



PYOGENIC GRANULOMA OCCURRING AT AN UNUSUAL SITE A CASE REPORT

Dermatology

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ABSTRACT

Pyogenic granuloma is a relatively common and benign condition characterized by localized capillary proliferation often as a reaction to several factors. It can occur in any age group with no sex predilection however oral mucosal lesions have been reported more commonly in women. Though it is very commonly reported to occur in head, neck, digits, oral mucosa and upper trunk, we report a case of pyogenic granuloma occurring on the anterior surface of the scrotum which is an unusual site for the condition

KEYWORDS

INTRODUCTION:

Pyogenic granuloma as a term was first coined by Hartzell in the year 1904, it is known by various other names namely 'proud flesh', 'granuloma pyogenicum', 'Band-Aid disease' etc. however the term pyogenic granuloma itself is a misnomer as the condition is neither infectious nor granulomatous hence the histopathological description 'Lobular capillary hemangioma' is the preferred term¹. It is a benign vascular lesion whose exact cause is uncertain however various etiological factors can be linked to its occurrence such as trauma, bacterial infections (evidenced by isolation of staphylococcus aureus in many instances), hormonal influences (a common occurrence in pregnant women² and women on oral contraceptives), certain drugs and possible viral etiology. Clinically it presents as a red rapidly growing papule or nodule with a subtle collaret of scales. The lesion may be painful and it usually ulcerates causing substantial bleeding on minor trauma.

The condition is common in children and young adults. Preferred sites for the tumor is face, oral mucosa, upper trunk, and digits though it has been reported to occur in less common sites like internal viscera, CNS and bladder etc. Here we report one such occurrence of the condition over the scrotum of a young adult male patient.

CASE REPORT:

A 27 year old male patient came with complaints of a lump over his scrotum for one month duration. It started as a small nodule which upon scratching with his finger nail caused bleeding following which he noted an increase in the size of the lesion over the past two weeks associated with pain. Patient gave no positive history of fever, sexual contact or drug exposure prior to the appearance of the lesion. Patient had no known comorbidities.

General and systemic examination revealed no abnormalities. Local examination revealed a flesh coloured protruding mass of dimensions 5x2x3 mm with areas of erythema over the junction between the base of the penis and anterior surface of scrotum on the left side. Lesion was slightly tender on palpation with a soft to firm consistency. No ulcer or active bleeding was noted over the lesion.

The lesion was removed from its base using electro cautery and the specimen was sent for histopathological study. Substantial bleeding was encountered during the procedure but hemostasis was achieved following removal and the patient was prescribed topical mupirocin cream.

Biopsy revealed a mass consisting of multiple dilated blood spaces lined by a single layer of endothelium embedded within an edematous stroma and covered by an epithelial collarette at its base. The findings were consistent with that of pyogenic granuloma.

DISCUSSION:

Pyogenic granuloma is a common benign vascular nodule consisting of capillary proliferation that develops rapidly in reaction to various stimuli. It shows no particular sex predilection however oral cavity lesions have been reported more commonly in females during the time of pregnancy. It has a wide age distribution however its peak incidence happens to be during the second decade.

Although no definite etiological factors can be ascertained to the occurrence of pyogenic granuloma, minor penetrating trauma at the site usually precedes the development of the lesion. Other factors that have been linked to its occurrence are staphylococcus infection, viral oncogenes, hormonal influence, anti-cancer drugs like 5-FU and capecitabine.^{3,4}, anti-retroviral drugs⁵ and retinoids⁶. Common sites of involvement are the oral cavity, head, neck, digits and upper trunk.

Clinically the lesion presents as a bright red to brownish nodule that rapidly grows in size over a few weeks and then stabilizes. Lesions are often pedunculated with a smooth surface however sessile lesions with a red verrucous surface are not uncommon. The lesion may be partially compressed however it cannot be completely blanched. Lesions usually get eroded causing recurrent bleeding. Disseminated⁷ and eruptive variants of the condition has been reported which warrants further investigations to distinguish it from more serious conditions like bacillary angiomatosis. Subcutaneous types and intravascular pyogenic granulomas have also been documented.

