CASE REPORT

Pyogenic Hemorrhagic Granuloma Mimicking Pigmented Melanoma.

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ABSTRACT

Pyogenic granuloma (PG) also called lobular capillary hemangioma or granuloma teleangiectasicum, is a very common benign vascular tumor that can occur on both skin and mucosa, in both sexes and regardless of age. It is characterized by a rapid development and a fragile and easily hemorrhagic surface. We present a case of this pathology whose clinical and dermatoscopic manifestations did not conform to the usual ones of GP and review the therapeutic options.

INTRODUCTION

The GP or lobular capillary hemangioma is a very frequent benign vascular tumor whose location covers both skin and mucous membranes, with a friable and easily hemorrhagic surface, with a preferential presentation in children and young adults, although it can be observed at any age and sex, although it is observed more frequently in adult women than in men and with the particularity of its presentation in the oral mucosa in pregnant women, which is usually observed in the first five months of gestation. No frequent tendency to spontaneous disappearance is reported, so treatment is generally required for its cure.[1]

CASE REPORT

A 28-year-old female patient who reports presenting a rapidly developing lesion with two weeks of evolution and easy bleeding. The patient reports that she initially had a black spot (comedone) that she traumatized by becoming inflamed and secreting a serosanguinous material.

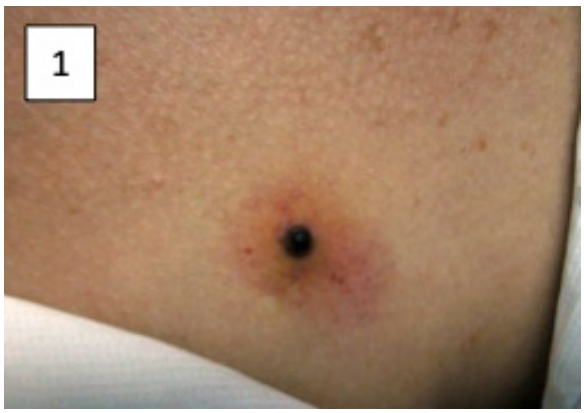

Photo 1. Clinical image of a dark pigmented lesion, surrounded by an inflammatory halo.

At the time of examination, the lesion was found located in the anterior thorax in the form of a blackish nodule with a diameter of 0.5 cm and surrounded by a reddish inflammatory halo with a diameter three times greater than the central lesion. (Photo 1)

In the dermoscopic examination (Photo 2) a rounded bluish-black lesion is observed, and its upper part

shows a whitish collarette while centrally a completely dark black pore appears.

The pathology report (Photo 3) reported:

MACROSCOPIC EXAMINATION: Fragment of skin, irregularly oval, blackish in color, measuring 0.3 cm along the major axis. When cut it is black. It is fully processed for histopathological study.

MICROSCOPIC EXAMINATION: The histological sections show a fragment of skin covered by extensively eroded epidermis and covered by a bloody crust. Hemorrhagic dermis with abundant blood vessels with a dilated lumen and areas of intense lymphocytic and neutrophilic inflammatory infiltrate. No malignant neoplastic changes are found.

DIAGNOSIS: Biopsy of an anterior chest skin lesion. PYOGENIC GRANULOMA.

DISCUSSION

GP is a common vascular proliferation that affects the skin and mucous membranes and, although it is benign in nature, is characterized by rapid growth and recurrent bleeding episodes. It usually appears as a single pedunculated or sessile lesion, but patients with multiple lesions may be seen. It appears as a small red papule that grows for weeks or months before stabilizing.

Various clinical variants have been described, such as the congenital, the disseminated in which the lesions frequently regress spontaneously, or the mucosal variant. Its pathophysiology remains unknown, but various mechanisms are invoked such as pregnancy, trauma, cancer therapy, laser therapy, and various drugs such as oral retinoids, contraceptives, topical 5-fluoracil, cyclosporine, tacrolimus, and antiretrovirals, among others,[2] but in general, the Most pathogenic theories revolve around a hyperplastic and neovascular response to an angiogenic stimulus, and de novo vasculogenesis from primitive stem cells is postulated.[1] Its appearance has been reported on capillary vascular malformations.

