

Nipple thrush /Oral thrush

Lactation clinic protocol: Nipple thrush / oral thrush (rev 1999)

Purpose: Definition of treatment of (Candida albicans/Monilia) in maternal nipple thrush and oral thrush in the infant.

EM Code: As applicable.

Related Diagnostic Codes: As applicable.
Nipple Thrush 112.9
Thrush/Newborn 771.7

Fee Determination: As applicable.

POLICY:

1. Diagnoses of nipple thrush infection in the mother shall require treatment of maternal nipples and the infant's oral surfaces to prevent persistent sore nipples and/or systemic monilial infection in the mother (Riordan and Auerbach 173-174,319,488-492; Lawrence and Lawrence 610-611).
2. Diagnosed oral thrush infection in the infant shall require treatment of the mother's nipples and the infant's oral surfaces to prevent persistent sore nipples and/or systemic yeast infection.

GENERAL INFORMATION:

1. See sore nipple protocol
2. Maternal sore nipples due to thrush infection if:
 - a. Nipples are bright pink, itch, burn, have multiple cracks, blisters and/or a fine red, raised rash is present on nipples, areola and/or breasts;
 - b. Oral thrush and/or diaper area monilia rash are present in the infant.
3. Infant oral thrush infection if:
 - a. Infant's oral surfaces (portions of the tongue) are coated with a raised, white substance that does not wipe away.
 - b. Nipple thrush is present in the mother.
4. Although thrush is an opportunistic infection, reinfection and cross infection is frequently seen. All sources of possible cross infection should be treated aggressively (Riordan and Auerbach 489, Lawrence and Lawrence 610-611; Huggins 59-60). The spread of most cases involves repeated contact with Candida infected surfaces or objects (Amir, et al 3).
5. Thrush outbreaks must be treated thoroughly. Anecdotal reports of resistant strains. Resistance has probably developed through incomplete treatment of yeast with over the counter and prescription preparations.
6. Intraductal yeast is extremely painful and cannot be treated by the application of external treatments alone. Current recommendations for Intraductal yeast

- include topical and oral antifungal medication (see Suggested Medication Protocol below)
7. Persistent nipple thrush that does not respond to a 28-day treatment will be referred to a dermatologist for evaluation and further treatment (Huggins and Billon 155-160).

PROCEDURE:

I. HISTORY (Questions To Ask The Mother)

- A. Complete labor, birth, neonatal and postpartum history.
- B. RATIONALE: Antibiotic use or vaginal yeast infection at the time of delivery are probable causes of neonatal thrush infection (Wong and Whaley 220).
- C. Age of baby.
- D. RATIONALE: Thrush is commonly seen after three weeks of age. However earlier infection is seen if one or more predisposing factors are present. (see below)
- E. How often fed, how long at each breast, how long do feedings take.
- F. Number of feeds during the day.
- G. Number of feeds at night.
RATIONALE: The mother may be limiting feeding due to sore nipples. Assess for adequate feeding patterns.
- H. Any pacifiers. Supplements, why, what, how often, how much, type of nipple used.
RATIONALE: The use of bottles can contribute to latch-on problems and can aggravate and/or cause sore nipples. Nipples and/or pacifiers, may be a source of reinfection.
- I. Number and type of wet diapers in the last 24 hours. Number and type of stools in the last 24 hours.
RATIONALE: Assess for normal output patterns.
- J. Type and duration of nipple pain. Pain in relation to feedings: latch-on, half-way, throughout feeding, after feedings, between feedings, all the time.
RATIONALE: Pain following or between feedings or pain deep in the breast is common in nipple thrush. Mother often complains of burning, stinging, hot poker, shooting and/or stabbing pain. Itchy pain and painful Milk Ejection Reflex (let-down) occurs frequently in intraductal yeast. Burning pain lasting for an hour or more following feedings is common in nipple thrush.
- K. History of engorgement.
RATIONALE: Sore nipples usually follow engorgement. When the breast becomes firm, the areola may be too hard for the infant to latch-on properly resulting in pinching or abrasion of the nipple.
- L. Any marks on the nipple or areola: cracks, bruises, scabs, bleeding.
RATIONALE: Nipples infected with thrush may be sore or very painful without outward signs of damage. Severe cracks or swelling of the nipple and/or areola have been observed in mother's with nipple thrush. Nipple and areola can be bright pink and inflamed and appear shiny. The

nipple tip may appear blanched white

M. Nipples itch or burn.

RATIONALE: Itching, burning and drying of the nipple and/or areola are indicative of a thrush infection.

