Hidrocystoma Multiplex

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CASE SUMMARY

History

A 48-year-old housewife complained of multiple asymptomatic papules on her face for over ten years, gradually becoming more numerous. There was an increase in size and number of the papules on exposure to heat or after exercise. The condition was worse in summer. She had no family history of similar facial eruption.

Physical examination

There were numerous skin-coloured, small, smooth, oval or round papules of 1-3 mm in diameter on the face (Figure 1). They were most numerous around the eyes. Some of the lesions had a cystic appearance and puncture resulted in collapse of the cyst with drainage of clear watery fluid.

Differential diagnoses

The possible diagnoses for numerous asymptomatic small facial papules included hidrocystoma, plane warts, seborrhoeic keratoses, milia, xanthelasma, syringoma, trichoepithelioma, tricholemmoma and sebaceous hyperplasia.

Investigations and diagnosis

Biopsy was done on one of the biggest papules beneath the left eye. Histology showed a small cyst of 0.2 cm in the dermis. The cyst was lined by a double layer of polygonal cuboidal epithelial cells of the sweat gland with irregular border. No papillary invagination or tadpole-like strand was seen. The features were consistent with hidrocystoma multiplex (Figures 2 and 3).

Management

The patient was advised about the benign nature

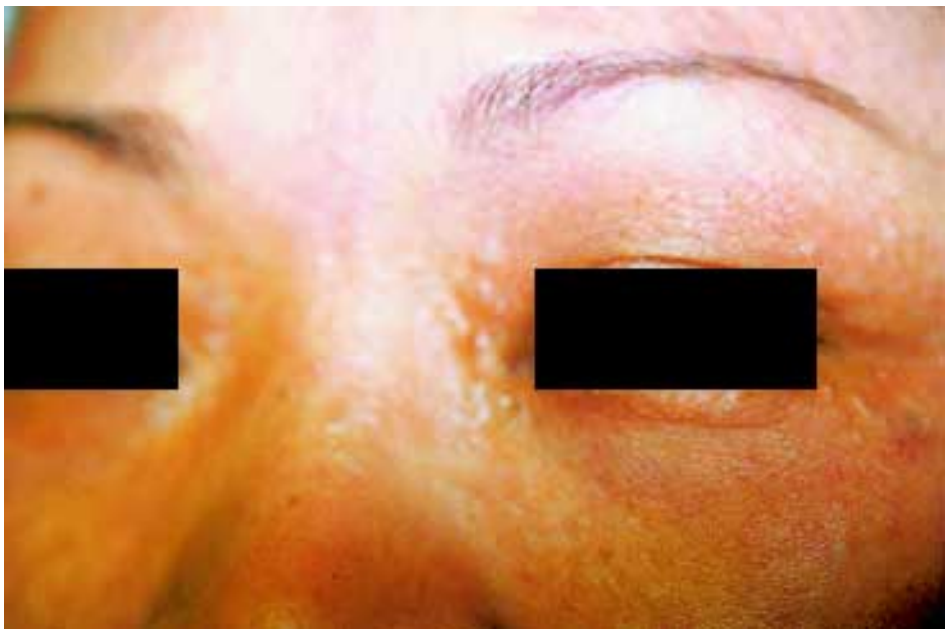

Figure 1: Multiple small cystic papules on the face

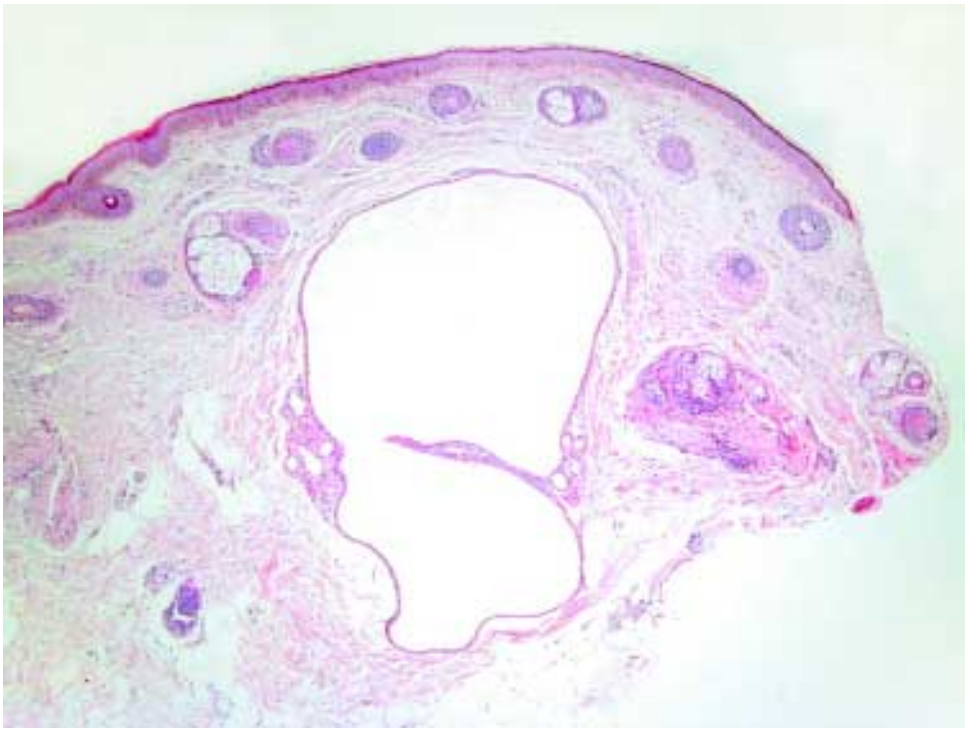

Figure 2: Low power view showing a cystic tumour in the mid dermis. (By courtesy of Dr. K. C. Lee, Department of Pathology, QEH)

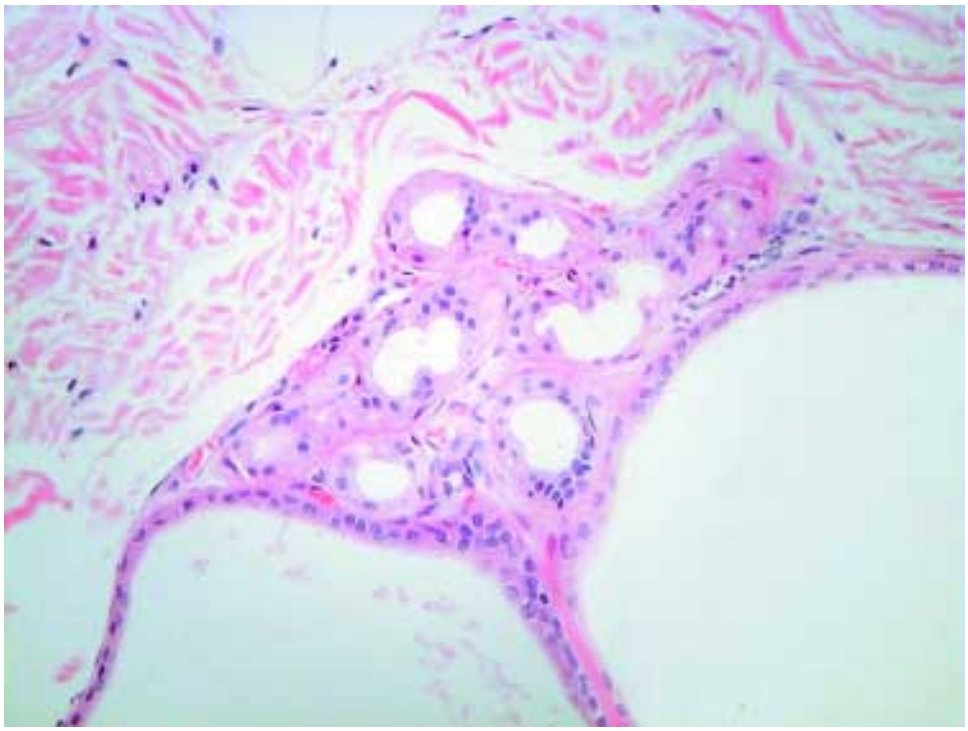

Figure 3: High power view showing polygonal lining cells with irregular border. (By courtesy of Dr. K. C. Lee, Department of Pathology, QEH)

of the illness. However, she requested to have treatment to improve the cosmetic appearance. Carbon dioxide laser under local anaesthesia with Eutectic Mixture of Local Anaesthetic (EMLA) cream occlusion for 1-2 hours was done.

Progress

Most of the lesions subsided when the patient returned for follow up assessment one month later. However, when exposed to heat, some of the lesions recurred.