Under the microscope the lesion is composed of multiple dilated vascular channels lined with single layer of endothelium, in the papillary and upper reticular dermis. A thin layer of epidermis lines a part of, or entire mass forming a collarette at the base. The vascular channels are embedded within a myxoid stroma with a mixed cellular infiltrate consisting of fibroblasts, lymphocytes, mast cells and occasionally neutrophils. Chronic lesions may show small foci of local bone formation. Bacillary angiomatosis presents with a strikingly similar histopathological appearance but shows more paler endothelial cells with a more prominent neutrophilic infiltration, also Giemsa or Warthin-starry stains will be able to demonstrate bacterial aggregates within these lesions. Clinically some lesions may resemble

keratoacanthomas, inflamed seborrhoeic keratosis, angioma, eccrine poromas, Kaposi sarcoma and viral warts which may then pose a diagnostic challenge. In our case, we suspected a genital wart with secondary cutaneous horn formation.

Pyogenic granuloma carries a very good prognosis. Simple surgical excision using scalpel or electrodesiccation followed by hemostasis is curative in most cases however recurrence following excision is not rare. Cryosurgery⁸ and laser assisted removal⁹ are also available options. Topical imiquimod¹⁰, Alitretinoin gel, beta adrenergic receptor antagonists have all been tried with success. Reports of Intralesional injection with bleomycin and chemical sclerosants have been published.

CONCLUSION:

Pyogenic granuloma is a common and benign vascular tumour that develops as a reactive process against various inciting stimulus, most often minor penetrating trauma. The tumour consists of capillary proliferations when viewed under the microscope. The common sites for the tumour are the oral cavity, face, upper trunk and the digits however it can uncommonly occur at visceral sites such as aero digestive tract and CNS. We have reported an unusual case of pyogenic granuloma occurring at the penoscrotal junction in a young adult.

ACKNOWLEDGEMENT:

None

CONFLICT OF INTEREST:

The authors declare there is no conflict of interest



FIGURE 1: Clinical picture showing the lesion over the penoscrotal junction

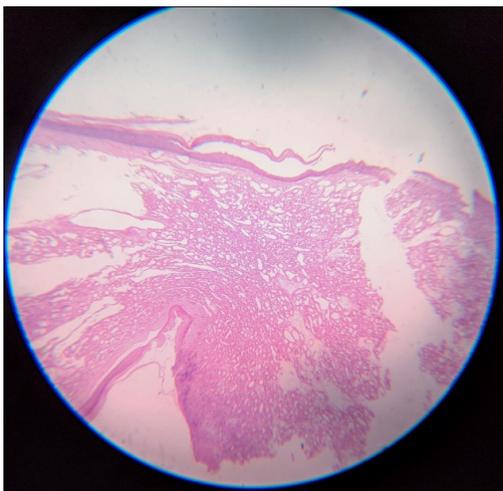


FIGURE 2: Histopathological picture in scanning view showing multiple dilated spaces in the dermis lined by a thin layer of epidermis

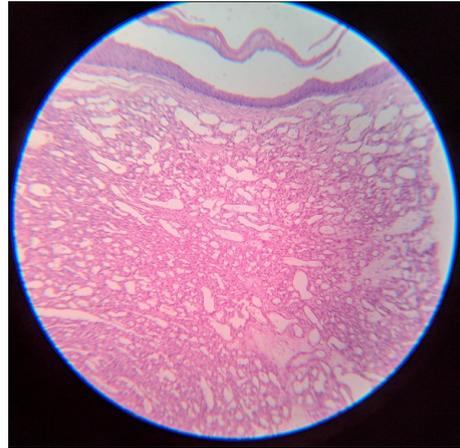


FIGURE 3: Histopathological picture in low power showing distinctive lobules of dilated capillaries lined by a single layer of endothelium embedded within an edematous stroma

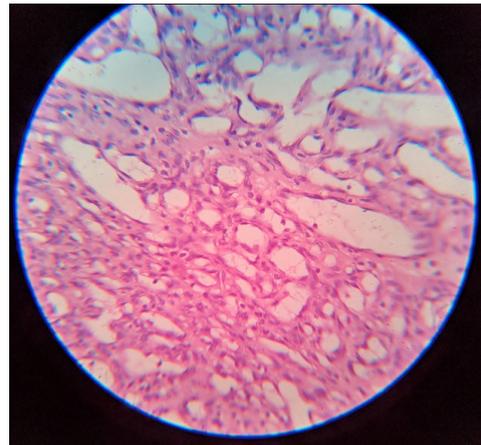


FIGURE 4: Histopathological picture in high power demonstrating the mixed cellular infiltrate in the stroma

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