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"Lactational Mastitis & Breast Abscess Management, An Introspection."

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Abstract: *WithOut Proper ManageMent For Aetio-Pathogenesis Factors, 'Lactational Mastitis'(LM) Is A Well Known Precursor & AccompaniMent Of Subsequent Varying Severity Of 'Breast Abscess' (BA) Formation. The Comparative Statistical Analysis Evaluations Study Suggest That, Proper Breast Feeding, Hygeine Mantainence, Prevalent Nipple Areola Complex (NAC) Lesions Control (Plugged Nipples Etc.), NAC Ductal Patency Maintainence / Restorage With, Supportive Measures (Meticulous Breast Massages, Hot/Cold Compressions, Indigenious Milk Expression Either Wise) & Appropriate Medical Therapy, Large No.Of LM Cases Of Differing Duration & Severity, With /Without Well Formed Lumps ?Galactoceles, Are Managed SuccessFully & DoNot Convert Into Varying Severity Of BAs, Needing Further ManageMent By- -Clinically Evaluated & Or MammoGraphy-USG / CTGuided Needle Aspiration Of Pus Discharge(C&S, Cytology) With Subsequent Appropriate Anti-Microbial Therapy & Needed Repeated Aspiration.*

Meticulously Selected Small Cosmetic Incisions-CircumAreolar, Radial, Sub-Mammary, Preferably With Gravitaional Support, Under Analgesia, LA / Supportive Anaesthesia, Methodically Performed Pus Evacuation, With Imperative Abscess Cavity Wound Lavage, (+-) Packing, Drainage Insertion, Regular Sterile C&Ds, With Continuous Intensive Supportive Measures & Medications, Report Comparative Much Better OverAll Success Rates, In Regards To "Breast Conservation Therapy- Breast Conservation Surgery"(BCT-BCS) Perspectives, In Conjunction To, -Classical Breast Abscess I & D Procedures.

Low Milk Supply Regimes & Or Milk SuppressionTherapy Administration Is Needed / Demanded SomeTimes, To Achieve Better Disease Control, Avoiding Complications Like Milk Fistula, Residual Lumps Persistence / ForMation Etc.

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

Keywords- LM & BA Occurrence & Convertibility 1) Nipple Areola Complex Ductal Patency 2)Proper ManageMent Preventive Aspects 3) Morpho-Physiological Aspects Of OverAll Result OutCome 4) BCT, BCSPerspectives 5)

I. Introduction

During Lactation & Breast Feeding, One Of The Commonest Clinical Presentation '**Lactational astitis'(LM)**, Is A Well Known Precursor & AccomaniMent Of Subsequent Varying Severity **'Breast Abscess'(BA)** Formation , Due To Lack Of Proper ManageMent, In Regards To Aetio-Pathogenesis Factors.

LM & BA, Retains The Commonest Clinical Presentation Status, During First 3-6 Months Of Delivery, Occuring 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-
- **Pueperal 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.

Incidence Mastitis Is Quite Common Among Breastfeeding Women. The WHO Estimates That Although Incidences Vary Between 2.6% And 33%, The Global Prevalence Is ≈ 10% Of Breastfeeding Women. Most Mothers Who Develop Mastitis Usually Do So Within The First Few Weeks After Delivery. Most Breast Infections Occur Within The First Or Second Month After Delivery Or At The Time Of Weaning.

However, In Rare Cases It Affects Women Who Are **Not Breastfeeding & Rarely In Men. Inflammatory Breast Cancer**, As Has Symptoms Very Similar To **Mastitis, Needs Careful Differentiation**. **Keratinizing Squamous Metaplasia** Of **Lactiferous Ducts** Leads To Pathogenesis Of **Non-Puerperal Subareolar Abscess. Aetio-Pathogenesis- Lactational Mastitis Often Occurs In Breastfeeding Problems Scenarios**, Typically Resulting In **Prolonged Engorgement Or Poor Drainage**.Mastitis Is Usually The **Result Of A Blocked Milk Duct** That Hasn't Cleared. Some Of The Milk Stagnant Behind The Blocked Duct **Can Force Into Nearby Breast Tissue**, Causing The Tissue To Become Inflamed.The Inflammation Is Called **Mastitis ('Milk Fever')**. **Infection May Or May Not Be Present.**

Milk Stasis, Thus Forms The **Basis For Subsequent Pathologies**.

- 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 Suckling 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**.

