

Case Report

SQUAMOUS PAPILLOMA OF LARYNX- CLINICO-PATHOLOGICAL PERSPECTIVE

***Harendra K. Gautam**

Department of Ear Nose and Throat, Ganesh Shanker Vidyarthi Memorial, Medical College, Kanpur

**Author for Correspondence*

ABSTRACT

Laryngeal papilloma is a warty growth causes change in voice and air way obstruction. It is rare in female. On fibro laryngoscopy papillomatous growth is present on anterior 1/3 of left vocal cord. This is manage by micro laryngeal surgery. On histopathological examination, it is shows keratinising epithelium overlying a fibrovascular, koilocytosis, vaculated cells with clear cytoplasm and severe degree of dysplasia and metaplasia.

Keywords: Vocal Cord, Squamous Papilloma and Metaplasia

INTRODUCTION

Laryngeal papilloma is a warty growth in the upper airway may cause significant airway obstruction or voice change (Verma *et al.*, 2015). Laryngeal papilloma has a bimodal age distribution and manifests most commonly in children younger than 5 years (juvenile-onset) or in persons in the fourth decade of life (San Giorgi *et al.*, 2015). Juvenile is more common and more severe than adult. Juvenile is caused by exposure to HPV during the peripartum period.

Treatment usually involves repeated debulking of the warty growths by angiolytic laser or microdebridement coupled with intralesional cidofovir therapy in patients with moderate or severe disease. In 3-5% of patients, laryngeal papillomas may undergo malignant degeneration to squamous cell carcinoma, and the prognosis for patients with these cancers is quite poor (Michaels *et al.*, 1995).

CASES

A 18 year-old female presented to the Otolaryngology Department, GSVM Medical College and Hospital (a tertiary care centre in Kanpur) with history of change in voice and occasionally.

Difficulty in breathing and the patient had no significant past medical history.

On examination the patient was conscious and orientated to time place and person, haemodynamically stable. Indirect laryngoscopy revealed papillomatous growth was present on left side true vocal cord and false vocal cord. On fibroptic laryngoscopy show papillomatous growth was present on anterior 1/3 of left true vocal cord and part of false vocal cord, left vocal cord movement was sluggish and vocal chink was reduce (Figure 1).

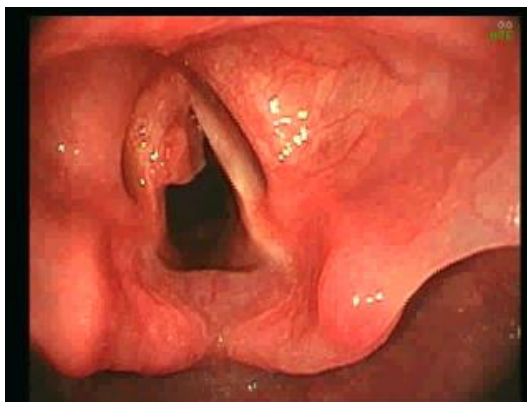


Figure 1: Fibrolaryngoscopic View of Laryngeal Papilloma

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This patient was admitted to ward and all papillomatous growth was removed by microlaryngeal surgery under general anaesthesia and specimen was sent for histopathological examination. The patient's post-operative recovery was uneventful. On histopathological finding show a papillary appearance and the exophytic growth of keratinized squamous epithelium overlying a fibrovascular core. Koilocytes, vacuolated cells with clear cytoplasmic inclusions. Metaplasia and dysplasia occur in varying degrees (Figures 2-3).

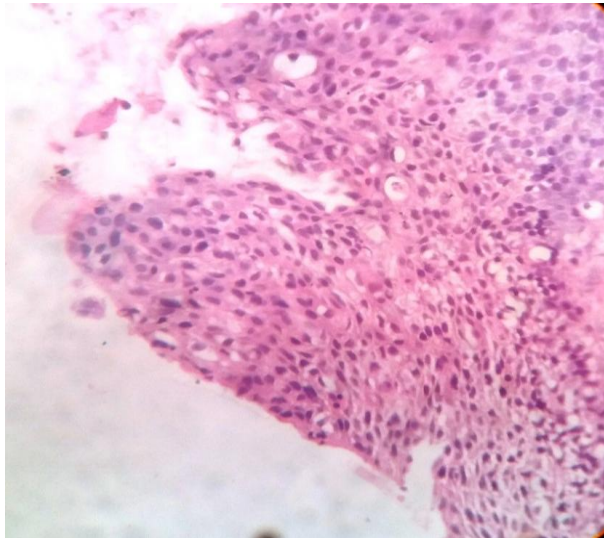


Figure 2: H&E x400- Section Show Papillae Lined by Stratified Squamous Epithelium with few Oncocytic Cells