REVIEW OF HIDROCYSTOMA

Eccrine hidrocystoma[1,2]

Clinical features

In the multiple type, there are numerous small cystic lesions on the face, mainly over the cheeks and eyelids. The lesions are sometimes pigmented.[3] They occurred almost exclusively in middle-age women, especially those who work in a hot and humid environment (for example, washer and cooks). The lesions become bigger and more numerous when the skin is exposed to heat or after exercise. The condition is more severe in the summer.

The solitary type[4] occurs mainly in middle age or elderly patients. Sixty percent are female. Most lesions occur in peri-orbital area. The lesions are asymptomatic, skin-colored to bluish, smooth and shiny, translucent papules. Compared with the multiple type, the lesions are larger with a mean diameter of 3mm. The edge of the lesion is usually not well delineated. Puncture of lesion results in collapse of cyst with drainage of a thin, clear, watery fluid. The patients' occupation are usually not heat-exposing and lesions do not change with temperature. Solitary eccrine hidrocystoma is more common in the Caucasians, while in Japan, the multiple type is more common.[5]

Histology[6,7]

The epidermis is normal or thin. One or more cystic spaces are seen in the upper or middle dermis. They are usually unilocular with little or no papillary projection into the cavity. One or two dilated eccrine sweat ducts are usually found near the cyst, and on serial sections, one may find an eccrine duct leading into the cyst from below.[8] The cyst walls are two-layered: low cuboidal cells in luminal side and flat epithelial cells in the basal side. The cyst cavity is empty or contains a homogenous, lightly eosinophilic material. Connective tissue around the cyst is compressed to form a pseudocapsule.

Histological differential diagnosis

It was distinguished from apocrine hidrocystoma by the absence of decapitate secretion, PAS-positive, diastase resistant granules in the cytoplasm, myoepithelial cells and papillary projections into the cyst. However, a recent immunohistochemical study showed that many cases of histologically diagnosed eccrine hidrocystoma are actually apocrine hidrocystoma or apocrine cystadenoma.[9]

Histogenesis

Histochemistry and electron microscopy shows that it represents an occlusion of the intradermal portion of the duct due to malformations of the eccrine ducts.

Treatment

Topical 1% atropine in 10% propylene glycol applied daily gives significant clearing of lesions in 2 days and complete resolution in one week. However, the lesions reappear after stopping for one week. Pupillary dilatation for up to 4 hours is a problem in some patients and wearing of sunglasses for several hours after applying atropine is required. The pupillary dilatation is due to systemic effect as it occurs bilaterally even when atropine is applied unilaterally. One percent scopolamine in hydrophilic petrolatum has been reported to be effective by some investigators but not others.[10] Oral atropine sulfate 0.5 mg four to six times daily produces complete resolution but side effects of dry mouth and thirst hamper usage. Simple incision or unroofing is effective but recurrence occurs in 4 to 6 weeks. Surgical excision or electrocautery may be done for isolated lesions. Argon laser treatment for multiple lesions has been effective with no recurrence in any of the lesions at 6 months follow-up.[11]

Apocrine hidrocystoma[1,2]

Clinical features

Lesions are usually solitary, asymptomatic, well-defined, dome-shaped, smooth-surfaced, translucent nodules of a few mm to 1.5 cm, frequently with a bluish hue.

The commonest site is around the eyes but it can also occur on the ears, scalp, chest or shoulder. They can be differentiated from basal cell carcinoma by having a less firm consistency, more regular surface contour, and no surface telangiectasia. They are differentiated from blue naevi and malignant melanoma by showing trans-illumination in larger lesions. Four cases of a newly recognised variant of ectodermal dysplasia has been reported.[12] The syndrome consists of bilateral apocrine hidrocystoma of the eyelid margins, hypodontia, palmo-plantar hyperkeratosis and onychodystrophy.

Histopathology[6]

There are several large cystic spaces with papillary projections into cystic space wall lined by a row of secretory cells of variable height, showing decapitate secretion. Large PAS-positive, diastase-resistant granules are present in the secretory cells. There are elongated myoepithelial cells at the periphery of secretory cells.

Histogenesis

They are regarded as an adenoma arising from the apocrine excretory duct rather than a retention cyst.

Treatment

For solitary lesion, surgical removal is usually done. It is usually also needed for diagnosis. Both electrodessication and carbon dioxide laser treatment[13] had yielded good results in cases of multiple lesions.

Learning points:
Hydrocystoma appears as small cystic papules on the face. They may be eccrine or apocrine in origin, solitary or multiple. The eccrine multiple type typically enlarges on exposure to heat.

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