- ❖ **Weaning- Breast Engorgement Or Mastitis Occur Frequently After Weaning**. **Pregnancy/Lactation Related Hormones Usually Return To Normal Levels Shortly After Weaning.**

But For Some Women It Can Take Several Months And There Is An **Increased Risk Of Rebound Lactation And Mastitis** Before Hormone Levels Settle.

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 **Parlodel (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** Following Incomplete **Inhibition Of Milk Secretion AndHyperprolactinemia**.
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 Li 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.

Women With Diabetes, Chronic Illness, AIDS, Or An Impaired Immune System May Be More Susceptible To The Development Of Mastitis.

Microbiology- Infectious Pathogens Commonly Associated With Mastitis Are- Staphylococcus Aureus, Methicillin Resistance Strains, Streptococcus Spp., S. Epidermidis. Gram-Negative Bacilli Such As Escherichia Coli. Salmonella Spp., Mycobacteria, Candida Albicans, And Cryptococcus(Rare). While, Recurrent BAs, Report Higher Incidence Of Mixed Flora, Including Anaerobic Organisms.

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.

Recent Researches Suggests That Infectious Pathogens Play A Much Smaller Role In The Pathogenesis Than Was Commonly Assumed Only A Few Years Ago. Most Detected Pathogens Are Very Common Species That Are Natural Part Of The Breast Fauna And Simple Detection Of Their Presence Is Not Sufficient To Prove A Causative Role. Furthermore There Are Indications That Treatment With Antibiotics May Have Minimal Impact, And Over-All There Is Insufficient Evidence To Confirm Or Refute The Effectiveness Of Antibiotic Therapy For Treating Lactational Mastitis. [3] [4] [5] [6] [7]

❖ 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:

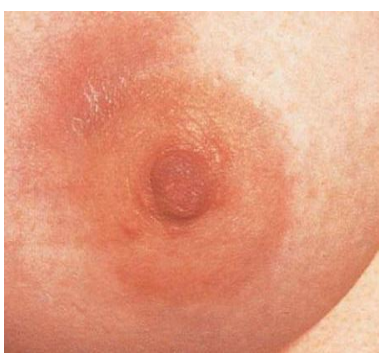
- Breast Tenderness Or Warmth To The Touch, General Malaise Or Feeling ill
- Swelling Of The Breast Pain Or A Burning Sensation Continuously Or While Breast-Feeding Skin Redness,Often In A Wedge-Shaped Pattern
- Fever Of 101 F (38.3 C) Or Greater, The Affected Breast Can Then Start To Appear Lumpy And Red.

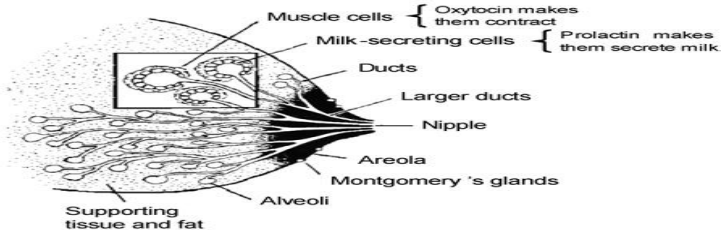
Some Women May Also Experience Flu-Like Symptoms Such As:

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 ASore Red Area On The Breast.

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



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

various conditions conditions related to lactation

- engorgement
- breast infection (mastitis or abscess) bacterial– usually s. areus
  – fungal infection (c. albicans; uncommon)
  – c. albicans nipple infection – viral (herpes; very rare)
- galactocoele (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 Phyllodestumour

• **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

Issues related to other breast infections 'primary breast abscess', 'breast cellulitis' & other skin disorders of the breast. [world health organization. Mastitis: causes and management (pdf version) (who/fch/cah/00.13).

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 Ml 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 ThePlunger 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.

- **Abnormalitie**S- Cleft Lip And/Or Palate *:Tongue-Tie: Muscular Weakness:*Down Syndrome Or Cerebral Palsy :*Congenital Heart Or Kidney Problems:*

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

- **Hiv Infected Woman**- Mastitis, Abscess And Nipple Fissure;Especially If The Nipple Is Bleeding Or Oozing Pus, The Risk Of HIV Transmission To The Infant, May Increase. Hence The Recommendation To Increase The Frequency And Duration Of Feeds Is Not Appropriate For A Mother Who Is HIV-Positive.Avoid Breastfeeding On The Affected Side While The Condition Persists.

