

Clear Cell Hidradenoma- a case report

P Bagga, M Shahi, N Mahajan

Citation

P Bagga, M Shahi, N Mahajan. *Clear Cell Hidradenoma- a case report*. The Internet Journal of Pathology. 2008 Volume 8 Number 2.

Abstract

Clear cell hidradenoma or nodular hidradenoma or eccrine acrospiroma are histologically distinct tumors of sweat gland ductal origin, usually seen in 20- 50 years age group with a female preponderance. We report a case of eccrine acrospiroma in a 3 year old female child who presented with an asymptomatic, solitary swelling in supraclavicular region. Only occasional reports are available in literature regarding presence of this tumor in children and present case is being reported because of its rarity in this age group.

INTRODUCTION

Clear Cell Hidradenoma (CCH) also known as solid-cystic or Nodular Hidradenoma is a benign adnexal tumor that arises from the distal excretory duct of eccrine sweat glands.[₁] This tumor is also designated as Eccrine Acrospiroma because spiroma means an adenoma of sweat glands and acro indicates the topmost or end. In other words, the acrospiroma resembles the cells and structures of ductal segment of the eccrine sweat gland. It usually presents as slowly enlarging, solitary, freely movable nodule, solid or cystic, measuring on an average 0.5-2cm in diameter, but may reach 6.0cm or more.[₂] The lesion can occur anywhere on the body e.g axilla, face, arms, thighs, trunk, scalp and pubic region but the most common site is head. Most commonly it is seen in the age group of 20- 50 years and is rare in children.[₃] It occurs in women twice as commonly as in men.

CLINICAL SUMMARY

A 3 year old female child presented with a solitary, asymptomatic swelling just above the medial end of left clavicle. It was noticed by her parents about one year back. There was no history of any trauma or systemic symptoms, except for a steady increase in the size of mass. Physical examination revealed a 3x3 cm, firm, freely movable, non-tender and dome shaped nodule. A complete surgical resection of the mass was performed.

PATHOLOGICAL FINDINGS

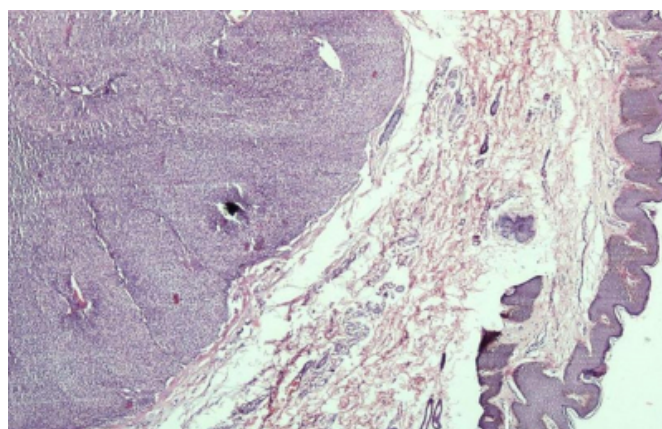
Macroscopic Examination- Specimen consisted of skin covered mass measuring 3x3x2 cm. It was firm in

consistency. The cut surface was grayish white and homogenous. The specimen was processed routinely and submitted for microscopic evaluation.

Microscopic Examination- The histopathological examination of the specimen showed similar morphology. The overlying epidermis was unremarkable. The dermis showed tumor lobules composed of cellular masses separated by thin vacuolar connective tissue stroma (Fig.1). The tumor showed two cell population. Most of them were large clear round cells with small dark nuclei and glycogen laden cytoplasm whereas the other type of cells had a finely granular, faintly eosinophilic cytoplasm with round to oval nuclei (Fig. 2-A & B).

Figure 1

Figure 1: Lobules of cells separated by connective tissue stroma (H&E stain; X40)



The clear cells were PAS (periodic acid-Schiff) positive (Fig. 3). Cystic spaces lined by flat to cuboidal epithelium

and containing homogenous faintly eosinophilic material were seen in some areas (Fig. 4). No atypical mitotic figures were noticed. The diagnosis of Clear Cell Hidradenoma or Nodular Hidradenoma was made.

