The Removal Of The Foreign Body Is Indicated.


Kvist Et Al. Study; Only ≈ 15% Of Mastitis Patients Require Antibiotic Treatment For Bacteria (Usually Staphylococcus Aureus),Originating From The Skin Or The Baby' Mouth/ ? Nose, Entering Breast Through NAC Lesions.


- **SYMPTOMATOLOGY-Lactation Mastitis Usually Affects Only One Breast And The Symptoms Can Develop Quickly.** The Signs And Symptoms(Milk Fever) Usually Appear Suddenly And They Include:
  - Breast Tenderness Or Warmth To The Touch, General Malaise Or Feeling ill
  - Swelling Of The Breast Pain Or A Burning Sensation Continuously Or While Breast-Feeding Skin Redness, Often In A Wedge-Shaped Pattern
  - Fever Of 101 F (38.3 C) Or Greater, The Affected Breast Can Then Start To Appear Lumpy And Red.

**Some Women May Also Experience Flu-Like Symptoms Such As:**

- Aches, Shivering And Chills, Feeling Anxious Or Stressed, Fatigue A Health Care Provider With Special Breastfeeding Competence As Soon As The Patient Recognizes The Combination Of Signs And Symptoms Should Be Consulted. Most Of The Women First Experience The Flu-Like Symptoms And Just After They May Notice A Sore Red Area On The Breast.

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Women Should Seek Medical Care If They Notice Any Abnormal Nipple Discharge, If Breast Pain Hinders Day To Day Life, Or They Have Prolonged, Unexplained Breast Pain. [8] [9] [10]

**ANATOMY OF THE BREAST**

![Diagram of breast anatomy](image)

(A&B) Breast Infections  (C): Breast Abscess  (D): Mastitis Carcinatosa

Various conditions related to lactation

- engorgement
- breast infection (mastitis or abscess) bacterial – usually S. aureus
  - fungal infection (C. albicans; uncommon)
  - C. albicans nipple infection – viral (herpes; very rare)
- galactocele (non-infected milk-filled cyst)
- nipple pain – cracked/damaged nipples – incorrect attachment: misalignment of mother’s nipple and baby’s mouth – infant causes: poor sucking, tongue-tie, cleft palate
  - incorrect use of breast pump
- other conditions
- **Benign Breast Disease**: Fibroadenoma, Fibrocystic Change, Cyst, Benign Phyllodes tumour

- **Musculoskeletal Conditions**
  - Tender Costochondral Junctions (Tietze Syndrome)
  - Sleeping or Breastfeeding In An Uncomfortable Position
- **Raynaud Disease Of The Nipple**

**Malignant Causes**

- Breast Cancer
  - Lobular And Ductal Carcinoma
  - Inflammatory Breast Cancer (May Mimic Bacterial Mastitis)
  - Malignant Phyllodes Tumour

**Geneva**: world health organization, 2000]
- Full breasts
- Breast engorgement- symptoms: cause: management
- Blocked ducts;plugged nipples- symptoms: cause: management
- Sore or fissured nipples- Symptoms: Cause: Management
  
The Mother Should Be Helped To Improve Her Baby’s Position And Attachment. Often, As Soon As Baby Is Well Attached, The Pain Is Less. The Baby Can Continue Breastfeeding Normally. There Is No Need To Rest The Breast – The Nipple Will Heal Quickly When It Is No Longer Being Damaged.
- Mastitis- symptoms: causes: management
- breast abscess: symptoms: cause: management
- Periductal mastitis- is an inflammatory condition of the subareolar ducts; the cause is unknown.

Periductal Mastitis Primarily Affects Young Women But Can Occur In Men As Well. The Majority Of Patients With Periductal Mastitis Are Smokers. It Has Been Postulated That Smoking Is Associated With Damage Of The Subareolar Ducts, With Tissue Necrosis And Subsequent Infection. The Toxic Substances In Cigarette Smoke May Damage The Ducts Directly Or There May Be A Localized Hypoxic Effect. The Breast Concentrates Substances In Cigarette Smoke; Cotinine, A Nicotine Derivative, Has Higher Concentrations In Subareolar Ducts Than In Plasma. Periductal Mastitis Is Also Associated With Squamous Metaplasia, Which Is Likely A Consequence Of Ongoing Inflammation. It Has Been Suggested That Squamous Metaplasia May Lead To Partial Duct Obstruction With Subsequent Dilatation And Secondary Inflammation And Infection. However, As Normal Ducts Are Blocked By Keratin, It Has Been Suggested That Duct Obstruction, Duct Dilatation, And Squamous Metaplasia Are Not Precursors Of Periductal Inflammation Or Relevant Etiologic Factors.