N. Predisposing factors:

1. Antibiotic or steroid treatment recently, mother or baby.
2. History maternal vaginal yeast infections, current or recurrent.
3. Recent injury to baby's mouth or mother's nipple(s).
4. Recent infant or maternal bacterial or viral illness.
5. Diabetes, Anemia, hormonal birth control, Vitamin and Mineral deficiencies, Obesity, sweating, HIV, or sexual partner is diabetic or using steroids.
6. Excessive Alcohol use or street drugs
7. Dietary Factors:
 - a. Excessive amounts of refined carbohydrates
 - b. Dairy Products
 - c. Artificial sweeteners
 - d. Mom bakes home made bread (Baker's Yeast) or home made beer and wine.
8. Hygiene
 - a. Wet or damp clothing: bra pads, diapers, bathing suits, exercise wear.
 - b. Tight jeans, pantyhose, synthetic underwear.
 - c. Poor hand washing, poor toilet hygiene.
 - d. Douching, feminine hygiene products.
 - e. Overuse of antibacterial soaps.
 - f. Sharing of toys, pacifiers, bottles that have come in contact with the infant's mouth. (At home and in day-care settings.)
 - g. Corn starch based baby or body powders.

RATIONALE: Possible causes of yeast overgrowth and thrush infection.
(Amir, et al 3-5)

II. Treatment Protocols for Thrush (Candida)

A. Medication Protocols

1. Suggested medication protocol for oral (Candida) thrush:
2. Baby: Rx to be obtained from the medical provider for: Nystatin oral suspension 1,000,000 units per ml., 60 ml bottle 1 or 2 ml. orally, applied to buccal surfaces every six hours.
3. Suggested medication protocol for cutaneous (Candida) thrush
 - a. Over the counter vaginal yeast medications may be used by the mother. Monistat (miconazole), Gynelotromin (clotrimazole , Femstat (butoconazol nitrate)OR
 - b. 2. Rx to be obtained from the medical provider for: Nystatin cream 30 gram tube, Apply sparingly to nipples and areola after every feeding.

- c. If nystatin resistant ketoconazol topical cream may be needed.
- d. Topical application of 1% Gentian Violet solution for mother and infant can be used alone or with topical creams. Mothers report that 1% Gentian Violet provides instant pain relief. Warn mother that Gentian Violet permanently stains everything it touches purple and can rub off on clothing. Nipple and oral gentian violet staining does wear off. However, tattooing of nipple and areola have occasionally been reported when mother has deep cracks.
 - 1. Paint maternal nipples and areola using a clean cotton tipped swab dipped in 1% Gentian Violet solution once a day for 3 to 5 days. Allow alcohol to evaporate from swab for a few seconds before applying. Solution may sting initially because of alcohol.
 - 2. Paint infant oral surfaces using a clean cotton tipped swab dipped in 1% Gentian Violet solution once a day for 3 to 5 days.
 - 3. Currently 1% Gentian Violet solution commonly available in the United States is in a base of 10% alcohol to increase shelf life and can be damaging to tissues if misused. Some compounding pharmacies can make a water based solution.
 - 4. Warn mother that label states harmful if ingested or call poison control if ingested due to alcohol not Gentian Violet.
 - 5. Instruct mother to use a new bottle of Gentian Violet for this thrush outbreak. The bottle should be thrown away after treatment is completed.
- 4. **Suggested medication protocol for maternal Intraductal Candidiasis:** Rx to be obtained from the medical provider for:
 - a. Diflucan (Fluconazole) Single dose therapy is not effective in most cases. Initial 400 mg. loading dose followed by 200 mg orally every day for 28 days. Safety for use in lactation has not been established. This medication has been used in premature infants, so it is probably safe for use in lactation. No complications from exposure through breastmilk have been reported (Hale 268)
 - b. 2. Nizoral (Ketoconazol) 200 mg tablets #10, One orally every day, with a meal, for 10 days. (Safety for use in lactation has not been established.) **Please see addendum at end of document.**
- B. Other areas of Candida overgrowth (e.g.: diaper area, vaginal area, sexual partner) should be treated appropriately.
- C. In cases where the nipples are severely damaged and/ or bleeding, temporary cessation (24 TO 72 hours) of nursing may be required.
 - 1. The mother will be advised to use a commercial, electric breastpump to maintain supply.
 - 2. Tully and Overfield state that a mother should not save expressed milk if she has nipple thrush due to possible reinfection. Monilia is both heat and cold resistant. Freezing may not kill the organism. (27) Milk expressed during the outbreak should be during the outbreak while undergoing treatment. Always exercise caution when advising a mother to throw