Figure 2

Figure 2: Lobules composed of two cell population - Clear cells and Eosinophilic cells (A - H&E Stain; X200, B - H&E Stain; X400)

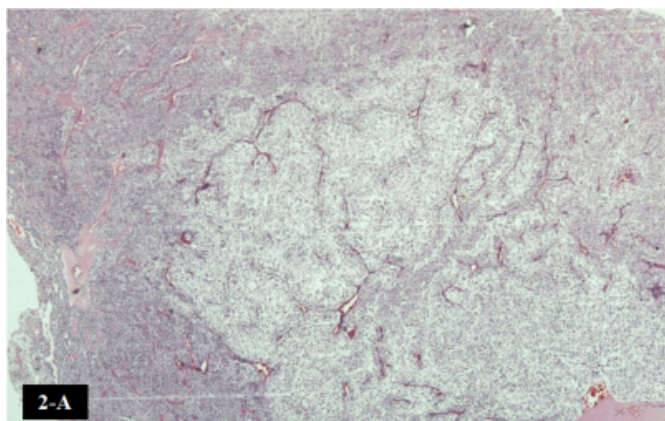


Figure 3

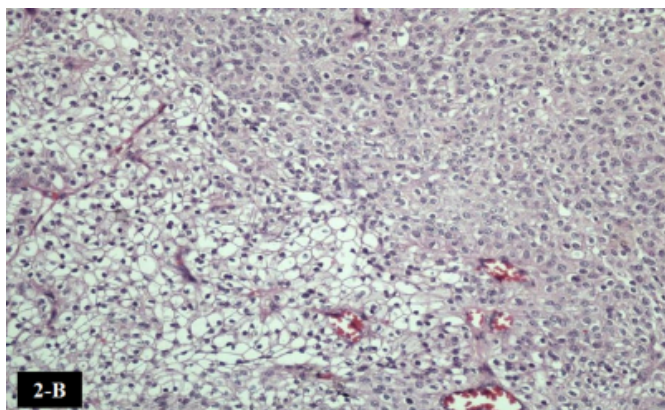


Figure 4

Figure 3: Clear cells showing PAS positivity (PAS Stain; X 400)

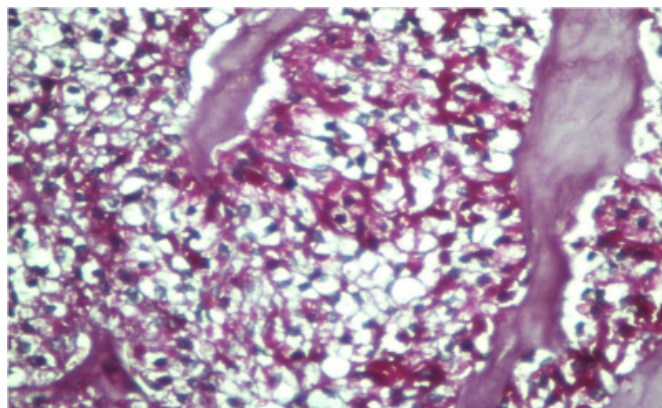
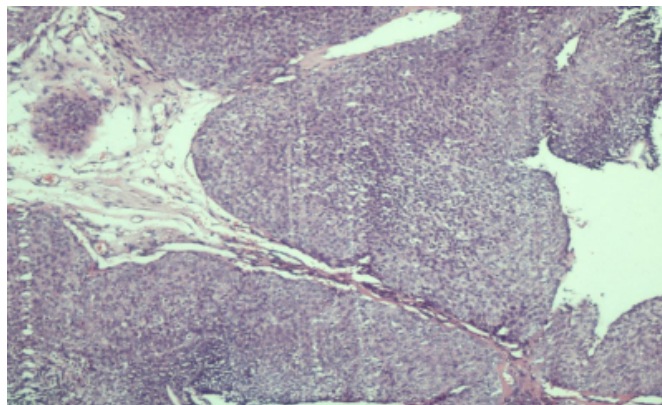


