

**Children's Hospital and Health System, Inc.**  
**Patient Care Treatment Guideline**  
**CW Urgent Care**

**SUBJECT: Umbilical Granuloma**

**Purpose:** To evaluate and initiate treatment of umbilical granulomas.

**Definition:** Umbilical granulomas are the most common cause of an umbilical anomaly. They are not present at birth and first develop during the first few weeks of life after cord separation (cord separation usually occurs one week after birth).

**Etiology:** Umbilical granulomas develop when granulation tissue at the base of the umbilicus persists and overgrows. It occurs due to incomplete re-epithelialization over the fibromuscular ring of the umbilicus after cord separation. The area contains no nerves and therefore does not have sensation.

**Differential Diagnosis:** The vast majority of umbilical anomalies in neonates are umbilical granulomas, which appear as moist, pink granulation tissue, and umbilical hernias, which present as smooth, reducible masses that are covered with normal appearing skin. Infrequent causes of umbilical anomalies include:

- Umbilical polyp
  - Umbilical polyps are composed of intestinal epithelium or uroepithelium. They are much less common than umbilical granulomas, and tend to be larger, firm, and do not respond to silver nitrate therapy. They require surgical excision.
- Patent omphalomesenteric duct
  - Persistent connection to ileum that fails to involute during development, leads to drainage from umbilicus, infants appear to have a stoma in the umbilicus after cord separation. These infants typically have persistent umbilical drainage rather than a true mass or other anomaly.
- Patent urachus
  - Persistent connection to bladder that fails to involute during development, presents with urinary drainage from umbilicus. These infants typically have persistent umbilical drainage rather than a true mass or other anomaly.
- Ectopic tissue (very rare—pancreatic or liver)

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## Guideline

### Objective Data/Physical Exam

- Soft, wet, pink to red in color, pedunculated anomaly that is “mushroom-like or “cherry-like” in appearance
- Size: 3-10 mm in diameter or length
- May secrete a serous or serosanguinous drainage

### Diagnostic Studies - *none indicated*

### Treatment

- Topical 75% Silver Nitrate is the mainstay of treatment for umbilical granulomas
  - Wear gloves to protect skin from contact with silver nitrate when applying.
  - Apply petroleum jelly onto the healthy skin surrounding the granuloma to prevent chemical burn from the silver nitrate.
  - The silver nitrate stick is activated by contact with moisture. Roll the tip of the stick gently over the moist granulation tissue, avoid applying to healthy skin. One stick is typically enough for each application. The treated tissue may turn gray or white in color or shrink slightly with treatment.
  - If silver nitrate comes in contact with healthy skin, immediately apply saline solution (which will deactivate the silver nitrate), and then rinse with water.
  - Silver nitrate can stain surrounding skin and clothing, use care during application and communicate this to family.
  - This procedure may need to be repeated once to twice weekly, generally only a few applications are needed for successful treatment.
  - Used silver nitrate sticks must be disposed of in proper waste bin.
- Topical clobetasol and application of salt under occlusion have been described as alternative methods of treatment of umbilical granuloma in case series, but are not well studied and should not be routinely recommended at this time.
- For cases that fail to respond to topical silver nitrate, PCP may consider ligation vs referral to pediatric surgery for excision. Lesions that require excision are typically sent for histopathology to evaluate for presence of umbilical polyp.

### Education of Patient/Family

- Keep treated area dry/avoid bathing infant for 24 hours after applying silver nitrate.
- Monitor size and appearance of umbilical granuloma daily.
- Skin that comes in contact with silver nitrate may be temporarily stained darker, this will resolve over about a week.
- Rarely, silver nitrate may cause the skin around the umbilicus to be irritated. This will heal. Follow up with PMD if surrounding skin is open, red or very inflamed, or peeling/drainage.
- In addition to CW Urgent Care AVS, consider CW Teaching Sheet.

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**Follow-up**

- Recheck by PMD in 3-5 days.
  - For treatment failure, PMD may consider referral for:
    - Evaluation for other possible causes of umbilical anomaly
    - Performance of other non-conservative treatments

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## UC EVIDENCE BASED GUIDELINE: UMBILICAL GRANULOMA

### References

- Bagadia, J, Jaiswal, S, Bhalala, KB, Poojary, S. Pinch of salt: A modified technique to treat umbilical granuloma. *Pediatr Dermatol*. 2019; 36: 561– 563. <https://doi.org/10.1111/pde.13851>
- Brodsgaard, A. (2015). Treating umbilical granuloma with topical clobetasol propionate cream at home is as effective as treating it with topical silver nitrate in the clinic. *Acta Paediatrica*, 104(2), 174-177.
- Aydin, M., Orman, A., Deveci, U. and Taskin, E. (2015), Topical clobetasol propionate may not be safe for treating umbilical granuloma in infants. *Acta Paediatr*, 104: e49-e49. <https://doi.org/10.1111/apa.12849>
- Daniels, J. (2001). Is silver nitrate the best agent for management of umbilical granulomas? *Archives of Disease in Childhood*, 85, 431-434.
- Meltzer, D. I. (2005). A newborn with an umbilical anomaly. *American Family Physician*, 71(8), 1590-1592.
- Nagar, H. (2001). Umbilical granuloma: A new approach to an old problem. *Pediatric Surgery International*, 17, 513-514.
- Lotan, G., Klin, B., & Efrati, Y. (2002). Double ligature: A treatment for pedunculated umbilical granulomas in children. *American Family Physician*, 65(10), 2067-2068.
- Palazzi, D. L., & Brandt, M. L. (2021). Care of the umbilicus and management of umbilical disorders. *UpToDate*. Retrieved from <http://www.uptodate.com>
- Treatment information and review also provided by Lynn Calaway, PA, Surgery, Children's Wisconsin, (personal communication, January, 2022) and Chris Schwake, MD, Children's Medical Group (personal communication, February, 2022).*

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