- away precious breastmilk.
3. All feeding / pumping equipment should be treated daily after each use and replaced after the first 10 days of treatment.

III. INSTRUCTIONS TO MOTHER

Usual recommendations for self care:

1. Bathe nipples and areola with a weak vinegar solution after each nursing (Vinegar solution is: 1 tablespoon white vinegar to 1 cup of water).
2. Make a clean solution every day. The solution can be applied by moistening a cotton ball and squeezing the solution over the nipple and areola. Do not touch the breast with the cotton ball. Use a fresh cotton ball each time and for each breast.
3. Medications if checked
 1. Apply _____ cream to nipples and areola as directed for a minimum of 14 days. Continue to use the cream for a full 14 days even if nipples are no longer tender.
 2. Use the oral (liquid) medication if prescribed for the baby. Place half the dose inside the baby's cheek. Coat the baby's oral surfaces with the medication by using a cotton swab, clean finger tip, or gauze square. Allow baby to rest briefly before giving the remainder of the dose. Apply the second half of the dose in the opposite cheek and coat the surfaces again. Use the medication for a minimum of 14 days.
 3. Paint nipples, areola, and baby's mouth with 1% Gentian Violet solution once a day for ___ days. Allow alcohol to evaporate from swab for a few seconds before applying. Solution may sting initially because of alcohol. Use a clean cotton swab for each breast and baby's mouth (3 swabs). Be careful it stains everything.
4. Contact the pediatric medical provider if the baby refuses to nurse or swallow and/or if a rash appears in the baby's diaper area.
5. Use a clean towel for each bath or shower. Wash all towels in hot water and dry on high heat after each use. Do not allow damp towels, wash cloths, exercise clothing, or bathing suits to hang in bathrooms.
6. Wear clean, washed, cotton bra and cotton underwear daily.
7. Use breast shells where indicated to keep bra from sticking to nipples and assist with air circulation. Boil shells for 20 minutes every day. Replace the shells, if needed, after 10 days of the treatment.
8. Use disposable bra pads. Avoid bra pads with occlusive, plastic liners. Washable bra pads; after laundering, boil in water with a little vinegar added for 20 minutes at a full boil.
9. Keep nipples and areola dry.
10. Expose nipples and areola to air as much as possible.
11. Boil infant's nipples and/or pacifiers in water with a little vinegar added for 20 minutes once a day. Replace all nipples after 10 days of treatment. Clean baby's toys with a spray of vinegar and water solution to prevent reinfection.
12. If baby is having problems with rashes, use 1/4 cup white vinegar in the final

- rinse instead of fabric softener.
13. Wash hands frequently. Switch to regular soaps. Avoid the use of antibacterial soaps. Use disposable paper towel to dry your hands. Keep nails clean and short.
 14. Use bleach based cleaners (10 % bleach solution) on household surfaces especially in the bathroom.
 15. Yeast may cause cravings for sugary foods, cheese, bread or alcohol. Avoid adding these items to maternal diet until treatment is completed.
 16. Add live culture, unsweetened yogurt to diet once or twice a day. Or Acidophilus capsules (live or viable units) twice daily.
 17. If using a breastpump, boil all parts that come in contact with breasts and milk in water with a little vinegar added for 20 minutes at a full boil after each use.
 18. Milk expressed during a thrush outbreak should be used while under treatment.
 19. Yeast burn up stores of vitamin C and zinc. Add these in the minimum daily requirement amount on the supplement label.
 20. Contact the medical provider immediately if symptoms worsen.

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Addendum--see Hale's information on intraductal thrush.

I am no longer prescribing diflucan Fluconazole or Nizoral Ketoconazol for intraductal yeast,