**Periductal mastitis- subareolar abscess and periareolar fistula idiopathic granulomatous mastitis**
- **Candida Infection (Thrush) Has Both Mother And Baby-Symptoms:**
  - **In The Mother:** Sore Nipples With Pain Continuing Between Feeds, Pain Like Sharp Needles Going Deep Into The Breast,Which Is Not Relieved By Improved Attachment. There May Be A Red Or Flaky Rash On The Areola, With Itching And Depigmentation.
  - **In The Baby:** White Spots Inside The Cheeks Or Over The Tongue, Which Look Like Milk Curds, But They Cannot Be Removed Easily. Some Babies Feed Normally, Some Feed For A Short Time And Then Pull Away, Some Refuse To Feed Altogether, And Some Are Distressed When They Try To Attach And Feed, Suggesting That Their Mouth Is Sore. There May Be A Red Rash Over The Nappy Area (“Diaper Dermatitis”).
  - **Cause:** This Is An Infection With The Fungus *Candida Albicans*, Which Often Follows The Use Of Antibiotics In The Baby Or In The Mother To Treat Mastitis Or Other Infections.
  - **Management:** If The Mother Has Symptoms, Both Mother And Baby Should Be Treated.
    - If Only The Baby Has Symptoms, It Is Not Necessary To Treat The Mother.
  - **Treatment- Gentian Violet Paint:** Apply 0.25% Solution To Baby’s Mouth Daily For 5 Days/ Until 3 Days After Lesions Heal. Apply 0.5% Solution To Mother’s Nipples Daily For 5 Days. **Nystatin:** Nystatin Suspension 100,000 IU/ML; Apply 1 MI By Dropper To Child’s Mouth 4 Times Daily After Breastfeeds For 7 Days, Or As Long As The Mother Is Being Treated. Nystatin **Tablets** 500,000 Units Three Times A Day Nystatin **Cream** 100,000 IU/ML; Apply To Nipples 4 Times Daily After Breastfeeds. Continue To Apply For 7 Days After Lesions Have Healed.
  - **Other Measures-**
    - **Miconazole** Oral Gel Four Times A Day For 1 Week Then Once Daily For One Week.
    - **Fluconazole:** Fluconazole 150 Mg Capsules Every 2nd Day (3 Doses)

**Oral Ketoconazole**
(As The Infection May Be Caused By Non-Albicans Candida Which May Be Resistant To Fluconazole).

**Hygiene-** Wash Hands Frequently, Wash Towels Daily,
Boil Dummy Daily And Replace Weekly If Possible (If Using).

- **Inverted, Flat, Large And Long Nipples**
- **Signs:** Nipples Naturally Occur In A Wide Variety Of Shapes That Usually Do Not Affect A Mother’s Ability To Breastfeed Successfully. However, Some Nipples Look Flat, Large Or Long.

And The Baby Has Difficulty Attaching To Them. **Most Flat Nipples Are Protractile** – If The Mother Pulls Them Out With Her Fingers, They Stretch, In The Same Way That They Have To Stretch In The Baby’s Mouth. A Baby Should Have No Difficulty Suckling From A Protractile Nipple. Sometimes An **Inverted Nipple Is Non-Protractile** And Does Not Stretch Out When Pulled; Instead, The Tip Goes In. This Makes It More Difficult For The Baby To Attach.

**Protractility** Often Improves During Pregnancy And In The First Week Or So After A Baby Is Born. A **Large Or Long Nipple** May Make It Difficult For A Baby To Take Enough Breast Tissue Into His Or Her Mouth. Sometimes The Base Of The Nipple Is Visible Even Though The Baby Has A Widely Open Mouth.
- **Cause:** Different Nipple Shapes Are A Natural Physical Feature Of The Breast. An Inverted Nipple Is Held By Tight Connective Tissue That May Slacken After A Baby Suckles From It For A Time.
- **Management:** The Same Principles Apply For The Management Of Flat, Inverted, Large Or Long Nipples.