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.
-

Supporting good feeding practices

If the infant is less than 6 months old:

- If the baby is growing well, point this out to the mother and praise her and the baby.
- Check breastfeeding position and attachment, and that the infant is suckling effectively.
- Check that the pattern of breastfeeding is optimal: feeding on demand day and night; letting the baby come off the breast by him- or herself; finishing the first breast and then offering the other one.
- Praise the mother's good practices, and encourage her to continue them.
- Explain about exclusive breastfeeding, remind the mother that she does not need to give anything else before the baby is 6 months old, and that feeding bottles are dangerous.
- Explain that this way of feeding the baby helps her to make plenty of milk.
- Explain about family planning methods and breastfeeding (see Session 8.4).
- At about 5 months of age, start to discuss complementary foods.
- Introduce complementary foods from 6 months (180 days) of age.

If the infant is more than 6 months old:

Praise the mother if the infant:

- is growing well, and is healthy
- is still breastfeeding.

Praise the mother or caretaker for the following good practices:

- if the infant has meals and snacks with sufficient frequency and quantity.
- if the quality of feeds is adequate, with appropriate variety of foods and adequate consistency.
- if she is assisting the baby to feed appropriately.
- if she is giving the child his or her own bowl.
- if she gives extra food to a child recovering from illness.

Remind the mother when to bring the child for immunization.

Remind the mother when to bring the child to a qualified health provider for signs of illness.

How to help a mother to position and attach her baby

- Help the mother to get into a comfortable and relaxed position, sitting or lying down.
- The helper should sit in a comfortable, convenient position.
- Explain to the mother how to hold her baby, according to the **four key points**:
  - with the head and body straight
  - facing the breast, and starting with his/her nose opposite the nipple
  - with his/her body close to her body
  - supporting the whole body.
- Show her how to support her breast:
  - with her fingers flat against her chest wall under her breast
  - with her thumb above the breast
  - her fingers should not be on the areola or near the nipple, because this can interfere with attachment.
- Explain or show the mother how to help her baby to attach by:
  - touching the baby's lips with her nipple
  - waiting until the baby's mouth is open wide
  - moving the baby quickly onto her breast
  - aiming her nipple up towards the roof of the baby's mouth
  - aiming his/her lower lip behind her nipple, so his/her chin touches the breast.
- Notice how the baby responds and ask her how the suckling feels.
- Look for signs of correct attachment. The four signs of good attachment are:
  - more of the areola is visible above the baby's top lip than below the lower lip
  - the baby's mouth is wide open
  - the baby's lower lip is curled outwards
  - the baby's chin is touching or almost touching the breast.
- If attachment is not good, or if the mother is uncomfortable, ask her to try again.
- Show her how to take the baby off the breast by slipping her little finger into the baby's mouth to release the suction.

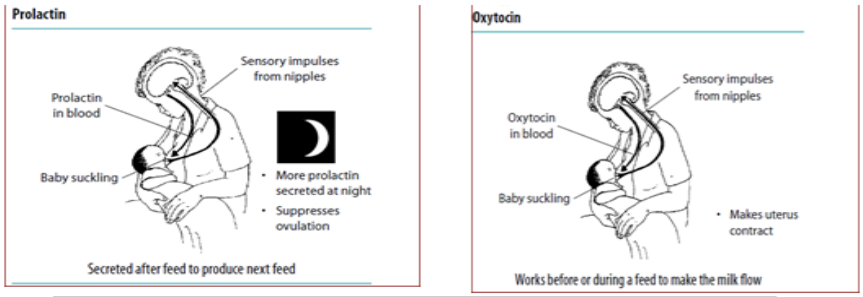
(1.) supporting good feeding practices
(2.) feeding: mother & child attachment

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.

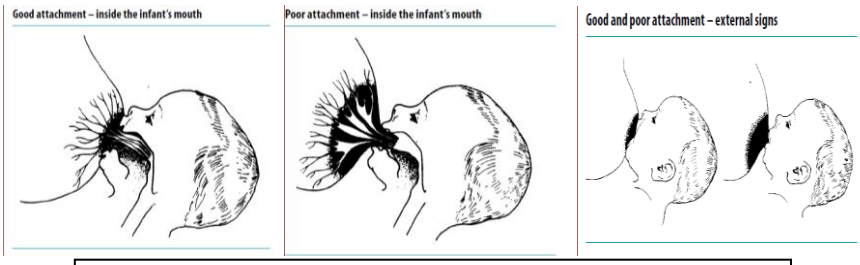
Check That Baby Is Getting The Milk - That Is, The **Let-Down Reflex** Is Working Soon After Child Begins To Suck. When Let-Down Happens, Mother Notices Tingling Feelings In Breasts, A Sudden Feeling Of Fullness Or Milk Leaking From Other Breast. Baby's Sucking Pattern Will Change And Child Will Start To Gulp Or Swallow More Often. **Make Sure Baby Is Attached Well**
And That Mother Is Relaxed And Comfortable **To Help The Let-Down Reflex Work**.
This Is Not The Time To Wean. More Than Anything Else,