Figure 5

Figure 4: Cystic spaces containing homogenous eosinophilic material (H&E Stain; X 200)



DISCUSSION

Clear cell hidradenoma or eccrine acrospiroma of the skin was first described by Liu in 1949 [4] as clear cell papillary carcinoma of the skin. Subsequently it was reported under various designations and the recent literature prefers the term clear cell hidradenoma, nodular hidradenoma or solid and cystic hidradenoma. Contrary to its initial description as a carcinoma, it represents a benign skin adnexal tumor. It usually presents as slowly enlarging, single, asymptomatic, firm, freely movable tumor or nodule. Some tumors discharge serous material while others tend to ulcerate. Slight tenderness is an uncommon complaint. The lesion can occur on any anatomical site. Mostly it is seen in the age group of 20-50 years. It is very rare in children. Sharma and Sharma [5] reported a case occurring in a boy aged 13 years. Similarly Maheshwari et al [6] reported a case of Clear cell Hidradenoma in a one year old child which was present since birth. In the present study also, the patient was a three

year old child which is an uncommon age of presentation.

Histopathological appearance of CCH is very typical, as has been observed in the present case, characterized by two types of cells- eosinophilic cells and clear cells along with duct like cystic spaces lined by low cuboidal cells.

Sometimes focal areas of squamous differentiation can be seen, which was not observed in the present case.

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.[7] In adults one also has to rule out the possibilities of metastatic renal cell carcinoma and clear cell variety of squamous cell carcinoma.

The clinical appearance of this lesion is not specific and differential diagnosis from other lesions, both benign and malignant, can only be done after complete removal of the lesion.

Immunohistochemical analysis is not required in routine practice, since most cases can be easily and reliably

diagnosed with haematoxylin and eosin stained sections.

Patient with this condition have an excellent prognosis. Recurrence is rare, if the lesion is completely excised.

ACKNOWLEDGEMENTS

We express our deep sense of gratitude to Late Dr. T S Jaswal, Director PG studies, Retd. Professor & Head, Deptt of Pathology, whose invaluable guidance and immense professional insight helped this work take its final shape. His absence will always be deeply felt.

References

1. Winkelmann RK, Wolff K. Solid- Cystic Hidradenoma of the skin. Clinical and histopathological study. Arch Dermatol 1968; 97:651- 661
2. Hunt SJ, Santa Cruz DJ, Kerl H. Giant Eccrine Acrospiroma. J Am Acad Dermatol 1990;23:663- 668.
3. Johnson BL Jr and Helwig EB : Eccrine Acrospiroma: A clinicopathological study, Cancer, 1969;23:641- 657
4. Liu Y. The histogenesis of clear cell papillary cell carcinoma of the skin. Am J Pathol 1949;25:93- 103.
5. Sharma DN, Sharma RD : Clear cell Hidradenoma. A case report, Ind J Pathol Microbiol, 1987;30:7- 9.
6. Maheswari V, Tyagi SP, Channa R, Tyagi N. Clear cell hidradenoma masquerading as umbilical polyp. Indian J Dermatol Venereol Leprol 1991;57:296- 298
7. Hernandez- Perez E, Cestoni- Parduci R .Nodular Hidradenoma and Hidradenocarcinoma. J Am Acad Dermatol 1985; 12: 15- 20.

Author Information

Permeet Kaur Bagga, MD Pathology

Assistant Professor, Deptt of Pathology, M M Institute of Medical Sciences and Research

Mohit Shahi, MD Pathology

Assistant Professor, Deptt of Pathology, M M Institute of Medical Sciences and Research

N.C. Mahajan, MD Pathology

Professor & Head, Deptt of Pathology, M M Institute of Medical Sciences and Research