**Antenatal Treatment** Is Not Helpful. If A Pregnant Woman Is Worried About The Shape Of Her Nipples, Explain That Babies Can Often Suckle Without Difficulty From Nipples Of Unusual Shapes, And That **Skilled Help After Delivery** Is The Most Important Thing.

**Immediately After Delivery:** The Mother Should Be Helped To **Position And Try To Attach Her Baby.** Sometimes It Helps If The Mother Takes A Different Position, Such As Leaning Over The Baby, So That The Breast And Nipple Drop Towards The Baby’s Mouth.

**The Mother Should Give The Baby Plenty Of Skin:** To Skin Contact Near The Breast, And Let The Baby Try To Find His Or Her Own Way Of Taking The Breast, Which Many Do. **If A Baby Cannot Attach In The First Week Or Two,** The Mother Can Express Her Breast Milk And Feed It By Cup.

**The Mother Should Keep Putting The Baby To The Breast In Different Positions.** And Allowing Him Or Her To Try. She Can Express Milk Into The Baby’s Mouth, And **Touch The Lips To Stimulate The Rooting Reflex** And Encourage The Baby To Open His Or Her Mouth Wider. **As A Baby Grows,** The Mouth Soon Becomes Larger, And He Or She Can Attach More Easily. **Feeding Bottles Or Dummies,** Which Do Not Encourage A Baby To Open The Mouth Wide, Should Be Avoided.

**For Flat Or Inverted Nipples,** A Mother Can Use A 20 ML Syringe, With The Adaptor End Cut Off And The Plunger Put In Backwards To Stretch Out The Nipple Just Before A Feed.

- **Illness, Jaundice And Abnormality Of The Child**
- **Illness-Symptoms Related To Feeding**
  Babies Under 6 Months Of Age If A Baby Has A Blocked Nose If A Baby Has A Sore Mouth Because Of Thrush (Candida) If A Baby Is Not Able To Breastfeed Adequately, But Can Take Oral Or Enteral Feeds The Mother Can Express Her Milk EBM To The Baby By Cup Or Nasogastric Tube Or Syringe. She Should Be Encouraged To Let The Baby Suckle Whenever He Or She Wants To. Milk-Banking Facilities, The Milk May Be Used For Another Child.
  - **Abnormalities**- Cleft Lip And/Or Palate :Tongue-Tie: Muscle Weakness:Down Syndrome Or Cerebral Palsy :Congenital Heart Or Kidney Problems:

**Management** Of Breast Conditions And Other Breast Feeding Difficulties-Dancer Hand Position


Milk Expression From The Affected Breast By, Only One Breast Is Affected / If Both Breasts Are Affected, Supportive –Local & Systemic Medications. Lactational mastitis & breast abscess,
Preventive Aspects

PREventing Mastitis—Although Mastitis Can Usually Be Treated Easily, The Condition Can Recur If The Underlying Cause Is Not Addressed.

During Breastfeeding, Mastitis Development Risk Reduction Measures Include—
- Preferably, Breastfeed Exclusively For Around Six Months,
- Encourage Baby To Feed Frequently, Particularly When Breasts Feel Overfull
- Ensure Baby Is Well Attached To Breast During Feeds – Ask For Advice If Unsure
- Let Baby Finish Their Feeds – Most Babies Will Release The Breast When They Have Finished Feeding; Try Not To Take Baby Off The Breast Unless They Are Finished
- Avoid Missing Or Putting Off Feeds
- Avoid Suddenly Going Longer Between Feeds – If Possible, Cut Down Gradually
- Avoid Pressure On Breasts From Tight Clothing, Including Bras.

(1.) supporting good feeding practices
(2.) feeding: mother & child attachment

Drain The Breast Often, But Gently—Breasts Need To Be Kept As Empty As Possible. Baby's Sucking Is The Best Way To Do This. The Milk Is Quite Safe For Baby To Drink. Feed More Often Than Usual, Starting Each Feed On The Sore Breast. Let Baby Suck Long Enough On This Side To Make Sure That It Is Being Drained Well. However, Take Care Not To Let The Other Breast Become Too Full, As It May Cause A Similar Problem In That Breast.