Ways of helping the breast to 'empty' or drain more easily:

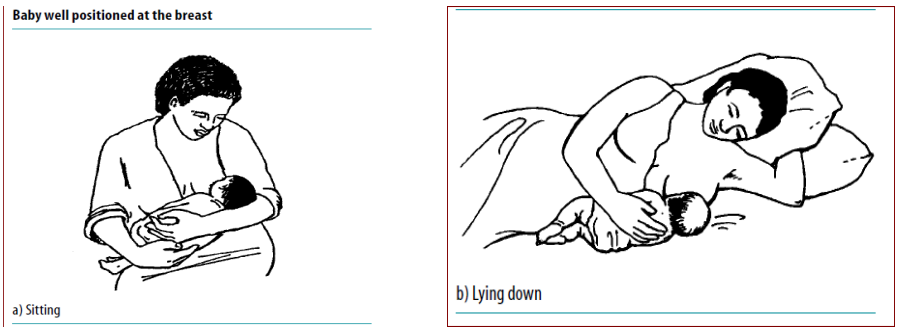
- Make Sure Bra Is Very Loose Or Take It Off.
- Relax While Feed To Help Milk Flow.
- Make A Special Effort To Relax Arms, Legs, Back, Shoulders And Neck.
- Breathe Deeply And Evenly.
- Listen To Soothing Music And Think About Baby To Help Start The Let-Down Reflex.
- **Change Feeding Positions** - Try 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.



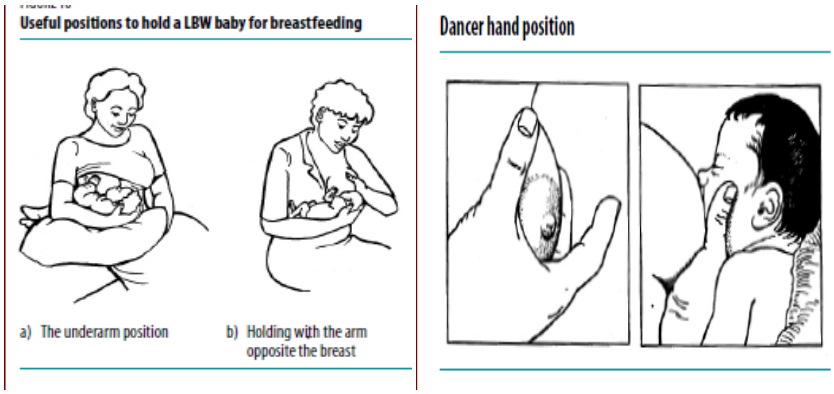
LACTATION:HORMONAL CONTROL



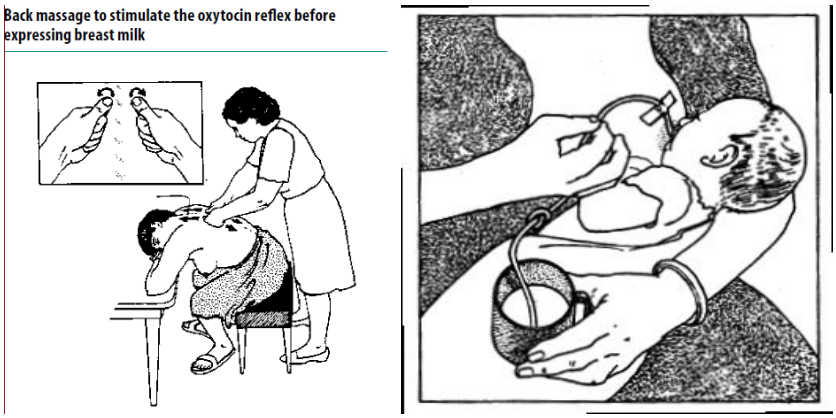
BREAST FEEDING: GOOD & POOR ATTACHMENT



BREAST FEEDING: MOTHER & CHILD POSTIONS



BREAST FEEDING: MOTHER & CHILD POSTIONS: SPECIAL CIRCUMSTANCES



MILK EXPRESSION & FEEDING: SPECIFIC CIRCUMSTANCES
Using Supplementary Suckling To Help A Mother To Relactate

