A Case of Steatocystoma Multiplex: Successful Treatment with Mini-incisions

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Steatocystoma multiplex is an autosomal-dominant disorder that consists of multiple, small, yellowish papules and nodules on the trunk and proximal extremities and less commonly on the face and genital areas. Various therapeutic modalities such as radical excisions, simple surgery, CO_2 laser therapy, cryotherapy, needle aspiration, and oral retinoids have been described with variable results. We report here a 33-year-old female with steatocystoma multiplex who was treated with mini-incisions, a simple surgical technique.
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Key Words: Steatocystoma multiplex, Surgery, Incision

INTRODUCTION

Steatocystoma multiplex is a clinical condition characterized by multiple dermal cysts, which usually begins in adolescence[1]. Sometimes it is inherited as an autosomal dominant trait, but more often it occurs sporadically. Non-inflamed lesions are asymptomatic, however, affected patients seek medical or surgical treatment for cosmetic reasons. There is no standard treatment for steatocystoma multiplex[2-5]. We suggest that simple surgery with mini-incisions as an excellent therapeutic modality for the treatment of steatocystoma multiplex.

CASE REPORT

A 33-year-old female patient presented with multiple subcutaneous nodules on her trunk and extremities. The lesions first appeared on the chest about 7 years ago, and since then, had progressively increased in number and spread onto both arms and thighs. Family history showed that her mother had similar lesions on the trunk and extremities. Cutaneous examination showed multiple skin colored, moderately firm and mobile, 0.5-1.5 cm papules and nodules on the anterior chest, upper extremities, axillae, and thighs. A skin biopsy of a lesion on the upper arm was performed and showed a folded dermal cyst lined by two or three layers of stratified squamous epithelium (Fig. 1). These clinical and histological findings were consistent with steatocys-

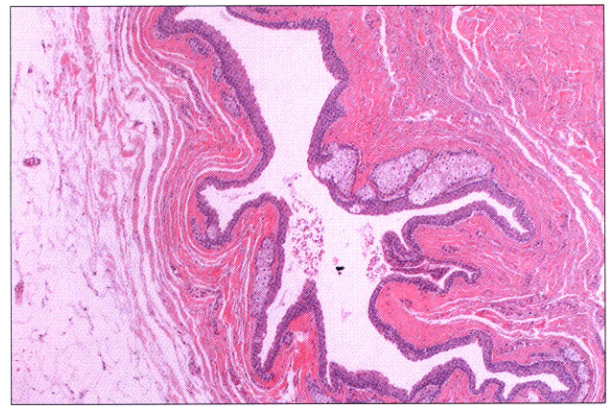

Fig. 1. Folded dermal cyst lined by two or three layers of stratified squamous epithelium (H&E, ×40).