Ways of helping the breast to 'empty' or drain more easily:
- Make Sure Bra Is Very Loose Or Take It Off.
- Relax While Feed To Help Milk Flow.
- Make A Special Effort To Relax Arms, Legs, Back, Shoulders And Neck.
- Breathe Deeply And Evenly.
- Listen To Soothing Music And Think About Baby To Help Start The Let-Down Reflex.
- Change Feeding Positions - Try To Choose Positions That Allow The Milk To Flow Downhill To Baby. For Instance, Feeding While Lying On Left Side Might Help A Blockage On The Right Side Of Either Breast. If The Blockage Is Under The Nipple, Raise The Breast With Your Hand While You Feed. If This Doesn't Work, Another Option Is To Feed On All Fours' Kneeling Over Your Baby.
- Gently Massage The Breast By Stroking Toward The Nipple While Baby Feeds. Gentle Pressure Behind The Lumpy Area May Help Move The Blockage.
- Hand Express To 'Empty' The Breast If Baby Won't Suck. If Mastitis, Milk May Taste Salty. This Won't Harm Baby, But May Cause Him To Refuse The Breast. A Good Place To Hand Express Is Under A Warm Shower.
Infant And Young Child Feeding: Model Chapter For Textbooks for Medical Students And Allied Health Professionals Who Library Cataloguing-In-Publication Data; ISBN 978 92 4 159749 4 (NLM Classification: Ws 125)

Apply Warmth And Cold


Some sources of warmth:
- Having Warm Shower.
- Immerse Breasts In Warm Water In The Bath Or A Basin.
- Use A Heat Pack (Wheat Packs That Heat In The Microwave Oven Work Well), Well-Covered Hot Water Bottle, Warm Hand Towel Or A Face Washer Wrung Out In Hot Water.

Rest: Getting Rest While Mastitis Is Vital. Stay In Bed If Can, Or At Least Put Feet Up For Most Of The Day. If Go To Bed, Take Baby, Supplies For Changing Nappies And Mother’s Own Food And Drinks Along With, So As To Avoid Getting Up Repeatedly. If Other Children, It May Be Better To Lie Down In Your Living Area.

Start treatment straight away:
- Medical Adviser Consultation Should Be Sought, If Above Measures Do Not Clear The Lump Within 12 Hours, Or If Mother Develop A Fever Or Feel Unwell.
- Early Treatment Means, Get Better Faster, Feeling Less Ill And At Less Risk Of A Breast Abscess.

[13] [14] [15] [16] [17]
Breastfeeding And Mother’s Medication

Breastfeeding Contraindicated: Anticancer Drugs (Antimetabolites); Radioactive Substances (Stop Breastfeeding Temporarily)

Continue Breastfeeding: Side-Effects Possible Selected Psychiatric Drugs And Anticonvulsants (Note Individual Drug)

Monitor Baby For Drowsiness: Use Alternative Drug If Possible Chloramphenicol, Tetracyclines, Metronidazole, Quinolone Antibiotics (e.g. Ciprofloxacin)

Monitor Baby For Jaundice: Sulfonamides, Dapsone, Sulfamethoxazole+Trimethoprim (Cotrimoxazole), Sulfadoxine+Pyrimethamine (Fansidar)

Use Alternative Drug: Estrogens, Including Estrogen-Containing Contraceptives, Thiazide Diuretics, Ergometrine (May Inhibit Lactation)

Safe in usual dosage most commonly used drugs (monitor baby):

- Analgesics And Antipyretics: Short Courses Of Paracetamol, Acetylsalicylic Acid, Ibuprofen;
  Occasional Doses Of Morphine And Pethidine
- Antibiotics: Ampicillin, Amoxicillin, Cloxacillin And Other Penicillins, Erythromycin
- Antituberculosis Drugs, Anti-Leprosy Drugs Antimalarials (Except Mefloquine, Fansidar)
- Antihelminthics, Antifungals
- Bronchodilators (e.g. Salbutamol), Corticosteroids, Antihistamines, Antacids, Drugs For Diabetes,
- Most Anti-Hypertensives, Digoxin
- Nutritional Supplements Of Iodine, Iron, Vitamins
Lactation Suppression

Feedback Inhibitor Of Lactation—Milk production is also controlled in the breast by a substance called the Feedback Inhibitor Of Lactation, or FIL (a polypeptide), which is present in breast milk.

