The Treatment of Umbilical Granuloma using Household Salt

Umbilical granulomas are one of the most common umbilical conditions to occur in neonates. A granuloma results from an overgrowth of cord tissue remaining after separation of the cord. Usually the cord separates by the eighth day and the cord stump dries and heals within two weeks (Wilson et al, 1985).

While the exact cause of umbilical granulomas is unknown it is thought that over granulation of the cord stump occurs in response to a mild infection (Zahid Hossain et al, 2010). This condition can cause parental anxiety and left untreated the granuloma can take months to resolve.

Treatment approaches

The most common treatment approach has been the topical application of concentrated silver nitrate solution (75%) or silver nitrate stick (Farhat and Mohammadzadeh, 2008). There are, however, well documented risks of chemical burns to the periumbilical area using this approach and expertise is required to ensure that such risks are minimised (Chamberlain et al, 1992).

A further approach has been the use of a double ligature technique where the granuloma is tied at the pedunculated base with silk sutures (Lotan et al, 2002). This is a safe and effective treatment but requires professional time and expertise to undertake.

Review

A critical incident review was undertaken in Tameside NHS Trust in 2009 following widespread burns to a baby following the inappropriate use of silver nitrate. As part of this process a number of research papers were identified where common table salt was being used effectively to treat umbilical granulomas (Zahid Hossain et al, 2010; Kesaree et al, 1983; Derakhsan, 1998). The research findings suggested that the sodium ion drew water from the granuloma resulting in rapid shrinkage, with the granuloma usually resolving within a few days with no side effects noted.
Trialing and a new protocol

A trial was then undertaken in Tameside where common table salt was used twice daily as a topical application to all newly diagnosed granulomas and washed off after 30 minutes. A new protocol was subsequently developed and implemented with results demonstrating the effectiveness of this approach to treatment, with no adverse side effects and a rapid healing time. There were also significant cost savings in both professional time and materials, with a reduction in the use of silver nitrate (NHS Institute for Innovation and Improvement, 2009). A number of NHS Trusts have now implemented this approach, identifying health visitors as the key professionals to oversee the care of babies with umbilical granulomas (Leicestershire Partnership Trust, 2014, RUH, Bath 2015, Bristol North PCT, 2005).

Good Practice Points for Health Visitors

- The umbilical granuloma should be assessed by the health visitor. This is to confirm the diagnosis and exclude any obvious infection which may require further treatment. Health visitors should also be aware of the differential diagnosis of rare conditions including umbilical polyp due to an urachal anomaly (bladder communication) or omphalomesenteric (also called vitellointestinal) duct anomaly (bowel communication). Both of these are associated with excessive leakage and require further medical assessment and treatment (Bedfordshire and Luton Joint Prescribing Committee, 2014).

- Health visitors should advise parents that the granuloma can be effectively treated using a twice daily application of a pinch of table salt directly onto the granuloma. The area should then be covered with a clean piece of gauze and left for up to 30 minutes. Following this the salt should be rinsed off with a clean gauze dressing soaked in cooled boiled water. Parents should be advised that this should be continued for at least two days by which time the granuloma should have reduced and started to heal.

- If there is no resolution within a week (Bedfordshire and Luton Joint Prescribing Committee, 2014), then the health visitor should reassess and consider referral for further treatment. A supporting leaflet should be given reminding parents of the treatment plan (Leicestershire Partnership Trust, 2014, SEPT Community Health Services, Bedfordshire, 2014).

- Health visitors should also remind parents that if there are signs of infection where the surrounding tissue becomes red and inflamed or there is an offensive discharge, then a review with the GP should be arranged.

References

Bedfordshire and Luton Joint Prescribing Committee (2014) bit.ly/1LduoyP
Bristol North Primary Care Trust (2005) bit.ly/1SkbSNL
NHS Institute for Innovation and Improvement (2009) bit.ly/1K3teHm
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