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## PLEOMORPHIC ADENOMA OF THE HARD PALATE IN A 61-YEAR-OLD PATIENT

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## **Summary**

The article describes a case of pleomorphic adenoma in a 61-year-old patient, its diagnostic methods and treatment.

**Key words: pleomorphic adenoma, mixed tumor, surgical treatment**

## **Introduction**

Lesions of hard palate can be caused by a great number of factors such as bacterial infection, allergic reaction or other lesion, even a malignant one. Risk factors that may predispose patients to occurrence of benign and pre-malignant oral cavity lesions include alcohol and tobacco products. Also minor injuries of oral cavity mucosa and HPV virus can be included in this group. As long as benign lesions are not considered life threatening, the pre-malignant lesions can undergo malignant transformation.

Lesions, which lack the ability of invading neighbouring tissue or metastasize, whose structure resemble healthy tissues and are characterised by slow growth, are included in the group of benign tumours. Pre-malignant lesions, in turn, are chronic lesions of oral mucosa, in which the cancer can develop. They should not be confused with pre-malignant condition which is a much more complex concept, featuring systemic diseases, and which progress with a much higher risk of cancer development. Both benign and pre-malignant lesions may present as tumours, hyperplastic lesions or ulcerations.

The squamous cell papilloma is considered as the most common benign lesion. This group also consists of fibromas, haemangiomas and adenomas deriving from small salivary glands. Their treatment is not very complicated and consists in surgical removal of the lesion, or alternatively removal with cryotherapy or laser.

Benign lesions of oral cavity are primarily leukoplakia, erythroplakia and lichen planus. Pre-malignant lesions include keratoid papillomas, florid papillomatosis and chronic desquamative inflammation of lip glands, also cheilitis caused by acute sun exposure, whereas the Plummer syndrome is considered a precancerous state.

The aim of this study is a detailed description of an oral cavity tumor located on the palate of a 61-year-old woman, which turned out to be a pleomorphic adenoma.

## **Case report**

A 61-year-old patient has been admitted on the 11<sup>th</sup> of April, 2017 to the Oral Surgery Department of Medical University of Lodz, due to an indolent tumor located on the mucosa of hard palate, bordering the soft palate, of 2 cm diameter (fig. 1).



Fig. 1. Clinical image of the pleomorphic adenoma

The patient acknowledged the presence of the tumor 5 years ago. CBCT examination showed no connection to the surface. On the 12<sup>th</sup> of April fine-needle aspiration biopsy has been performed, which showed the presence of fusiform cells of non-epithelial origin, without atypical characteristics. The cytological image was in favor of a benign lesion. On the 27<sup>th</sup> of April the excision of the tumor was performed. The surgery was performed in local anaesthesia with a carbon dioxide laser (fig 2, 3), also 2 supplying blood vessels have been ligated and the nerve dissected (fig. 4, 5). The patient has been informed about a possibility of sensation loss within the hard palate on the right side. The material has been sent for histopathological verification (fig. 6), which results confirmed the suspicions of pleomorphic adenoma.

### **Discussion**

The pleomorphic adenoma, also known as mixed tumour, is a benign neoplasm, built out of epithelial and myoepithelial components, and mesenchymal stromal cells. Almost 80% of all salivary gland tumours is located in the parotid gland, 10 to 25% in the submandibular gland and only few percent in sublingual glands [1, 2]. However it can also appear in small salivary glands of the oral cavity, lips, maxillary sinuses, and also lacrimal glands. The tumor is always located unilaterally; it grows slowly, usually for few years. It shows female

predilection.



Fig. 2. Carbon dioxide preparation of the tissue.



Fig. 3. Carbon dioxide preparation of the tissue.