Sometimes one breast stops making milk while the other breast continues, for example if a baby suckles only on one side. This is because of the local control of milk production independently within each breast. If milk is not removed, the inhibitor collects and stops the cells from secreting any more, helping to protect the breast from the harmful effects of being too full. If breast milk is removed the inhibitor is also removed, and secretion resumes. If the baby cannot suckle, then milk must be removed by expression.

FIL enables the amount of milk produced to be determined by how much the baby takes, and therefore by how much the baby needs. This mechanism is particularly important for ongoing close regulation after lactation is established. At this stage, prolactin is needed to enable milk secretion to take place, but it does not control the amount of milk produced.

Lactation Suppression—the act of suppressing lactation in postpartum women by chemical or other means.

Indications-
- After birth, some women may desire to stop the production of breast milk—decides to bottle feed from birth, or
- In the case when the infant dies or is surrendered at birth.
- There is very little information available on the subject of lactation suppression for women who are not breastfeeding their babies (spitz et al. in a 100-year review) of all available information concluded that there was nothing new or helpful to assist with the mammary involution or milk suppression process or to treat the pain or discomfort of severely engorged breasts.
- The abrupt weaning process may lead to severe engorgement, extremely painful breasts, and possibly to other severe medical conditions. Up to one third of women who do not breast-feed and who use a brassiere or binder, ice packs, or analgesics may experience severe breast pain. Mastalgia
- Specific studies of non-pharmacologic methods of lactation suppression were limited and inconclusive. Available data suggest that many women using currently recommended strategies for treatment of symptoms may nevertheless experience engorgement or pain for most of the first postpartum week.

In the past, hormonal therapies, such as diethylstilbestrol and bromocriptine were used, but these are no longer recommended due to side effects (e.g. DES is a known carcinogen). In some countries, cabergoline (dostinex) is used for this purpose. Estrogen containing birth control pills may have the same side effect.

There is no currently recommended medications to suppress lactation.

There are no FDA approved medications for this purpose. Drugs that have been used in the past have shown severe potential side effects such as thromboembolism, cerebral accident, and myocardial infarction have been reported with their use and are not recommended for lactation suppression.

Other methods that have been used to assist with lactation suppression
- By simply not stimulating the breasts after birth, after a few days the production of milk will cease. Women may experience pain and discomfort from engorgement. These discomforts can be treated with analgesics, cooling packs and chilled cabbage leaves. However, as much as one third of all women will experience severe pain in this process.
- By binding the breasts by use of tight-fitting bras or ace bandages. Swift et al. concluded that breast binding should be discontinued as a method of lactation suppression and use of support bras encouraged.

This breast binding approach should be discouraged as this may cause blocked milk ducts and mastitis. By using cabbage leaves. The Cochrane Review of two studies on this subject concluded that there was no statistically significant evidence that interventions were associated with a more rapid resolution of symptoms; in these studies women tended to have improvements in pain and other symptoms over time whether or not they received active treatment.

Women cannot always breastfeed after birth. Reasons may be because the infant dies or is adopted, or the mother is too ill, or for the well being of the mother or infant. HIV-positive mothers,

Other Pharmacologic Agents (Clomiphene, Tamoxifen, Prostaglandins, Pyridoxine, Oxytocin, L-Dopa And Homeopathic Preparation) Were Tested In Single Small Trials. Generally, Side Effects Were Poorly Reported And No Case Of Thromboembolism Was Recorded Among Trials That Included It As An Adverse Treatment Outcome. Most Of The Drugs Tested Are Currently Not Available Or Registered For Suppressing Lactation. No Trials Compared Non-Drug Approaches With No Treatment And None Of The Included Trials Provided Reliable Data On Women’s Satisfaction With The Treatment. Lactational Mastitis & Breast Abscess, Management Guidelines Australian Breastfeeding Association, Booklet-Breastfeeding: Breast And Nipple Care Reviewed March 2015

Clinical Assessment
• Localised Inflammatory Features (Pain, Erythema, Heat, Swelling)
• Systemic Features (Fever, Malaise, Myalgia)
• Assessment Of Infant Hydration And Weight

