A 8-year-old girl presented for evaluation of a rash present since infancy that had recently begun spreading over her body. The eruption began on the central chest and gradually spread to the upper chest, and medial aspect of the arms, forearms, and thighs. The lesions were occasionally pruritic but otherwise asymptomatic. The patient was treated with a course of topical hydrocortisone valerate by her pediatrician with no change in the lesions. The patient had no significant past medical history and had met all developmental milestones appropriately. Family history was unremarkable with no similar rash noted in any other family members.

Physical examination revealed a healthy, well-developed, 8-year-old girl. Evaluation of the skin revealed hundreds of tan-brown, 1- to 2-mm papules distributed on the upper chest, flexor surfaces of the arms, the forearms, and in a band-like distribution across the upper thighs (Figure 1).
Case Challenge

Diagnosis:

Eruptive Vellus Hair Cysts

A 2-mm punch biopsy of the left arm was performed for histopathologic analysis. Hematoxylin-eosin staining demonstrated a cyst lined with infundibular epithelium containing cornified cells and numerous vellus hair shafts (Figure 2A, 2B).

DISCUSSION

Eruptive vellus hair cysts (EVHC) were first described in 1977 in a case report of two children with multiple asymptomatic hyperpigmented papules distributed on the trunk and the flexor surfaces of the extremities.1 Since the initial report, more than 50 cases have been reported in the literature, but the incidence of this condition is likely higher given that many children probably do not undergo biopsy for evaluation. EVHC may be sporadic or inherited in an autosomal dominant fashion.2 Familial cases are usually present at birth; however, case reports document onset between birth and age 20 years. There is usually no race or sex predilection.3-4 Pathogenesis is unknown, but theories postulate the possibility of a developmental abnormality that predisposes the hair follicle to infundibular occlusion.5

Diagnosis is typically made based on clinical examination alone; however, a biopsy is used to rule out other conditions that can mimic EVHC. The differential diagnosis includes steatocystoma multiplex, milia, keratosis pilaris, and folliculitis. Approximately 25% of cases resolve spontaneously, but treatment of the persistent cases can be challenging.6

Most lesions are asymptomatic except for rare reports of associated tenderness or pruritus.7,8 The cosmetic appearance is often the primary concern for patients and their families. A cyst extraction method using local anesthetic cream was reported by Karadag et al. in which an incision is made in the surface of the cyst and the cyst material is extruded. Microscopic examination of the extruded cyst contents with 10% potassium hydroxide is diagnostic and reveals multiple vellus hair cysts within the pink keratinaceous material.9 Spontaneous resolution has occurred in some cases. Treatment options include 12% lactic acid and retinoid preparations; one case report describes the successful use of calcipotriene cream.10-12 Surgical techniques such as curettage and incision and drainage have been used but have a risk of scarring. Laser therapy using a CO2 or erbium:yttrium-aluminum-garnet (Er: YAG) laser has been tried as well. These approaches enable rapid treatment of multiple lesions; however, there is always a risk of inconsistent results and scar formation.13 In the case described here, after a discussion of the benign nature of condition, the family opted for no treatment.

CONCLUSION

Clinical recognition of EVHC and knowledge of the benign nature of this condition permits reassurance of the patient and parents. Treatment options can be discussed with parents who are concerned about the cosmetic appearance of the lesions.

REFERENCES