

Punch and Scoop Technique for Removing Pilomatricoma

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Abstract: Pilomatricomas are benign calcifying neoplasms derived from follicle matrix cells. Standard treatment for pilomatricomas involves complete surgical excision, with an overall low rate of recurrence. We discuss a simple alternative surgical technique that allows for removal of the lesion with less residual defect than complete excision.

Pilomatricomas are benign calcifying neoplasms derived from follicle matrix cells. They are more common in children than adults (1–3). Pilomatricomas are often misdiagnosed as other benign cysts or neoplasms (1,4). Although they present most commonly in the head and neck region, approximately 15% occur on the upper extremities (2). Pilomatricomas are not typically painful, although one-third of patients may note tenderness (2). Standard treatment for pilomatricomas involves complete surgical excision or linear incision, with an overall low rate of recurrence (2). We discuss a simple alternative surgical technique that allows for removal of the lesion with less residual scarring than complete excision.

A healthy 4-year-old girl presented with a 22-mm × 18-mm, firm, well-demarcated, freely mobile nodule on the right deltoid without tenderness or warmth (Fig. 1). Clinically the lesion was consistent with a pilomatricoma. Observation rather than treatment was discussed with the girl's parents, who opted for treatment.

The parents were instructed to apply topical lidocaine–prilocaine under occlusion to the area 1 hour before the procedure. The patient was then secured on a papoose board. (If not available, one can use two full-size bed sheets, with which one wraps the arms then the body.) The area was then cleansed with alcohol prep, anesthetized with lidocaine with epinephrine, and recleansed with chlorhexidine. A 4-mm punch biopsy was subsequently performed. The punch specimens were sent for histopathology. Thereafter, cystic material and cyst wall were curetted from the punch site (Fig. 2) and 25% trichloroacetic acid (TCA) was applied using a curette and then a cotton-tipped applicator. The wound was left to heal by secondary intention with a pressure dressing placed. The patient tolerated the procedure well and was left with only a 4-mm defect (Fig. 3) rather than a lengthy surgical scar as would have occurred with full excision of this 22-mm cyst. When the punch was inserted, the characteristic white granules of a pilomatricoma immediately confirmed our suspected diagnosis. In the case of an uncertain result, the punch specimen

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Figure 1. Lesion before surgery. Full extent outlined in ink.



Figure 2. Immediately after punch removed, contents expressed, showing white spicules. Curette used to remove all remaining pilomatricoma cyst contents.

should be sent to pathology, with pressure dressing or gel foam placed to stop the bleeding while awaiting pathology results to determine whether additional surgery is required.

TCA is not absorbed through the skin, but it is not known how much is absorbed from within a cyst (5). It has been safely used in corneal cysts (6). Internal usage of TCA has been described, with 95% intrauterine TCA being used for dysfunctional uterine bleeding without adverse events (7). Although excessive doses of TCA have been found to be teratogenic in murine studies, TCA is considered according to the Toxicology Data Network to be of low potential risk now and in the patient's future (8). We use it daily for the treatment of warts and noncancerous, precancerous, and cancerous



Figure 3. The site 1 week after the procedure. Note the small clean crust. The final scar will be smaller than this.

growths, and it is readily available in all of our examination rooms.

We have had good results using this technique for 30 years, with approximately 12 children per year treated, without any toxicity, chemical burns, or excessive drainage. This technique thus serves as a useful alternative to full excision or incision and removal of pilomatricomas through incision lines, with a much smaller scar.

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