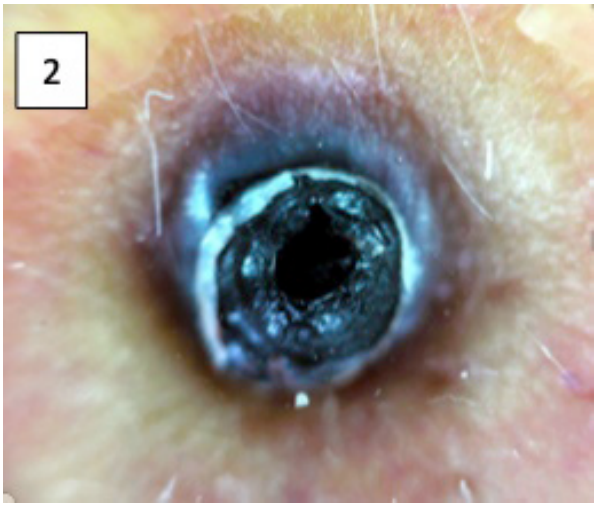

Photo 2. Dermoscopy allows us to observe a bluish-black lesion with a whitish collarette on the cusp that surrounds an irregular-looking crater of the same color.

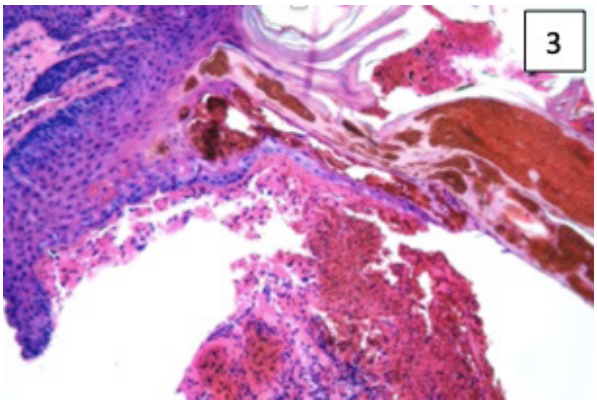

Photo 3. Histopathology showing eroded epidermis covered by bloody crust and hemorrhagic dermis with abundant blood vessels with dilated lumen and areas of intense lymphocytic and neutrophilic inflammatory infiltrate.

Although the diagnosis is generally clinical, histopathological confirmation may be useful to exclude differential diagnoses, as in our case.

Dermoscopy has been invoked as a non-invasive diagnostic aid technique, and it shows a pinkish papule, many times homogeneous, surrounded by a whitish collar of scales and the presence of white rail lines that intersect inside the papule. separating it into reddish septa that in turn represent the fibrous septa that are observed in histopathology. The presence of vascular structures with vessels that take different shapes is also observed: dotted, loop, irregular linear or telangiectatic, and that, together with the previous characteristics, give

rise to different reported patterns such as: homogeneous red with white collar, red homogeneous with white lines in rail, homogeneous red with vascular structures, homogeneous red with collarette and white lines.[3,4]

In our patient, the lesion deviates from both the clinical and dermoscopic pattern of the GP and if we remember that in the past, before the appearance of dermoscopy, it was reported in a series of cases[5] that 38% of clinical diagnoses were erroneous, we can then understand the importance of the contribution of dermoscopy for a more accurate diagnosis of GP.

However, in this specific case these characteristics were absent, so it is necessary to remember that multiple differential diagnoses have been evoked with benign and malignant tumors, and among the latter is malignant melanoma. This tumor has well-known clinical characteristics as well as established dermoscopic manifestations such as: an atypical or absent pigmentary pattern, irregular striae, a whitish-blue veil, areas resembling scars, bright white streaks, areas of regression, irregular or peripheral blood cells, atypical spots.[6,7]

In this patient, the lesion did not present the clinical characteristics of GP since the absence of a pink papule was noted and it did not present a pedicle either. Its compact bluish-black color suggested a melanocytic lesion and among them a melanoma, a differential diagnosis that has already been established. reported in other cases[8] and in terms of dermatoscopy, neither the collarette nor the whitish lines in rail were observed, but a bluish-black color not typical of the GP was visualized, however, it did not present the dermoscopic structures typical of melanoma either. Therefore, given its short evolution time and the traumatic history of an apparent comedone.

