



INTRADUCTAL PAPILLOMA – A CASE REPORT AND REVIEW OF LITERATURE

Oral Pathology

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ABSTRACT

Intraductal papilloma is a benign neoplasm that typically arises in the mammary glands of the breast. Similar growth pattern can also be observed in the salivary glands, where it is known as intraductal papilloma of the minor salivary glands. In this case report we are discussing about a 19 year old male patient where the tumor is characterized by a papillary growth pattern of the salivary gland duct epithelium, and it is often associated with dilatation of the ducts. The epithelial cells that line the papillae may show variable degrees of dysplasia, but they are typically benign in nature. Histopathological examination with appropriate immunohistochemical panels may be used to help distinguish intraductal papilloma from intraoral cystic lesions and other benign or malignant tumours.

KEYWORDS

INTRODUCTION

Intraductal papilloma is a benign neoplasm that typically arises in the mammary glands of the breast. However, a similar growth pattern can also be observed in the salivary glands, where it is known as intraductal papilloma of the minor salivary glands. This variation is also sometimes referred to as intraoral papilloma.¹

Intraductal papilloma of the minor salivary glands is a rare lesion, and its etiology is not completely understood. It is typically observed in the upper lip, buccal mucosa, and palate regions of the oral cavity. The tumor is characterized by a papillary growth pattern of the salivary gland duct epithelium, and it is often associated with dilatation of the ducts.

Intraductal papilloma of the minor salivary gland is different from the more common oral papillomas that arise from the squamous epithelial cells of the oral mucosa. Intraoral papilloma is a growth of squamous cells due to the infection of the human papillomavirus (HPV). In contrast, intraductal papilloma of the minor salivary gland does not seem to be associated with HPV infection.

The diagnosis of intraductal papilloma is achieved through histological examination of a biopsy taken from the lesion. Treatment for the intraductal papilloma of the minor salivary glands typically involves complete surgical excision, and the prognosis is generally very good. In many cases, these tumors do not recur after excision, although long term follow-up with imaging techniques may be recommended to ensure complete removal of any remaining tissue.^{2,3}

Intraductal papilloma of the minor salivary glands is a relatively rare lesion, and its history is not well documented in the literature. The first case report of intraoral intraductal papilloma was published in 1967 by Brothwell and Oliver, who described a case of papilloma arising from the minor salivary glands of the palate in a 47-year-old woman.

Since then, several cases of intraoral intraductal papilloma have been reported in the literature, predominantly in adults in their 4th-6th decade of life, with a slight preference for women. The most common site of occurrence is the palate, but the upper lip, gingiva, buccal mucosa, and tongue have also been reported as sites of involvement.

The etiology of intraoral intraductal papilloma remains unclear, but some theories suggest that it may be related to hormonal changes, genetic factors, or trauma to the minor salivary glands.⁴ There is no known association with human papillomavirus, in contrast to oral papillomas that arise from the squamous epithelial cells of the oral mucosa.

Treatment for intraoral intraductal papilloma typically involves complete surgical excision, and the prognosis is generally very good.⁵ In most cases, the lesions do not recur after excision, although postoperative imaging techniques may be recommended to ensure complete removal of any remaining tissue.

A 19-year-old male patient presented with a chief complaint of swelling in the upper right back tooth region since 4 months. On intra oral examination, an ovoid shaped swelling of size 4x3 cm, with irregular surface is seen on the palatal aspect extending from 13 to 16 region without crossing the midline (Fig 1). Intra oral periapical radiograph reveals a thin radiolucent line extending from 13 to 16 region. The lesion is excised and the samples are sent to the Department of Oral Pathology & Microbiology. On macroscopic examination of the received specimen is dark brownish in colour, firm in consistency, the specimen is sectioned into two equal halves. Entire tissue was kept for processing. On microscopic examination, the haematoxylin and eosin-stained soft tissue specimen exhibits papillomatous ductal epithelium and connective tissue capsule (Fig 2). These papillary epithelial projections are proliferating into the cystic lumen and are lined by cuboidal to columnar cells (Fig 3). The connective tissue stroma also exhibits a few dilated salivary gland ducts with mucin secretions and comedo necrosis (Fig 4). Based on overall clinical and radiographical features and their correlation with the histopathological features the final diagnosis is suggestive of "Intraductal Papilloma".

DISCUSSION

The histopathological features of intraoral intraductal papilloma are similar to those of intraductal papilloma that arises in the mammary gland. The tumor is characterized by a papillary growth pattern of the salivary gland duct epithelium, and the papillae are covered by a layer of benign epithelial cells.^{6,7} The core of the papillae is composed of stroma, and there may be a central fibrovascular core.

In some cases, the stroma may be edematous and contain lymphoid cells, plasma cells, and other inflammatory cells. The epithelial cells that line the papillae may show variable degrees of dysplasia, but they are typically benign in nature. Mitotic figures are uncommon, and there is no evidence of invasive growth into the surrounding tissues.⁸

Intraductal papilloma of the minor salivary glands can be distinguished from other oral lesions, such as squamous papilloma, mucocoele, and salivary gland neoplasm, through histopathological examination of the biopsy specimen.⁹ Squamous papilloma, for example, is characterized by a growth of squamous epithelial cells, while mucocoeles are cystic lesions that arise from the minor salivary glands.¹⁰

Summary

Overall, the histopathological features of intraoral intraductal papilloma are similar to those of intraductal papilloma of the breast, and excisional biopsy is the recommended treatment for this lesion. Histopathological examination with appropriate immunohistochemical panels may be used to help distinguish intraductal papilloma from intraoral cystic lesions and other benign or malignant tumours.

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