

**REVIEW ARTICLE**

**NEWS IN DIAGNOSIS AND TREATMENT OF MALIGNANT  
AMYGDALINE TUMORS**

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**ABSTRACT**

*The malignant amygdaline tumors are a major health problem, both because of the rise in its appearance rate and its serious evolution towards death by this disease. Despite of the ease with which the amygdaline area can be examined, its malignant tumors are diagnosed in very late stages, the survival rate remaining unchanged for the past three decades, even with all the progresses made in the surgical, radiotherapeutical and chemotherapeutical treatments.*

*In this article, we analyze the surgical techniques as well as the strategy of combining all three therapies based on the state of the tumor, the answer to therapy, the histological type and complications that appear. The treatment and diagnostic particularities are taken into consideration, these being able to determine the early or late diagnostic, but also the disease's evolution.*

**KEYWORDS:** *malignant amygdaline tumors, early diagnostic, modern therapeutical means.*

The malignant amygdaline tumors have, in Europe, a bulk incidence rate of 34,6 cases at 100.000 inhabitants/year and a mortality rate of 13,7 cases per 100.000 inhabitants/year. The majority of patients are 45 years or over and the incidence rate increases with age, the men/women ratio being of 2,5/1. In the U.S., the incidence of amygdaline cancer has appreciated approximately 3% of all malignant neoplasms in men and 2% respectively at females [1,2].

In the last half century there has been an increased incidence of tonsillar malignancy among women and the young, equally likely due to their exposure to known oral carcinogens, such as tobacco and alcohol [3,4]

The purpose of this paper is to emphasize the importance of early diagnosis of tonsillar cancer, knowing that it increases the rate of healing and supravieturilor to 5 years. Also considering therapeutic peculiarities of each stage of evolution of tonsillar cancer [5].

The most frequent malignant amygdaline tumors are epitheliums and especially spinocellular epitheliums. Morphologically, these are identical to the epidermical type epitheliums with horned pearls. The neoplastic epithelial cells are very large and irregular and relatively often met. Another frequent histological form is the trabecular, pavementuous, metatipic or intermediary spinocellular epithelium. The cancer cell in this form is incompletely

differentiated. The epithelium with undifferentiated cells, improperly named "basocellular", are an epithelium type in which the cells do not suffer any malpighian differencing. The epithelium is formed of stacks of cells disposed in cordons, beaches, or islands. The maturation and differentiation of tumoral cells can vary in the same tumor, as the biopsy collection was made from the center or the extension of the tumor [6].

The glandular epithelium and adenocarcinoma, cilindroma and mixt tumors are exceptional.

The fibroblastic or fusocellular sarcomas of the tonsils are usually starting on the pillars and then invade the tonsil itself [7].

Disease onset is insidious, and because minimal disturbances (mild discomfort in the throat), tonsillar cancer has long been unknown. The first clinical manifestations usually occur when the tumor has gone lodge tonsils, and usually catch cervical lymph nodes. The appearance of a rough subangulomandibular ganglion patient attention that accuse a mild pain in the pharynx, which emphasizes the deglutition and cause talgian hemolateral reflex. Throat examination at this stage reveals a small ulcer on tonsil, hard to find when its location is "hidden" (in the tonsillar pillars on the back of the amygdale, the upper-posterior pole). When the patient accuses minimum sensations in pharynx, must carefully examine all of these points [8,9]. The tumor discovered in the initial phase it shows the form, either vegetant or cryptic. Local shallow examination can not visualize the lesion. On palpation with a stylet, the lesion is friable, easily penetrating it deeply and causing bleeding. When the patient accuses minimum sensations in pharynx, must carefully examine all of these points. The tumor found in the initial phase are presented either as colitis or vegetable, be encrypted. Local superficial examination may not visualize the lesion. On palpation of the stylet, the lesion is friable, easily

penetrating it deeply and causing bleeding. Amygdala as a whole, to touch, to take a firm has consisenta. In vegetable form, the tumor is more evident. Sometimes adenopathy accompanies the onset. Nodes are tough, painless, mobile, and no signs of inflammation. At this stage, it is very good overall and appetite is preserved. Diagnosing the disease in this state, there is a good chance of cure with survival over 5 years [10]. In our experience, these patients survive cancer and end to end with other associated diseases (upper gastrointestinal hemorrhage, acute myocardial infarction, stroke, etc.).

There are particular situations when patients accuse embarrassment persistent pharyngeal region without evidence of any injuries, despite thorough check. In this situation prefer tonsillectomy and histopathology tonsils removed, the more as contributing factor to identify and suspicion of tonsillar cancer (age over 40 years, alcohol, tobacco, flawed macro and microclimate, asymmetric tonsils, etc.) [11,12]. If this stage is not diagnosed, the patient arrives in the condition when tumor appearance is obvious, but it already exceeds capsule tonsils and lymphadenopathy tends to fixing or is fixed. Now appearing swallowing disorders initially solid then gradually and the patient becomes liquid and appetite, leading to weight loss. Adenopathy grow in size, are attached to the underlying plans and overlying skin appears hyperemia, due to inflammation. Gradually adenopathy undergoes superinfection with fistulization and secondary ulceration. At this stage, therapeutic success is uncertain, requiring successive combination chemo- radiotherapy depending on disease resistance to treatment [13]. From our observations, about 82% of these patients go in terminal stage (about 6-8 months after the onset of illness). Terminally leads to tumor extension period peritonsillar and periganglionar, when a patient accuses unbearable ear pain, sore throat meals, fetid halitosis, insomnia, cachexia. On examination it is

found lockjaw (internal pterygoid muscle attachment), bulging palate hyperemia, glossopharyngeal trench with deep ulceration. End stage arterial trunks stand more compression tumor until ulcerate and give fatal bleeding. Nerve compression cause motor paralysis, sensory, autonomic (sympathetic touch) and cranial nerves (paralytic syndromes).