Infant And Young Child Feeding:Model Chapter For Textbooksfor 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

Using **Cold Packs** On The Affected Breast Can Help Reduce Swelling And Relieve Pain. Use **Warmth** Only Sparingly And Just Before A Feed (For Up To 10 Minute) Can Help Trigger Let-Down To Help Clear The Blockage And May Relieve Pain.

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:

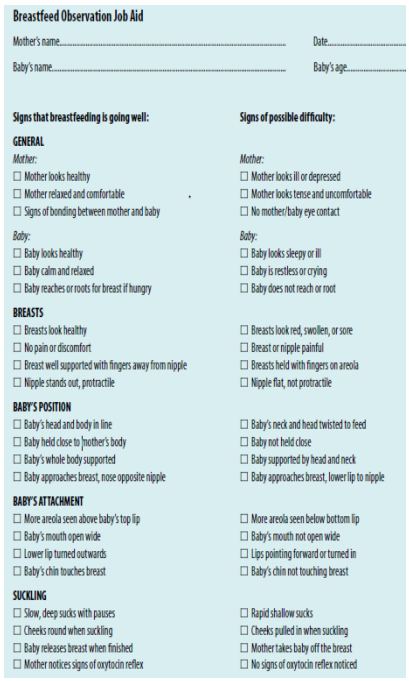
- Medical Adviser Consultation Should Be Seeked, If Above Measures Do Not Clear The Lump Within 12 Hours, Or If Mother Develop A Fever Or Feel Unwell.
- Early Treatment Means, Get Better Faster, Feeling Less Ill And At Less Risk Of A Breast Abscess.

[13] [14] [15] [16] [17]

How to express breast milk directly into a baby's mouth

Ask the mother to:

- Wash her hands
- Hold her baby skin-to skin, positioned as for a breastfeed, with the baby's mouth close to her nipple
- Express some drops of milk onto her nipple
- Wait until her baby is alert and opens the mouth widely
- Stimulate the baby if he or she appears sleepy
- Let the baby smell and lick the nipple and attempt to suck
- Let some breast milk fall into the baby's mouth
- Wait until the baby swallows before expressing more drops of breast milk
- When the baby has had enough, he or she will close the mouth and will take no more milk
- Ask the mother to repeat this every 1 to 2 hours if her baby is very small, or every 2 to 3 hours if her baby is bigger.



Breastfeed Observation Job Aid

Mother's name..... Date.....

Baby's name..... Baby's age.....

Signs that breastfeeding is going well:	Signs of possible difficulty:
GENERAL	
Mother:	*Mother:*
☐ Mother looks healthy	☐ Mother looks ill or depressed
☐ Mother relaxed and comfortable	☐ Mother looks tense and uncomfortable
☐ Signs of bonding between mother and baby	☐ No mother/baby eye contact
Baby:	*Baby:*
☐ Baby looks healthy	☐ Baby looks sleepy or ill
☐ Baby calm and relaxed	☐ Baby is restless or crying
☐ Baby reaches or roots for breast if hungry	☐ Baby does not reach or root
BREASTS	
☐ Breasts look healthy	☐ Breasts look red, swollen, or sore
☐ No pain or discomfort	☐ Breast or nipple painful
☐ Breast well supported with fingers away from nipple	☐ Breasts held with fingers on areola
☐ Nipple stands out, protractile	☐ Nipple flat, not protractile
BABY'S POSITION	
☐ Baby's head and body in line	☐ Baby's neck and head twisted to feed
☐ Baby held close to mother's body	☐ Baby not held close
☐ Baby's whole body supported	☐ Baby supported by head and neck
☐ Baby approaches breast, nose opposite nipple	☐ Baby approaches breast, lower lip to nipple
BABY'S ATTACHMENT	
☐ More areola seen above baby's top lip	☐ More areola seen below bottom lip
☐ Baby's mouth open wide	☐ Baby's mouth not open wide
☐ Lower lip turned outwards	☐ Lips pointing forward or turned in
☐ Baby's chin touches breast	☐ Baby's chin not touching breast
SUCKLING	
☐ Slow, deep sucks with pauses	☐ Rapid shallow sucks
☐ Cheeks round when suckling	☐ Cheeks pulled in when suckling
☐ Baby releases breast when finished	☐ Mother takes baby off the breast
☐ Mother notices signs of oxytocin reflex	☐ No signs of oxytocin reflex noticed

