CASE REPORT

Eccrine spiroadenoma located on the shoulder: Report of a case.

Diana Cristina Dávila Quijano,* Juan Carlos Garcés Santos, Jorge Enrique Úraga Pazmiño*****

* *Dermatologist, of the Dermatological Center "Dr. Úraga" Guayaquil, Ecuador*
** *Pathologist - Dermatopathologist, Guayaquil, Ecuador*
*** *Director of the Dermatological Center "Dr. Úraga".*

Corresponding author: dianacdavilaq@hotmail.com

Key words: eccrine spiroadenoma, eccrine gland tumor, painful nodule

Reception date: 20/12/2022
Acceptance date: 13/01/2023

ABSTRACT

Eccrine spiroadenoma is a rare benign neoplasm originating in the eccrine sweat glands. It usually presents as a solitary lesion. It is characterized by a painful nodule, often bluish in hue, with increased tenderness to palpation that tends to arise on the upper body, such as the head, neck an d trunk. A histopathological study is required for diagnosis.

The case of a 44-year-old male patient with a diagnosis of eccrine spiroadenoma in the left shoulder is presented and a brief review of the subject is made.

INTRODUCTION

Eccrine spiroadenoma is a rare benign neoplasm of the skin adnexa, classified as a tumor of eccrine differentiation.[1,2] It can occur in men and women at any age, but most commonly affects young adults between the second and fourth decades of life.[2-4]

Clinically it is characterized as a solitary, painful nodule in 97% of patients, but multiple presentation comprises less than 3% of all cases and appears to be predominant among women. Multiple eccrine spiroadenomas of linear, zosteriform, nevoid or following blaschko lines have been reported.[5-6]

CASE PRESENTATION

44-year-old male patient, who came to our institution for presenting a nodule on the left shoulder of 5 years of evolution. Initially the nodule did not present pain or associated pruritus and was gradually growing, presenting pain in the last 2 years. With no relevant personal or family medical pathological history, she denied any family member with similar skin findings or history of skin cancer. Physical examination revealed a subcutaneous, firm, smooth-surfaced, well-demarcated, bluish-gray nodule located on the left shoulder (Figure 1). Surgical excision of the subcutaneous lesion was performed and the tissue was submitted for microscopic examination.

DIAGNOSIS

Histologic findings demonstrated a nodule with defined borders located in the mid and deep dermis. The nodule is composed of basaloid cells arranged in small nests and cords or acini, in a sparse hyaline or edematous fibrous stroma. No evidence of malignant transformation was observed (Figure 2).

TREATMENT

The patient was treated by complete local excision with no recurrence in the following 2 years of follow-up.

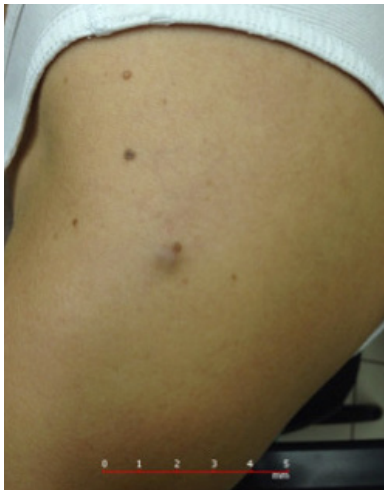
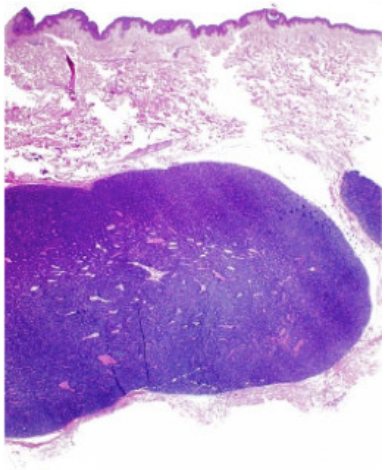


Figure 1. Firm, smooth-surfaced, well-demarcated, bluish-gray, subcutaneous nodule located on the left shoulder.