Symptom Management
• Simple Analgesia
• Hot Packs Before Feeding
• Cold Packs After Feeding

Antibiotic Therapy
• Flucloxacillin Or Dicloxacillin 500 Mg Qid For At Least 5 Days
• For Abscess – Guided By Microbiological Culture And Sensitivity

Support Continued Breastfeeding
• Education And Reassurance
• Regular And Complete Drainage Of Breast (Use Breast Pump If Needed)
• Observe Feeding And Attachment
• Referral To Lactation Consultant
• Referral To Australian Breastfeeding Association

Early And Frequent Review
• Review In 24-48 Hours; Investigate If Not Settling
• If Not Settling, Ultrasound To Look For Breast Abscess And Rare Causes Of Inflammation Such As Inflammatory Breast Cancer
• Aspiration Of Abscess Collection
• Biopsy Lesions Suspicious For Malignancy

Management Of Breast Abscess If Present
• Aspiration With Antibiotic Cover Is A Safe First Line Approach Where Specialist Breast Clinics Or Ultrasound Guidance Are Available
• Incision And Drainage If Not Settling Or Aspiration Is Unavailable
• Other Management (As Per Mastitis)

Psychological Support
• Reassurance And Support
• Evaluation For Depression
• Referral To Australian Breastfeeding Association
Lactational Breast: Radio-Diagnostics
1. X-Ray mammography
2. Ultrasonography
3. Colored Dopplers
4. MRI (high resolution) [18]

Mammographic Changes During Lactation
American College Of Radiology (ACR) Classification

Lactating Breast: Prominent & Dilated Mammary Ducts Seem As Tubular Hypoechoic Structures, Widen As They Approach The Nipple. Some Times Fat Drops Within The Milk Secretions In The


Anti-Inflammatory Drugs & Antibiotics. D/D - Breast Abscess, Simple Breast Cyst (Well Defined Smooth Walls), Galactocele, Carcinoma Breast (Hypoechoic)


Color Doppler Image Of Breast Abscess
Power Doppler Image Of Breast Abscess

High-Resolution MRI In Detecting Subareolar Breast Abscess
High-Resolution MRI In Detecting Subareolar Breast Abscess

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III. Discussion

‘Lm’ & ‘Ba’ Management Modality
The Present MultiCentric Study, During Last 2-3 Decades, Observing /Dealing Large No. Cases Of Lactational Mastitis, Managed In Accordance To Following Described GuideLines, Were AlMost Completely Cured, WithOut Subsequent Breast Abscess Formation, In Same Or ContraLateral Breast.

In Colloboration With Honest Compliance Support Of Supportive Measures Including- Proper Feeding Methodology, Proper Hygiene Maintainence, Encouraging Complete Breast Feeding & Or Milk Expression (Manual-Self, Attendant Supported, Breast Pump Appliances), Hot & Cold Compressions, Psycho-Social Support Etc.

- management of blocked nipple areola complex(nac) due to:

  Poor Hygiene; Nipple Areolar Openings Blockage By Insipissated Milk, Emolient Creams, Lubricants e,g Ghee Etc., Were Meticulously Managed By-


  Supportive Suction Support By AvailAble Breast Pumps, Or 20 ML Syringe, With The Adaptor End Cut Off And The Plunger Put In Backwards For- Removal/Clearance NAC Blockage & Stretch Out The Nipple Just Before A Feed(Inverted, Flat Nipple).

  Remaining Partial & Or Complete Blocked Ductural Openings Are CareFULLy Probed Negotiated With IV Canula No.18/20 Synthetic Sheaths To A Distance Of 1-2 Cms & Taken Out, With/ Without 1-2 CC Normal Saline Instillation To Ensure Patency.

  The Manovure Has Encouraging Results For Blockage Removal, With Continuing Further Support By Complete Proper Breast Feeding Encouragement, & Or Milk Expression (Manual-Self, Attendant Supported, Breast Pump Appliances), Hot & Cold Compressions Etc. 1-3 Such Regular Sittings, By Clinician & Or Patient/ Responsible Attendant

Followed By Regular Follow Up For Further Need.