Ebm- Expressed Breast Milk Breast Feeding Observation Format

- Continued Breastfeeding Is Encouraged For Women With Mastitis And/Or Breast Abscess. Emptying Of The Breast Can Be Helped By The Use Of A Breast Pump.
- 20 Ml Syringe, With The Adaptor End Cut Off And The Plunger Put In ckwards To- -Remove/Clear NAC Blockage -Stretch Out The Nipple Just Before A Feed(Inverted, Flat Nipple)

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)
- Anthelminthics, 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,

Particularly Those Not On Antiretroviral Drugs During Pregnancy, Avoid Breastfeeding To Reduce The Risk Of Passing On The Virus To Their Infants. Some Mothers Do Not Breastfeed On Personal Or Social Grounds.
Without An Infant Suckling, Milk Production (Lactation) Eventually Stops Of Its Own Accord.
In The Meantime, Women Can Experience Breast Engorgement, Leakage Of Milk, Discomfort And Pain. Clinicians May Provide Treatment To Suppress Lactation And Reduce These Symptoms. Binding The Breasts Or Wearing A Tight Brassiere, Applying An Infra-Red Lamp, Fluid And Diet Restrictions, External Application Of Jasmine Flower And Ice Packs Are Tried Non-Drug Approaches. Drug Treatments Include Oestrogensandbromocriptine Which Lowers Prolactin Levels. However, Increased Risks Of Thromboembolism, Cerebral Accident And Myocardial Infarction Have Been Reported With Their Use.
The Evidence To Support Treatments For Preventing Lactation Is Limited.

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

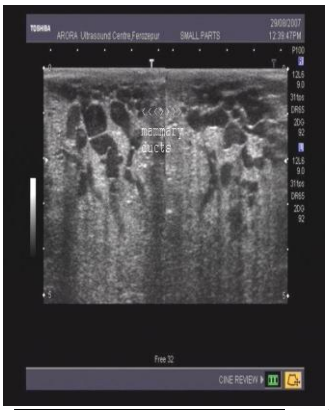
Management Of Breast Abscess If Present
• Aspiration With Antibiotic Cover Is A Safe First Line Approach Where Specialist Breast Clinics Or Ultrasound Guidance Are Available
• Incision And Drainage If Not Settling Or Aspiration Is Unavailable
• Other Management (As Per Mastitis)

Psychological Support
• Reassurance And Support
• Evaluation For Depression
• Referral To Australian Breastfeeding Association

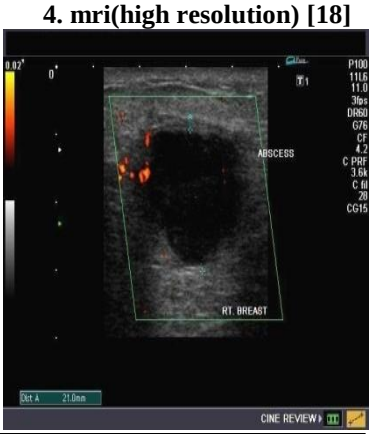
Lactational Breast:Radio-Diagnostics

1. X-Raymammography 2. Ultrasonography 3. Colored Dopplers'

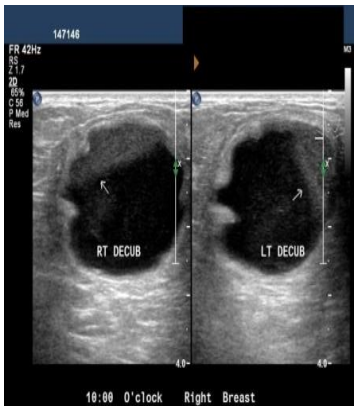
4. mri(high resolution) [18]