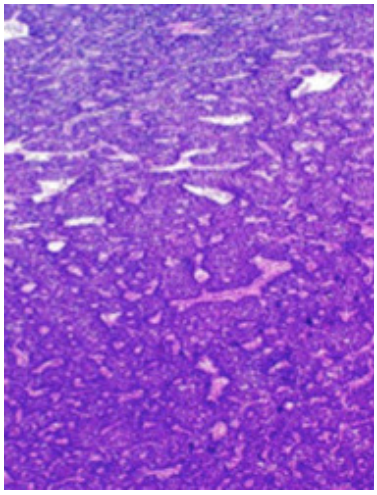


Figure 2. Histologic findings demonstrated a nodule with distinct borders located in the mid and deep dermis. The nodule is composed of basaloid cells arranged in small nests and cords or acini, in a sparse hyaline or edematous fibrous stroma. No evidence of malignant transformation was observed.

DISCUSSION

Eccrine spiroadenoma was first described by Kersting and Helwig in 1956.[4,2] It is a rare and benign adnexal tumor originating in the cutaneous eccrine sweat glands.[7] The etiology of eccrine spiroadenoma remains unknown. Although autosomal dominant transmission has been suggested, this has not been confirmed.[5,8]

Eccrine sweat glands are simple tubular glands that open directly to the surface; they are found throughout the body, especially on the palms, soles and axillae. 8 Eccrine spiroadenoma tends to arise in the upper body; head, neck and trunk, especially the ventral portion. Rarely, it may be located on the upper and lower extremities, especially the dorsal portion.[3]

It often occurs as a solitary, lobulated nodule of firm or soft and spongy texture, round or ovoid and blue in color, varying in size from 0.5 to 5 cm in diameter.[1,6]

It is among the most painful cutaneous tumors. Pain is the most distinctive clinical feature, it is described as discontinuous and intermittent, it is present in 91% of patients and helps to establish the diagnosis, but its absence does not rule it out.[7,9]

Hye Ran Park et al. hypothesized that pain in eccrine spiroadenoma is due to nerve fibers in the tumor capsule and stromal connective tissue that are thickened, hyperexcitable, and stimulated by pressure or mild cutaneous sensory stimuli.[10,11]

Few cases of multiple spiroadenomas have been reported in the literature to date, estimated to comprise less than 2% of all cases.[5] It has been proposed that they may arise from an abnormal clone of multipotent stem cells of the sebaceous follicle unit during embryogenesis, producing a proliferation of abnormal cells resulting in the formation of nodules.[6] They may be described as multifocal or localized, distributed in a linear, zosteriform, nevoid or blaschkoid pattern depending on their distribution.[5]

Although rare, malignant transformation has been reported in a few cases, it was first described in 1972. It can usually arise within 20 to 30 years after the initial lesion.[6] It spreads through the lymphatic and hematogenous pathways.[12]

Signs of malignancy include an increase in the size and number of lesions, color change and the appearance of signs such as ulceration and bleeding.[4]

Definitive diagnosis is based on histology and immunohistochemistry; it comprises large, sharply demarcated basophilic nodules (“cannonballs” or “blue balls”) arranged in interlacing cords, islands or sheets in the dermis or subcutaneous tissue that are surrounded by a fibrous capsule. Basaloid cells may be composed of two distinct morphologies with one type of cell being

larger, pale and with ovoid nuclei and the other type being smaller, darker and with compact hyperchromatic nuclei.[6] In certain cases lymphocyte infiltration and abundant telangiectasias are observed in the tumor region. When vascular hyperplasia is important a differential diagnosis should be made for glomus tumors.[1]

In addition, it must be differentiated from other clinically painful nodules, such as schwannomas, hemangiomas, angioleiomyomas, glomus tumors and cutaneous endometriosis.[13]

Standard treatment consists of surgical excision with wide margins of 1 to 3 cm. For cases of multiplicity or malignancy, options such as radiotherapy, carbon dioxide laser ablation or chemotherapy are considered. However, the latter as an adjuvant treatment is not well established.[6,12]

Follow-up of patients with malignant transformation must be very regular due to its poor prognosis; it has a mortality rate of up to 39% of cases in the absence of treatment.[7]

CONCLUSION

Eccrine spiroadenoma is a pathology not so frequent to observe. The location in the shoulder gives greater importance to the differential diagnosis with other tumor lesions in this location.

