Nodular hidradenoma: A rare tumor in children

Pragati A Sathe[1], Balaji D Baste[2]

From [1]Associate Professor, [2]Assistant Professor, Department of Pathology, King Edward Memorial Hospital and Seth Gordhandas Sunderdas Medical College, Mumbai, Maharashtra, India

Correspondence to: Dr. Balaji D Baste, Department of Pathology, King Edward Memorial Hospital and Seth Gordhandas Sunderdas Medical College, Mumbai, Maharashtra, India. E-mail: balajidbaste@gmail.com

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ABSTRACT

Hidradenomas are the benign cutaneous tumors of sweat gland origin, with the clear cell type constituting the most frequent histologic variety. Usually, they are diagnosed in the elderly population, the peak incidence being the fifth to sixth decade. Very few cases of hidradenoma have been documented in children in their first decade of life. Here, we present a rare and interesting case of a 10-year-old boy who presented with swelling on the anterior aspect of the neck, since birth. The histological findings were consistent with the diagnosis of nodular hidradenoma.

Key words: *Children, Hidradenoma, Skin adnexal neoplasm*

Hidradenomas are benign cutaneous tumors of sweat gland origin, with the clear cell type constituting the most frequent histologic variety [1]. Hidradenoma may be solitary or multiple and often resides in the vulvar region of adult women [2]. It mostly occurs in adults, but a few cases of nodular hidradenoma have been reported in children. It grows slowly and is usually asymptomatic [3]. We, hereby, reporting a case of a young boy with a nodular hidradenoma of the neck region, thus highlighting that this tumor needs to be included in the differential diagnosis of skin tumors, even in the pediatric age group.

CASE REPORT

A 10-year-old boy came with complaints of a slowly growing swelling on the anterior aspect of the neck present since birth reaching the present size. There was a history of an occasional episode of bloody discharge. There was no history of trauma in this location or previous history of excision. The past and family history was insignificant and the general examination findings were normal. On local examination, it was a firm non-tender swelling located at the subcutaneous plane in the anterior aspect of lower one-third of the neck, 2 cm above the suprasternal notch. The overlying skin showed a punctum without any communicating tract. The swelling did not move with protrusion of tongue or on deglutition. Routine hematological investigations were within normal limits. The lesion was excised and sent for histopathologic examination.

We received skin covered lesion measuring 1.5×0.6 cm. A tiny punctum was seen on the central part of skin. The cut surface showed white homogenous soft to firm well-circumscribed non-encapsulated lesion (Fig. 1a). On microscopic examination, the dermis and subcutaneous tissue showed a multinodular well-circumscribed lesion consisting of two types of cells (Fig. 1b). The cells were arranged in sheets and nested pattern and they had eosinophilic and clear cytoplasm with well-defined cell borders (Fig. 1c and d). There were no necrosis, increased mitotic activity, or nuclear pleomorphism, and the periphery showed mild lymphocytic inflammation. A histopathology diagnosis of nodular hidradenoma was given. The patient was doing well at the last follow-up.

DISCUSSION

The common pediatric adnexal tumors reported in literature seem to have either follicular or apocrine/eccrine origin while those with sebaceous differentiation are distinctly uncommon. Pilomatricoma is the single most common skin adnexal tumor, occurring in children, and the most common location is the head and neck region [4]. Hidradenomas are quite uncommon in this age group. Mostly seen in the age group of 20–50 years, few cases of hidradenoma have been reported in children in their first and second decade or even at birth [5]. Maheshwari *et al*. reported a case of clear cell hidradenoma in a 1-year-old male child presenting with a red polypoidal umbilical mass of 2 cm diameter since birth [6]. Kim *et al*. reported a case of an axillary nodular hidradenoma in a 29-month-old girl [3]. In our case report, the tumor in the patient also was reported to be noticed since birth.

Hidradenoma usually presents as slowly enlarging, single, asymptomatic, firm, freely mobile tumor, or nodule. Some tumors discharge serous material while others tend to ulcerate. The lesion can occur at any anatomical site. It often occupies the vulvar region in women and the perianal region in men and is found at a lower frequency in the scalp, neck, face, lower eyelid, external

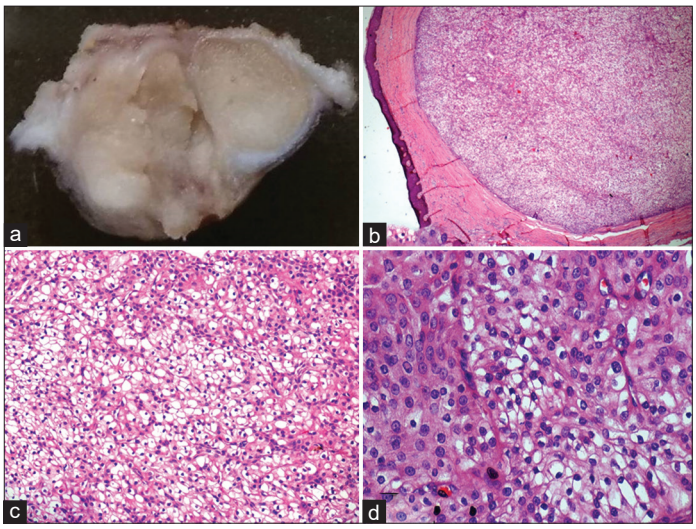

Figure 1: (a) Gross photograph showing white homogenous soft to firm well-circumscribed non-encapsulated lesion. (b) The dermis and subcutaneous tissue showed a nodular well-circumscribed lesion (HE, ×40). (c) Photomicrograph showing large cells with small dark nuclei and glycogen laden clear cytoplasm (HE, ×100). (d) Photomicrograph showing admixture of two cell types, one with finely granular, faintly eosinophilic cytoplasm and the other showing clear cytoplasm. Both have round uniform nuclei (HE, ×400)

auditory canal, knee, and foot. This tumor has sometimes been associated with hyperestrogenemia as estrogen and sometimes even progesterone receptors have been identified on the tumor cells. This association with hyperestrogenemia plays a role in the multiplicity of localizations and not in the appearance of the hidradenoma [2].

Clinically, hidradenoma can mimic any other solid or solid-cystic dermal tumor. However, histopathology is quite characteristic. Well-circumscribed upper dermal tumor, with small monomorphous and polyhedral cells that have clear or eosinophilic cytoplasm, clinches the diagnosis. Small ductular lumina may sometimes be seen; clear cell change and/or squamous metaplasia may be prominent. Focal apocrine components may also be present [7]. If the clear cells are prominent and most commonly in adults, a differential diagnosis of metastatic renal cell carcinoma may be considered. However, the typical vascularity of a renal cell carcinoma is not seen in a nodular hidradenoma.

Although eccrine acrospiromas are usually benign, they can, on rare occasion, undergo malignant transformation. The malignant counterpart, termed clear cell hidradenocarcinoma or malignant clear cell hidradenoma, is exceedingly rare and is characterized by infiltrative borders, cellular atypia, and numerous abnormal mitotic figures. Immunohistochemical analysis is not required in routine practice, since most cases can be easily and reliably be diagnosed with hematoxylin and eosin stained sections [5].

CONCLUSION

Even though pilomatricoma is the most common cutaneous tumor in children, it is important to consider a diagnosis of clear cell hidradenoma in this age group.

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