Multiple therapeutic options have been proposed for this pathology: electrodesiccation, cryotherapy, curettage, shaving excision, sclerotherapy, corticosteroid injection, application of imiquimod 5% cream,[9] systemic propanolol, reported in eruptive GP with good results;[10] intralesional injection of bleomycin,[11] topical timolol;[12,13] laser;[14] surgical excision, application of silver nitrate, punch excision, diathermy, etc.[15] Electrodesiccation was performed in our patient without subsequent recurrence.

REFERENCES

1. Lawley LP. Pyogenic granuloma (lobular capillary hemangioma) UpToDate 2021
2. Bernales A. Pyogenic granuloma – just salt a simple and pain free treatment. Dermatologic Therapy. 2022;35:e15194.
3. Zaballos P., Carulla M., Ozdemir F., Zalaudek I., Bañuls J., Llambrich A., Puig S., Argenziano G., Malvehy J. Dermoscopy of pyogenic granuloma: a morphological study. British Association of Dermatologists 2010; 163: 1229–1237
4. Puravoor J., Feroze K., Haritha R. Dermoscopy Aided Diagnosis of Nose Ring Associated Pyogenic Granuloma Indian Dermatology Online Journal 2020;190:436-437
5. Rowe L. Granuloma pyogenicum. AMA Arch Dermatol 1958; 78: 341-347.
6. Tognetti L., Cartocci A., Bertello M., Giordani M., Cinotti E., Cavenini G.m, Rubegni P. An Uddated Algorithm Integrated With Patient Data for the Differentiation of Atypical Nevi From Early Melanomas: the idScore 2021. Dermatology Practical & Conceptual 2022; 12: e2022134
7. Polesie S., Sundback L., Gillsted M., Ceder H., Dahlren J.,Foulgelberg J., Johansson E., Pakka J., Zaar O., Paoli J. Interobserver Agreement on Dermoscopic Features and their Associations with In Situ and Invasive Cutaneous Melanomas. Acta Derm Venereol 2021; 101: adv00570
8. Zaballos MP., Rodero J., Serrano P., Cuellar F., Guionnet N., Vives JM. Pyogenic granuloma clinically and dermoscopically mimicking pigmented melanoma. Dermatology Online Journal 2009;15: 10
9. Ravishankar D., Kusagur MS. Therapeutic vanish in pyogenic granuloma: a case series. International Journal of Research in Dermatology 2020; 6: 553–555
10. Fattore D., Di Guida A., Detoraki A., De Fata G., Gawllo L., Fabbrocini G. Successful treatment of eruptive pyogenic granuloma with propranolol Dermatologic Therapy. 2021;34:e14998
11. Khurana A., Mathachan SR. Efficacy of bleomycin as a treatment modality in pyogenic granuloma: a case series. Dermatologic Therapy. 2021;34:e15024.

12. Hoyer P., Ly P., Ross L., Wilkerson M. Timolol for Treatment of Recalcitrant Pyogenic Granuloma: a Case Report and Review of the Literature. The National Society forn Cutaneous Medicine 2017; 1:150-155.
13. El-Taweel AE-AI, Al-Refaie A-AA-SA, Salem KHA, Salem RM. Topical β-blockers for pyogenic granulomas: A promising option for younger patients. J Cosmet Dermatol. 2021;20:1801–1806.
14. Ponomarev IV, Topchiy SB, Andrusenko YN, Shakina LD. Treatment of pyogenic granuloma in children with copper vapor laser radiation (578 nm). Indian J Dermatol Venereol Leprol 2021;87:856-8.
15. Lee J., Sinno H., Tahiri Y., Gilardino MS. Treatment options for cutaneous pyogenic granulomas: A review Journal of Plastic, Reconstructive & Aesthetic Surgery (2011) 64, 1216e1220.