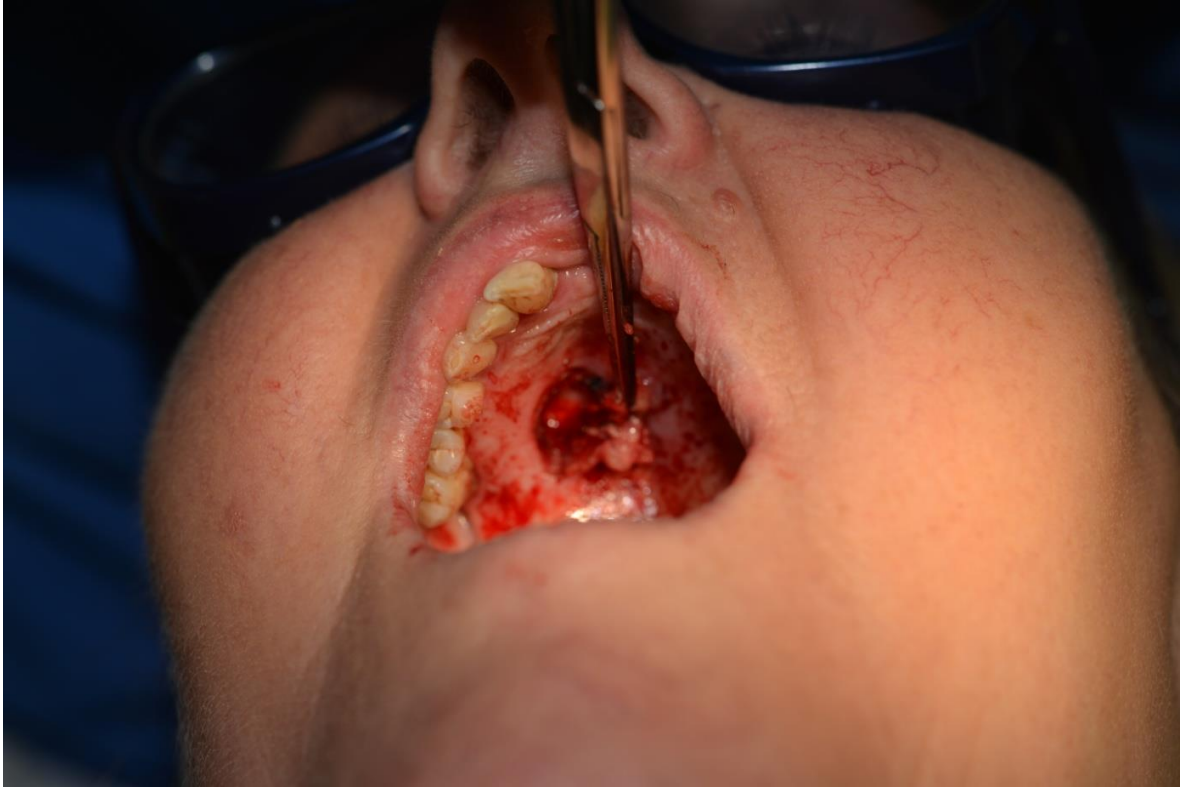


Fig. 4. Excision of the tumour.



Fig. 5. Post-operative image of the wound.

The mixed tumor can also appear in children [3]. It may undergo a malignant transformation, forming a carcinoma ex-pleomorphic adenoma, which is a relatively rare malignant salivary

gland tumor (5-25%). It is usually preceded by slow, longstanding growth, which suddenly undergoes precipitate progression and transforms into a malignant tumour.

