

VEGETATIVE GRANULOMA : A DIAGNOSIS SELDOM SUSPECTED CLINICALLY

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ABSTRACT

Vegetative granuloma is granulomatous foreign body response to impaction of vegetative or plant material in periapical and sulcus areas of oral cavity, generally secondary to trauma and/or poor oral hygiene. Other names being used in literature for vegetative granuloma are pulse granuloma, chronic mandibular periostitis, hyaline ring granuloma and giant cell hyaline angiopathy. Most cases are seldom suspected clinically and confirmed by microscopic examination only. We present here a case of 42 years old female with peanut sized nodular swelling over left maxilla associated with gradually increasing pain since 3 months. Her oral examination revealed poor oral hygiene. Radiological investigation depicted soft tissue swelling without any bony involvement. Histomorphology showed tissue lined by hypertrophied stratified squamous epithelium having vegetative matter impacted in fibro-collagenous stroma surrounded by prominent giant cell reaction with well-formed granulomas, suggestive of diagnosis of vegetative granuloma. It is important to correctly diagnose this entity as it is an uncommon one and rarely encountered in routine practice. It may clinically mimic as malignancy or tuberculosis at times, hence an accurate diagnosis saves from undue over treatment. Vegetative granuloma is treated by complete excision of lesion and maintenance of oral hygiene to prevent recurrence.

KEYWORDS: Vegetative material, Granuloma, Oral cavity.

INTRODUCTION

Vegetative granuloma is chronic inflammatory response in form of granulomatous reaction to vegetative or plant material remains in periapical and/or sulcus areas of oral cavity. Due to poor oral hygiene of oral cavity and/or compromised periodontal health, there is impaction of food particles leading to foreign body reaction in form of granuloma formation (1). It mostly occurs in posterior region of mandible where food impaction is common (2). In literature other terms used for vegetative granuloma are pulse granuloma, chronic mandibular periostitis, hyaline ring granuloma and giant cell hyaline angiopathy (3). These lesions are usually seen in periapical and sulcus areas but may also occur in wall of inflammatory odontogenic cyst. Pulse granuloma has usually been reported in lungs of infants and severely debilitated patients due to aspiration of pulses, thus deriving its name (2-3).

CASE REPORT

A 42 years old female presented with a peanut sized nodular swelling over maxilla associated with gradually increasing pain since 3 months. On physical examination the patient had poor oral hygiene. On extraoral examination she had diffuse swelling over left side of cheek. Rest of the systemic examination was

non-contributory. Radiological investigation showed soft tissue swelling devoid of any bony involvement. Histomorphology showed tissue lined by hypertrophied stratified squamous epithelium showing parakeratosis, focal reactive atypia with unremarkable rete ridges. Underlying zone revealed vegetative matter impacted in fibro collagenous stroma. Surrounding stroma showed giant cell reaction in form of numerous multinucleated foreign body giant cells along with few well-formed granulomas admixed with dense chronic mononuclear inflammatory infiltrate (Fig. 1).

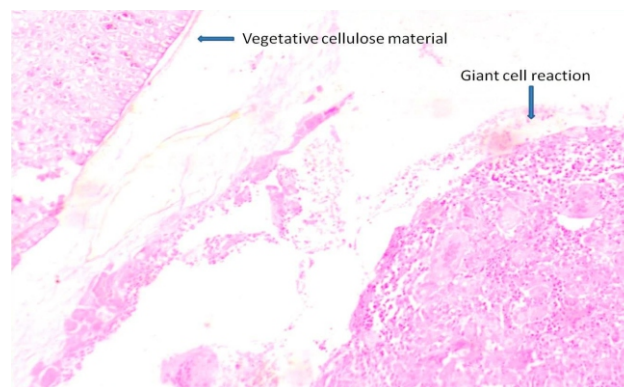


Fig. 1: Vegetative Cellulose Material Surrounded by well formed Granulomas

Acid fast bacilli and Periodic acid Schiff stains didn't reveal any micro-organisms. These histomorphological features were consistent with diagnosis of vegetative granuloma. As vegetative material with cellulose lining was clearly identified in the lesion, there was no confusion with any other differential diagnosis for granuloma formation.

DISCUSSION

Vegetative granuloma is a seldom reported entity in literature that denotes vegetative material induced granulomatous reaction, predominantly in oral cavity. It may present as a recurrent swelling, painful or at times asymptomatic, with duration ranging from 2 weeks to several years. Most commonly encountered site is posterior region of mandible on its buccal aspect. The vegetative granuloma pathogenesis is divided into two groups on the basis of origin; exogenous or endogenous. Exogenous origin includes impaction of vegetative material due to poor oral hygiene or compromised periodontal health or traumatic implantation during extraction of sockets, and deep periodontal pockets. Endogenous origin includes giant cell hyaline angiopathy due to degenerative changes in walls of blood vessels (4-5). In vegetative material, cellulose moiety of plants is not digested by human body and it remains as hyaline material which induces granulomatous response (6-7). Pulse granulomas are types of vegetative granulomas, depicted as hyaline rings girdled by chronic inflammatory cells and multinucleated giant cells, first described in lungs of infants and severe debilitated individuals after aspiration of fragments of pulses. The pulse word is derived from legume cells which provoke foreign body reaction. Vegetative granulomas are also associated with other lesions like keratocystic odontogenic tumour. Most cases of vegetative granulomas are diagnosed on basis of microscopic examination rather clinically. Differential diagnosis includes other etiologies of superficial pyogenic granuloma viz. tuberculosis verrucosa cutis, blastomycosis, bromoderma etc. Vegetative granuloma is easy to differentiate from all

these entities due to presence of readily identifiable cellulose material. Treatment of vegetative granuloma is complete excision of lesion and maintenance of oral hygiene to prevent recurrence (6-8).

CONCLUSION

It is important to diagnose vegetative granuloma as a pathological entity as well as keep it as one of the differential diagnosis while dealing with nodular swellings in and around oral cavity particularly in those with poor oral hygiene and no systemic symptoms of neoplasia.

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