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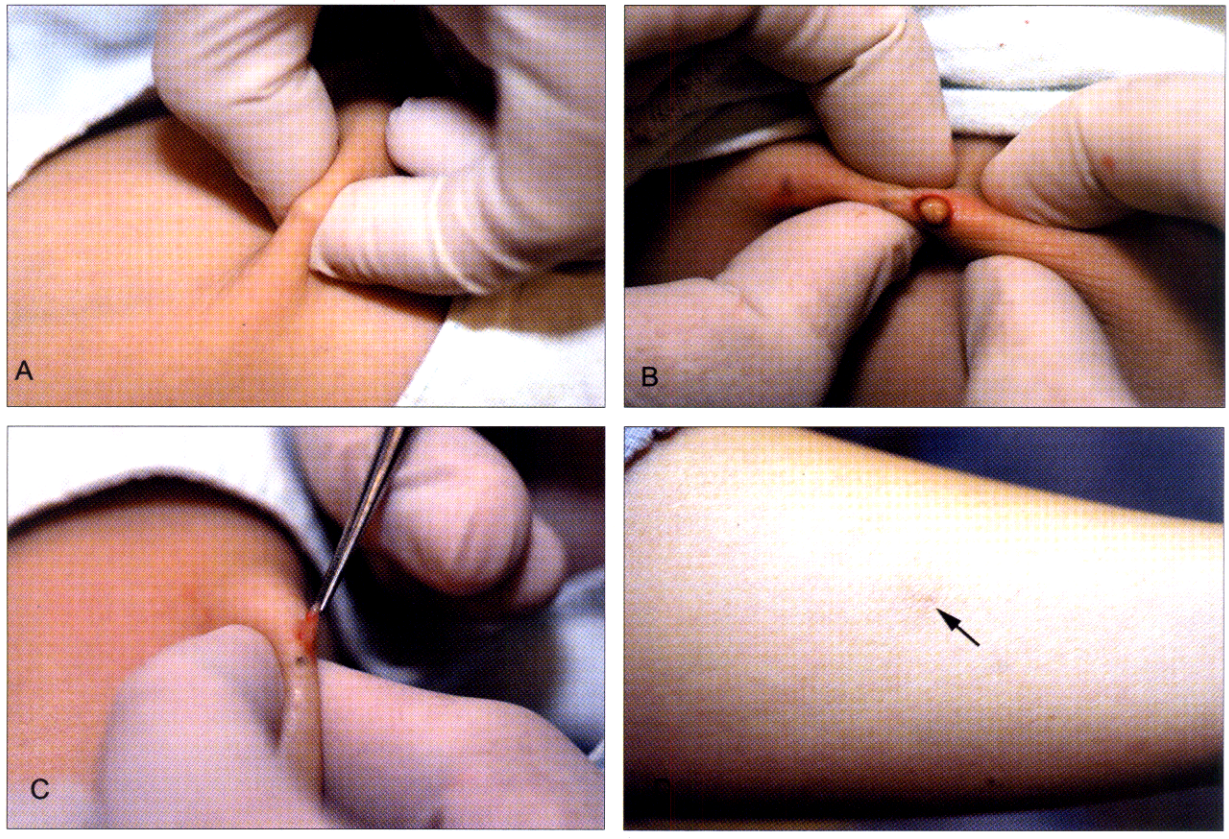

Fig. 2. (A) Isolation of the cyst with fingertips. (B) Squeezing of a cyst after mini-incision. Note the creamy yellow contents. (C) Extraction of the cyst wall. (D) 10 days after the operation. Scars are virtually unnoticeable (arrow).

toma multiplex.

For cosmetic reasons, our patient wanted to remove the nodules on exposed areas such as her arms and upper chest. We decided to treat the patient with mini-incisions, as reported by Schmook et al.[2] although with some modifications. At first, the selected lesion was isolated with fingertips (Fig. 2A). A local anesthesia was administered and the cyst was punctured by mini-incisions of 2-3 mm with a no. 11 surgical blade. The creamy contents were evacuated by manual squeezing (Fig. 2B). The cyst wall was then extirpated with fine forceps, as it almost always became visible following the decompression procedure (Fig. 2C). However, with a few lesions, the base of the sac was removed with scissors. The incisions were closed with sterile adhesive strips. We treated 8 lesions, which showed a good cosmetic result without scarring (Fig. 2D). During the follow-up period of 6 months, no recurrence of the treated lesions was observed.

DISCUSSION

Steatocystoma multiplex is characterized by multiple, freely-movable, cystic lesions located on the trunk, neck, axillae and proximal extremities, and less commonly on other sites, such as the face, scrotum, vulva, or penis[1]. It can occur as a conglobata disease, called steatocystoma multiplex suppurativum, and less commonly it can be located exclusively on the face[4,5]. It has been reported in association with pachyonychia congenita, acrokeratosis verruciformis, hypertrophic lichen planus, hypohydrosis, hypothyroidism, hidradenitis supprativa, ichthyosis, hypotrichosis, and multiple keratoacanthomas[1,3]. Molecular genetic mapping studies have shown that missense mutations in the gene encoding for keratin 17 can cause either steatocystoma multiplex, pachyonychia congenita, or a combination of both[6].