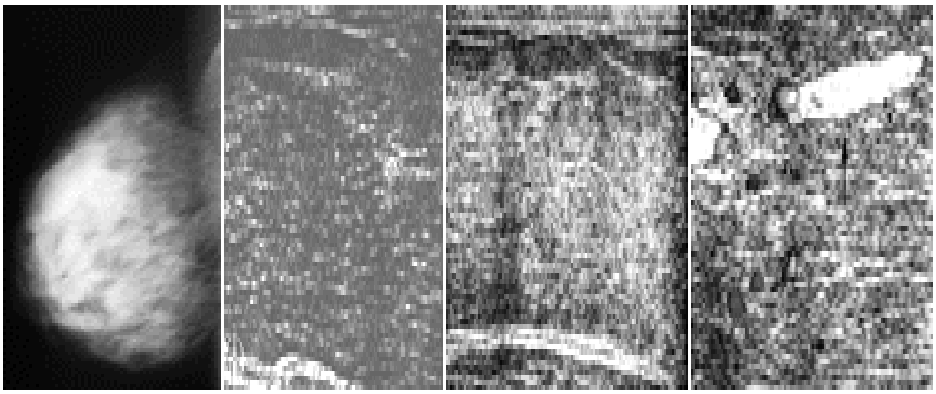
Lactating Breast: Prominent & Dilated MammaryDucts Seen As Tubular Hypoechoic Structures,Widen As They Approach The Nipple. Some Times Fat Drops Within The Milk Secretions In The



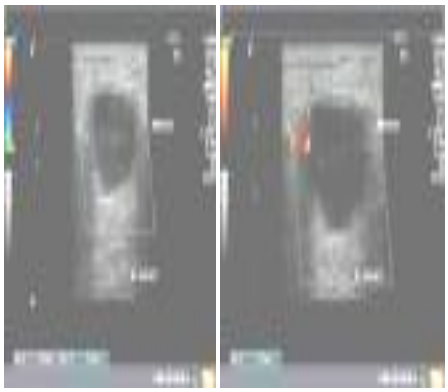
USG Right Breast:Rounded,AnechoicLesion With Posterior Acoustic Enhancement. Size-2 Cms. Irregular.Well Defined Walls. No Internal Septae Are Present. Color Doppler Images Suggest Some Increase In Vascularity Along The Rim Of The Lesion. ?Anti-InflammatoryDrugs &Antibiotics. D/D-Breast Abscess, Simple BreastCyst(WellDefined SmoothWalls), Galactocele, CarcinomaBreast(Hypoechoic)



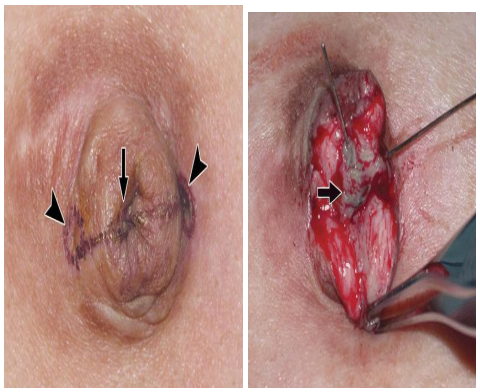
Mildly Echogenic Debris Within The Ducts)Are Not Visualized. Galactocele With A Fat-Fluid Level S/O Galactocele. The Echogenic Material Is Seen To Move With Change In Posture (Arrowed).



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



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



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

American Journal Of Radiology

III. Discussion

'Lm' & 'Ba' Management Modality

The Present MultiCentric Study, During Last 2-3 Decades, Observing /Dealing Large No. Cases Of **Lactational Mastititis**, 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 Hygeine 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 Hygeine; Nipple Areolar Openings Blockage By Inspissated Milk, Emolient Creams, Lubricants e,g Ghee Etc.,Were Meticulously Managed By-

NAC Patency SecureMent- In Compliant Patient, Preferably Under Properly Timed Analgesia- Oral Etoricoxib(90) / Injectible Diclofenac, (+.) Sedation- Inj.Phenargan Alone Or With I/M Pentazocine, (+.) Local Anaesthesia- 2% Xylocaine CircumAreolar Infiltration, **NAC Cleaning** With Sufficient Amount Of Savlon, Betadine & Essentially An **Organic Solvent-Spirit / Ether** As Available, Followed By Firm Yet Gentle Wiping With Dry Gauge, **Breast Compression** From Behind Forwards (Posterio-Anterior) & Then **NAC Squeezing** With Thumb & Index Finger By Patient HerSelf & Or Attendant / Clinician, Demonstrates **Nipple Blockage Removal** Successfully, As Evident By, Oozing Milk Drops & Or Milk Streams From Different Openings.

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 Ductular 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 (**Cautious Use Of Safe Medications In Regards To Feeding Mother**).