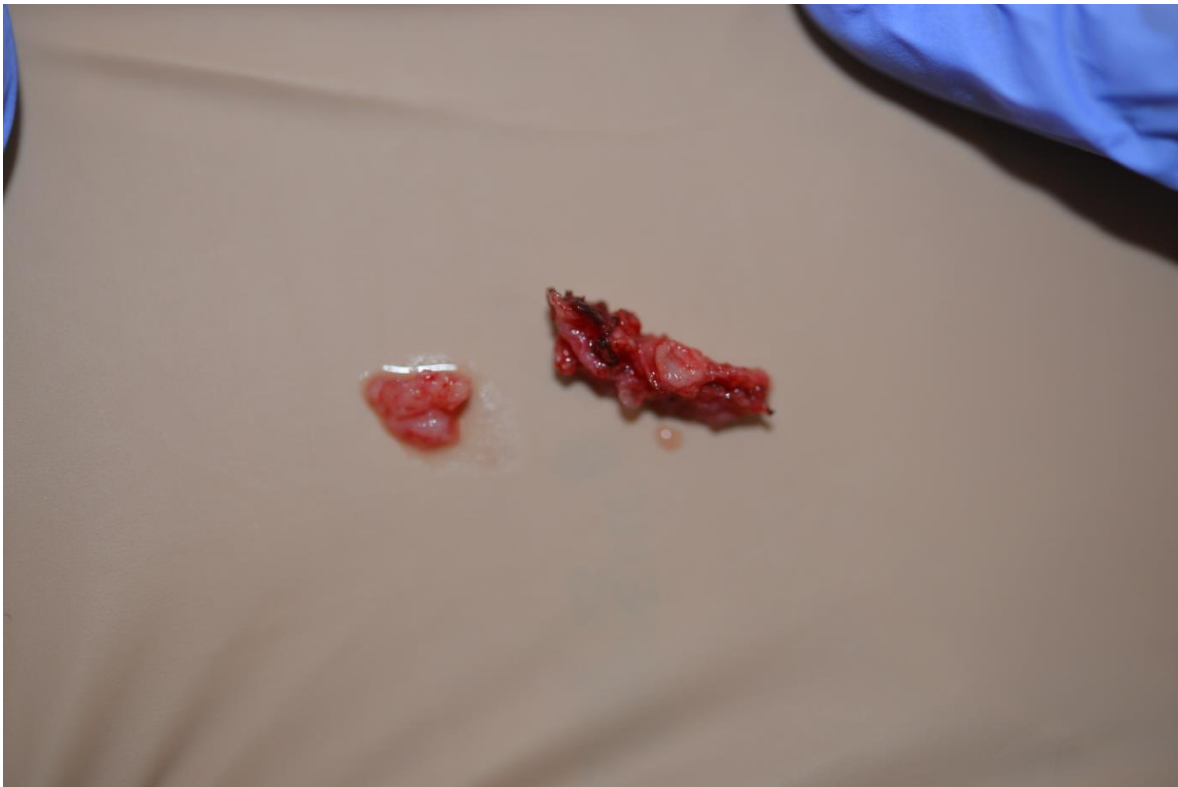


Fig. 6. Excised lesion.

Rak ten daje przerzuty głównie do układu chłonnego szyi i przerzuty odległe, zwłaszcza gdy składnikiem guza jest czynnik nabłonkowy, a na dodatkową agresję zmiany może wskazywać komponent mezenchymalny [1].

Such carcinoma forms metastases, mainly into lymphatic system of the neck, and distant metastases, especially when there is an epithelial component present, additional aggression can be associated with the mesenchymal component.

One of the lesions of oral cavity is a squamous cell papilloma, which is caused most often by trauma or viral infection (usually HPV). The papilloma which if formed due to a sustained trauma is most often located on the tip or edge of the tongue, buccal mucosa in the biting line or on a lip.

Viral papillomas are most often observed on the palate or bottom surface of the tongue. In both cases single lesion can be observed, that may present as small, pink-whitish cauliflower or mushroom like papulas, of no more than 1 cm diameter. Such lesions grow indolently.

Benign lesions of the oral cavity include also haemangiomas, which derive from the



blood vessels. On the mucosa of the oral cavity most often cavernous haemangioma can be observed, which usually causes the oedema of tongue and lips, and also the vascular granuloma, which is located on the lips, gingiva and tongue. The characteristic feature of the haemangiomas is their spherical shape.

Another lesion also falling into the latter category are fibromas, which are firm, pink tubercles, of smooth surface, located usually on the buccal mucosa and on the border between the soft and hard palate, less often on the tongue and lips. Their cause is usually the chronic irritation of those parts.

The most often diagnosed precancerous condition of oral cavity is leukoplakia, the so-called idiopathic white patch, which begins with an indolent white patch on the mucous membrane. The lesion changes with time, and can form grey-whitish patches, which may coarsen. They can be observed on the buccal mucosa, lips, tongue and palate.

Other precancerous condition of oral cavity can be also erythroplasia, also called the erythroplasia of Queyrat, which is a non-homogenous lesion, consisting in a red patch on a mucous membrane that cannot be attributed to any other pathology.

In available literature authors were unable to find any description of a pleomorphic adenoma located outside of a salivary gland. The performed treatment was more or less the same as in a case of a salivary gland adenoma, where the fundamental treatment is radical excision of the tumour. In a case of a salivary gland, where most of the benign lesions are located in the superficial lobe of parotid gland, the treatment of choice is superficial parotidectomy. Because of the fact that minor focal points of the tumour can create microscopic satellite focal points, it is mandatory to excise the tumour with a healthy tissue margin [1, 2, 4]

In the pleomorphic adenoma of the submandibular gland, excision of the whole gland is performed, whereas in the pleomorphic adenomas deriving from the smaller glands, excision of the gland with the surrounding healthy tissue margin is advised. In our case, surgical excision was performed along with respectably wide margin of healthy tissue.

The prognosis in a case of pleomorphic adenoma after its radical excision is very optimistic and does not require any additional treatment. There is no data regarding the palatal location, but in case of salivary glands, in approximately 10% cases, there is a local relapse due to inaccurate excision of the satellite focal points.

Malignant transformation of pleomorphic adenoma is observed in 1,9-10,5% of cases, which is greatly caused by multifocal relapse of the neoplasm and no unequivocal guidelines regarding the optimal scope of the surgery [4].

The role of the complementary radiotherapy in treating the recurrent pleomorphic adenoma of the salivary gland, and also malignant lesions developing on its basis, is ambiguous. Despite the described efficacy of the therapy, there are also the adverse effects, such as radionecrosis of the skin and soft tissues [1]. The chemotherapy in the treatment of the pleomorphic adenoma of the salivary gland or the resulting cancer is not performed as a routine treatment [1].

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