The treatment of multiple lesions presents a thera-

peutic challenge in steatocystoma multiplex. Medical treatment with isotretinoin can be recommended in cases with inflamed and suppurative lesions. But variable results, from significant improvement to exacerbation have been reported[4,7]. Several therapeutic modalities such as cryotherapy, CO_2 laser, needle aspiration, and excisions have been suggested for non-inflamed cysts[2-5,8]. Cryotherapy has been reported to show limited success and can leave residual scarring[4]. CO_2 laser, with or without mechanical removal using anatomical forceps, has been reported with good aesthetic results[5,9]. Aspiration and the scraping technique can be considered, however, obstruction of the needle by keratinous material and the likelihood of hematoma formation diminished the usefulness of this technique[10]. Needle insertion and the extirpation method, as a modified aspiration technique, has been tried with cosmetically acceptable results and without complications[8]. This technique consists of inserting the tip of a needle to one side of the cysts and extirpating the contents by gently pressing from the opposite site of the insertion.

Our method is mainly a modified form of Schmook et al.'s[2]. They treated 5 cases of steatocystoma multiplex with mini-incisions of 1 mm with a no. 11 blade, before squeezing the creamy contents, excochleating the cyst wall with a 1 mm curet and completely removing the cyst wall with forceps. Similar surgical techniques using artery forceps or a sharp cautery tip have previously been reported1[1-12].

During the procedure, we felt that the most important process in making the mini-incisions was isolation of the lesion with fingertips and injection of local anesthesia to keep the lesion intact. Because the cysts in steatocystoma multiplex can be mobile, our minimal invasive technique required precise localization. Manual decompression was enough for evacuation of the sac, thus curettage was not required. There was resistance during extraction of a few lesions, so when required, the base of the sac was removed with scissors. As the incisions were less than 3 mm, there was neither significant bleeding, or a need for sutures. No sign of infection was observed with the treated lesions, and scarring was negligible, with a good long-term cosmetic result. As mentioned as the treatment of choice by Schmook et al.[2] and Kaya et al.[3], we also believe that this minimal invasive surgical procedure is simple and a reproducible modality for the treatment of steatocystoma multiplex.

REFERENCES

1. Cho S, Chang SE, Choi JH, Sung KJ, Moon KC, Koh JK: Clinical and histologic features of 64 cases of steatocystoma multiplex. J Dermatol 2002;29: 152-156.
2. Schmook T, Burg G, Hafner J: Surgical pearl: mini-incisions for the extraction of steatocystoma multiplex. J Am Acad Dermatol 2001;44:1041-1042
3. Kaya TI, Ikizoglu G, Kokturk A, Tursen U: A simple surgical technique for the treatment of steatocystoma multiplex. Int J Dermatol 2001;40: 785-788.
4. Apaydin R, Bilen N, Bayramgurler D, Basdas F, Harova G, Dokmeci S: Steatocystoma multiplex suppurativum: oral isotretinoin treatment combined with cryotherapy. Australas J Dermatol 2000; 41:98-100.
5. Rossi R, Cappugi P, Battini M, Mavilia L, Campolmi P: CO_2 laser therapy in a case of steatocystoma multiplex with prominent nodules on the face and neck. Int J Dermatol 2003;42:302-304.
6. Smith FJD, Corden LD, Rugg EL, Ratnavel R, Leigh IM, Moss C, et al.: Missense mutations in keratin 17 cause either pachyonychia congenita type 2 or a phenotype resembling steatocystoma multiplex. J Invest Dermatol 1997;108:220-223.
7. Rosen BL, Brodkin RH: Isotretinoin in the treatment of steatocystoma multiplex: A possible adverse reaction. Cutis 1986;40:115-120.
8. Duzova AN, Senturk GB: Suggestion for the treatment of steatocystoma multiplex located exclusively on the face. Int J Dermatol 2004;43:60-62.
9. Krahenbuhl A, Eichmann A, Pfaltz M: CO_2 laser therapy for steatocystoma multiplex. Dermatologica 1991;183:294-296.
10. Sato K, Shibuya K, Taguchi H, Kitano Y, Yoshikawa K: Aspiration therapy in steatocystoma multiplex. Arch Dermatol 1993;129:25-37.
11. Keefe M, Leppard BJ, Royle G. Successful treatment of steatocystoma multiplex by simple surgery. Br J Dermatol 1992;127:41-44.
12. Adams BB, Mutasim DF, Nordlund JJ: Steatocystoma multiplex: a quick removal technuque. Cutis 1999;104:127-130.