Milk Suppression- Low Milk Production & Or Complete Cessation, Is Differently Needed, For OverAll Better Result OutCome ManageMent Of LM, BA Cases, Especially With Subsequent Complications. With No Recommended Medication AvailAble For Lactation Suppression. Along With Honest Supportive WithDrawl/ Restriction/ Regulation Of Mother & Child Emotional Factors & Other Social Aspects, Following Cautiously Used Medications, Can Safely Achieve Desired Milk Suppression- **Cabergoline Tablets(0.5 Mgm)**- Total Dose≈1 Mgm(Two 0.5 MgmTablets).

First Dose Given On Day (1), Is Repeated Either On (2^{nd}) Or Third Day. **Mixogen Injection**- A CombinationOf Long & Short Acting Esestrogen & Androgen Esters. 1 Ml. Deep IntraMuscular Injection Is Given To Be Repeated After 3-7 Days, As Needed.

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.

■ Late Or Severe LM Cases Not Controlled By Discussed ManageMent Modality, Or Well Formed Large Breast Abscess Presentations Of Varying Sizes, Severity & Duration, UL/BL, Are Managed By- Clinically Evaluated & Or MammoGraphy-USG / CT Guided No.16/18 Wide Bore Needle Aspiration Of Sero-Sanguinous Purulent Discharge Maximally & Sending For-Culture-Senstivity & ? Cytology For Malignant Cells. Subsequent 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 (? Culture-Senstivity Report) & Regular FUC Of Case.
Usually Repeat Aspiration Needed At Least Twice, In Most Of Cases After 3-5 Days.

Meticulously Selected Small Cosmetic Incisions- CircumAreolar, Radial, Sub-Mammary, Preferably With Gravitaional Support, Under Analgesia, LA / Supportive Anaesthesia, Methodically Performed Drainage, With Imperative Abscess Cavity Wound Lavage By Technique MethodoLogy Comprising -H_2O_2,Normal Saline Betadine Instillation Using Sterile Syringe, Followed By Sterile C&Ds Regularly,
With Continuous Intensive Supportive Measures, Report Comparative Much Better OverAll Success Rates,In Regards To

"Breast Conservation Therapy- Breast Conservation Surgery"(BCT-BCS) Perspectives,
In Conjunction To, **Classical Breast Abscess I & D Procedures.**

Low Milk Supply Regimes & Or Milk SuppressionTherapy 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 LMs, 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-Pathogenecity 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 Severeity & 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

LM & BA, Are Amongst Common Clinical Entities, With Vivid Presentations, In Day To Day,
Clinical Practice Of Differing Stratum.

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-
Supportive Measures: Aimed At 'Milk Stagnation' Prevention By Cautious
Proper Hygeine Mantainence Of NAC-Achieved By Regular Cleaning, Blockage Removal, Ensuring Ductular Patency-Free Flow Of Milk, Encouraging Breast Feeding & Or Milk Expression(Manual/Assisted) Supported By Meticulous Breast Massages, Hot /Cold Compressions Etc.

- **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 NeedFul.
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/CTGuided Needle Aspiration Of Pus Discharge,Sent For C&S,Cytology For Needed Subsequent Appropriate Anti-Microbial Therapy.
- Small Meticulously Selected Cosmetic CircumAreolar, SubMammary, Radial Surgical Incisions, Preferably With Gravitaional Support,Under Analgesia, LA / Supportive Anaesthesia, Methodically Performed Pus Drainage, With/WithOut Drainage Insertion But Imperative Abscess Cavity Wound Lavage By Technique MethodoLogy Comprising -H_2O_2,Normal Saline Betadine Instillation Using Sterile Syringe, Followed By Sterile C&Ds Regularly, With Continuous Intensive Supportive Measures, Report Comparative Much Better OverAll Success Rates, In Regards To Morpho-Physiology Aspects, Long / Short Term MorBidity Safety Profiles – Effected Breast Size, Architecture Compared To ContraLateral Normal Breast, Subsequent Pregnancy Lactation & Breast Feeding, Tumour/Malignancy Conversion & Others**"Breast Conservation Therapy- Breast Conservation Surgery"(BCT-BCS) Perspectives**, In Conjunction To, **Classical Breast Abscess I & D Procedures.**

Acknowledgements

With Special Gratitude And Thanks, For All The "Study Material Resources Consulted, Every Involved Personnel, During Last About (3) Decades MultiCentric Observations.

& Dr.(Mrs.)Poonam Sahni, M.B.B.S, DGO(Gold-Medalist) For Her Constant Participation.

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