REFERENCES

1. Zheng, Y., Tian, Q., Wang, J., Dong, X., Jing, H., Wang, X., Feng, Y., & Xiao, S. (2014). Differential diagnosis of eccrine spiradenoma: A case report. Experimental and Therapeutic Medicine, 8(4), 1097–1101.
2. Ter Poorten, M. C., Barrett, K., & Cook, J. (2003). Familial eccrine spiradenoma: a case report and review of the literature. Dermatologic Surgery: Official Publication for American Society for Dermatologic Surgery [et Al.], 29(4), 411–414.
3. Son, J. H., Choi, Y. W., Cho, Y. S., Byun, Y. S., Chung, B. Y., Cho, H. J., Kim, H. O., & Park, C. W. (2017). A Case of Eccrine Spiradenoma: A Rarely Seen Soft Tissue Tumor on the Extensor Surface of Arm. Annals of Dermatology, 29(4), 519–522.
4. Cukic, O., Jovanovic, M. B., & Milutinovic, Z. (2019). An Unusual Nodule on the Auricle: Eccrine Spiradenoma. Ear, Nose, & Throat Journal, 98(9), 545–546.
5. Zheng, Y., Tian, Q., Wang, J., Dong, X., Jing, H., Wang, X., Feng, Y., & Xiao, S. (2014). Differential diagnosis of eccrine spiradenoma: A case report. Experimental and Therapeutic Medicine, 8(4), 1097–1101.
6. Englander, L., Emer, J. J., McClain, D., Amin, B., & Turner, R. B. (2011). A rare case of multiple segmental eccrine spiradenomas. The Journal of Clinical and Aesthetic Dermatology, 4(4), 38–44.
7. Salim, S., Bounniyt, H., El Amraoui, M., Benzekri, A., Senouci, K., & Hassam, B. (2018). Malignant transformation of a spiradenoma with blaschkoïd pattern. Clinical Case Reports, 6(11), 2086–2088.
8. Ren, F., Hu, Z., Kong, Q., & Sang, H. (2015). Multiple Segmental Eccrine Spiradenoma with a Zosteriform Pattern: A Case Report and Literature Review. Annals of Dermatology, 27(4), 435–438.
9. Revis, P., Chyu, J., & Medenica, M. (1988). Multiple eccrine spiradenoma: case report and review. In Journal of Cutaneous Pathology. (Vol. 15, Issue 4, pp. 226–229).
10. Donaldson, K., Scott, G., Cantor, F. K., Patronas, N. J., Quezado, M., & Heiss, J. D. (2018). Eccrine spiradenoma mimicking a painful traumatic neuroma: case report. Journal of Neurosurgery, 129(3), 825–828.
11. Park, H. R., Im, S. B., Kim, H. K., Shin, D. S., & Park, Y. L. (2012). Painful eccrine spiradenoma containing nerve fibers: a case report. Dermatology , 224(4), 301–306.
12. Otero JE, Carlo V, Trinidad J. Malignant eccrine spiradenoma of the neck: A case report, Otolaryngol Head Neck Surg. 2001. 125(4), 0-428
13. Xing, Y., Wu, X., Xu, C., Sun, L., Li, H., Zhang, Y., Xue, H., & Ye, Y. (2021). Ultrasonographic features of eccrine spiradenoma: A case report. Medicine, 100(14), e25469.