  Anti-Fungal Therapy- With Oral Fluconazole 150 / 200 Mgm Tab. 1 OD X 2 Days, Preferably On AlterNate Days Or As Needed Dose Duration To Mother, With / Without Supplementation With Available Local Anti-Fungal Preparations Application To Mother & Baby, Almost Complete Infection Control Is Usually Achieved. Sores, Fissures, NAC/Other Inflammatory Changes Are Usually Simultaneously Managed With Described Medical & Supportive Measures. Inverted, Flat, Large And Long Nipples, Jaundice Other illness, Abnormalities, HIV Infections & Other Co- Morbidities, Need Specific ManageMent.

  Medical Therapy: Appropriate Anti-Microbial + An-Aerob Therapy, Intensive Analgesic Anti-Inflammatory Medications With Needed Antacids Cover, B-Complex:Nutritional Supplementation, In Adequate Dosage & Duration 3-5-7 Days (Caution Use Of Safe Medications In Regards To Feeding Mother).


  Cabergoline Tablets(0.5 Mgm)- Total Dose=1 Mgm(Two 0.5 MgmTablets).


  Mixogen Tablets- (1) Tab. BD For 3-5-7 Days. In View Of Reported Exhaustive List Of Side-Effects, Drug InterActions, Contra-Indications, The Medications Used For Milk Suppression Need Cautious Administration & Monitored Dose Titration For Desired Effects, Especially In Existing Co-Morbid Conditions CircumStances.

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Low Milk Supply Regimes & Or Milk Suppression Therapy: Administration Needed / Demanded Sometimes To Achieve Better Disease Control, Avoiding Complications Like Milk Fistula, Residual Lumps Persistence / ForMation Etc. [19] [20] [21] [22] [23] [24] [25]

IV. Inferences
By Early Recognition & Proper Management Of LM’s, Large Percentage Of Cases (50-75%), Can Be Safely Resolved, WithOut Conversion To Subsequent BAs Of Varying Site, Size, Severity & Durations, To Be Managed By Different Techniques, In Consideration Of BCT-BCS For Comparative Result Outcomes In Regards To Morpho-Physiology Aspects, Long / Short Term Morbidity Safety Profiles, Tumour/Malignancy Conversion & Others.

ReAffirming That Lack Of Aetio-Pathogenicity Based Timely Management Of Breast Engorgement Due To Frequent Pressure On One Part Of The Breast From Fingers Or Tight Clothing, And Trauma.

NAC Infection, Inflammation & Blockage Of Varying Severity & Extent Leading To Milk Stasis, The Essential Aetio-Pathological Component Of Mastitis (Lactational) & Consequent Non-Infective Inflammation With Persistent Milk Stasis & Supervening Infection, Especially In Uncontrolled NAC Pathologies Become Infective Mastitis & Subsequently Breast Abscess.

V. Conclusion

The Present Study, Discussed ManageMent Modality Comprises- Preventive Aspects Of LM DevelopMent By AwareNess Regarding Hygeine, Proper Breast Feeding Technique Methodologies In Normal Mother Child & Special Circumstances, As Well.

Needed Supportive Measures Aimed At Indigenous Milk Expression By Meticulous Breast Massages, Hot /Cold Compressions, Breast Pumps, Psycho-Sociological Support.

Prevention Of Developed LM Cases Conversion To BAs. By-


Medical Therapy:

Appropriate Anti-Microbial + An-Aerob Medications, Intensive Analgesic Anti-Inflammatory Medications With Needed Antacids Cover, B-Complex: Nutritional Supplementation, In Adequate Dosage & Duration 3-5-7 Days.

AntiFungal Therapy

Needed Milk Suppression Therapy Regular Cautious Follow Up Of Case, For Desired NeedFull.
Large No. Of Lactational Mastitis Cases Of Differing Duration & Severity, With /Without Well Formed Lumps / Galactoceles, Are Successfully Managed.
**ManageMent Of BA Cases Of Varying Site, Size, Severity & Durations By Appropriate Different Techniques Including:**

- Clinically Evaluated & Or Mammography-USG/CT/Guided Needle Aspiration Of Pus Discharge, Sent For C&S, Cytology For Needed Subsequent Appropriate Anti-Microbial Therapy.


In Conjunction To, Classical Breast Abscess I & D Procedures.

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