Figure 3: H&E x100- Section Shows Papillomas Lined by Stratified Squamous Epithelium Showing Parakeratosis and Displaying a Central Fibrovascular Core

DISUSSION

Papilloma is a benign exophytic neoplasm of epithelium on a connective tissue core. In the larynx the stratified squamous variety is the commonest form of papilloma. They are found in both adults and children but in the latter, because of the much narrower diameter of the airway, the symptoms are more serious and treatment is more urgent and difficult. It is thus, customary to divide the condition on the basis of the age of the patient into juvenile and adult types. In some juvenile cases the papillomas persist into adult life. Hoarseness is the most common presenting symptom. Other symptoms include choking episodes, foreign body sensation in the throat, cough, dyspnea inspiratory wheeze and stridor. Confirmation in patients presenting with hoarseness or voice change requires visualization of the vocal cords. Because laryngeal involvement occurs in more than 95% of patients, direct laryngoscopy reveals the characteristic warty growths (Capper *et al.*, 1983).

The goals of therapy are to relieve airway obstruction, improve voice quality, and facilitate remission. The primary treatment involves repeated surgical debulking, usually by means of microdebridement, angiolytic laser, cryotherapy, or carbon dioxide laser. This may be followed by an injection of cidofovir into the resection site in patients with moderate-to-severe disease (Steinberg *et al.*, 1988). In 3-5% of patients, laryngeal papillomas may undergo malignant degeneration to squamous cell carcinoma, and the prognosis for patients with these cancers is quite poor.

The histopathological appearances are similar at all ages. By far the commonest site of occurrence of squamous papilloma in the larynx is the vocal cord, usually in the anterior half. Multiple papillomas may, particularly in children, spread upwards to the supraglottis, pharynx and soft palate. Squamous papillomas range from white to red, and are delicate, granular, polypoid structures which vary from 1-10 mm in diameter, most being less than 5 mm. In florid cases the papillomas form a solid field of mucosal

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thickening without invasion deep to mucosa. Under magnification, small individual papillae can be discerned as blunt finger-like processes with branches, which never become long and filiform.

Microscopically, the papillary processes are seen as cylindrical projections with smaller off shoots of squamous-cell-covered epithelium cut in various planes, being second or even third order branching of the papillary structures. In a minority of cases there is keratosis in which layers of completely keratinized enucleate cells are seen on the surface of the papillae. Sometimes cells of the squamous epithelial covering of the papillae show atypical change, a situation which is frequently related to the presence of koilocytosis. Epithelial atypia has been alleged to be associated with rapid recurrence of papillomas and increased risk of progression to carcinoma (Walsh and Beamer, 1950). Koilocytosis is frequently seen in the upper, intermediate and superficial zones of the squamous epithelium of laryngeal papillomas. It consists of a spherical enlargement of the cells of the lesion, accompanied by perinuclear vacuolation. Papillomas showing respiratory epithelial hyperplasia have a decided tendency to recur. Difficulty may be experienced in distinguishing two other types of neoplastic lesion, which occur particularly often on the vocal cords, from squamous papilloma, keratotic plaque with dysplasia; and carcinoma of both verrucous squamous and regular types (Cooper *et al.*, 1992). Raised plaques composed of thickened squamous epithelium with a keratinized surface are seen quite frequently in biopsy. They show a mild to severe degree of dysplasia of the deeper layers of their squamous cells. It is important to separate these lesions from squamous papillomas because the former have a malignant potential which is not possessed by the latter. It seems likely that squamous papillomas of the larynx are also caused by this virus. The presence of HPV 6 and 11 may also be used to monitor interferon treatment. The presence of signal for virus is closely correlated with that of koilocytosis in routinely stained sections (Quiney *et al.*, 1989).

Conclusion

Laryngeal papilloma of vocal cord is rare in female. It is presented mainly change in voice and airway obstruction and warty growth on vocal cord. This is manage by micro laryngeal surgery. Histopathological finding are shows keratinising epithelium overlying a fibrovascular, koilocytosis, vacuolated cells with clear cytoplasm and severe degree of dysplasia and metaplasia.

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