Differential diagnosis as well as the positive is difficult in the early stage. Therefore, histopathological examination after biopsy should not be accepted in absolute terms, the biopsy is repeated and the patient remained under observation by monitoring.

Palatine tonsil reticulosarcomas beginning of macroscopic point of view, they look for enlargement of the tonsils, and the section under crypts, the tumor is seen as a hotbed of gray, well differentiated from the amygdale. These are rare tumors found especially in young people. The confluence outbreaks appear yellowish gray mass with necrotic and hemorrhagic areas. The clinical outcome, reticulosarcomas lymphosarcomas approaches and therapeutic sensitive to radiotherapy. Lymph node and visceral generalization is about blood and lymph. Of all the reticulosarcoma's histological forms, the embryonic form malignant is so sick amygdale in a couple of months, a lot, then ulcerates. Meanwhile, the entire tumor infiltrates surrounding tissues: stakes, wave, pharyngeal wall, reaching paraamygdaline space. This tumor mass, deep fixed plans, ulcers, bleeding, that the amount they produce voice disorders, food and breathing quickly reach tracheotomy [14,15]

Fibroblastic sarcoma of the palatine tonsil is very rare and is characterized by voluminous amygdale, painless, red, irregular, and very hard, without lymphadenopathy. After several months, the ulcerated amygdale, invade surrounding tissues, lymphadenopathy appears very large, rugged, rough, and exitus after visceral metastases .

Tonsillar cancer treatment is performed by three methods: surgery, radiotherapy and chemotherapy.

Surgical treatment has limited indications. In the early stages is effective electrosurgery. It also can perform neck dissection for cervical lymphadenopathy uninfluenced by treatment. In stages I and II can perform tonsillectomy because in these stages, the tumor capsule does not exceed the tonsils [16,17]. Radiotherapy is very effective when prescribed correctly. It provides local control of neoplastic disease and increase survival times. It also provides improved quality of life for patients with advanced disease. There are two types of radiation, electromagnetic (photons and X -rays, alpha, beta and gamma) and corpuscular (electrons, protons, neutrons). Interstitial Radiation consists of direct implantation of radioactive source in tumor mass, thus avoiding the rays passing through healthy tissues. Long irradiation or irradiation were simplified by telecobaltoterapie fast and betatron . In cobalt, regardless of initial tumor extension is required to achieve a minimum of 75 Gy. It depends on the nature of the macroscopic tumor histology and tumor volume (large tumors require a higher dose).

Roentgen radiation therapy allows only small tumors (in situ). It can be used in stage I, where the tumor is located on the anterior pillar [18].

Tonsillar cancer chemotherapy is palliative value, as for any other cancer. Are used: Cisplatin , Methotrexate, Endoxan cyclophosphamide. A new cytostatic still experimental, but applicable Cefuximabul is very toxic, requiring infinite precautions administration, after you perform a clinico- biological balance called performance index (PI). Topical tonsillar cancer treatment is the method HIFU - HCU. This is a noninvasive treatment that uses focused ultrasound, based on the principle HCU (conformational Ultrasound Hyperthermia). Focused ultrasound generator, high intensity, causes cancerous

tissue destruction by overheating. The process does not involve pain to the patient, the tumors are destroyed immediately, no need for hospitalization. Duration of the procedure is between 1 and 4 hours. Side effects of this method are much lower compared to traditional methods. [19,2].

Tonsil malignancies have an increased incidence in recent years, at regional, national and international, which is comparable to oral and thyroid malignancies, but much lower than lung cancer. Tonsillar cancer comprises 2-5% of all cases of malignancy diagnosed annually worldwide. Frequency increases in industrialized areas. [13] Although it shows a preference for males aged between 55 and 65 years, recent years have seen an increase in incidence in women at the age of increasingly smaller. General conceptions of tonsillar cancer treatment have evolved over time. Of these, the most important is to establish a precise balance before treatment, multidisciplinary collaboration and recovering quality of life after treatment. [9,11]

Despite the fact that in Romania, HIFU - HCU method is an innovation in many countries in Europe, Asia and America is popular for over 15 years. Romania is the fourth country in the EU where such a device is used to treat cancerous tumors and where they are conformational hyperthermia ultrasound ablation.

Note also in tackling drug, changing strategy with application to genetic research in cancer tonsillar cancer cells, inhibition of epidermal growth factor receptor (cefuximab treatment). [12,17]

An effective method of diagnosis when no explanation is tonsillectomy dysphagia. Not infrequently, histopathological examination of excised tonsils tonsillar cancer diagnoses.

A proper therapy before treatment protocol requires a multidisciplinary collaboration that includes endoscopic and imaging performance's pit.

The main methods of treatment remain eligible

for use and the most effective surgery and radiation.

Tonsillar cancer prognosis remains of course dependent on early diagnosis and curable forms that are still rare because the doctor patient presents late-stage infiltration trench invasion and metastasis in lymph glosomygdaline and tributary.

## References

- Doll R.**, The geographical distribution of cancer. *Br. J Cancer* 1969; 23(1): 1-8.
- Kabat GC, Cahng CJ, Wynder EL.**, The role of tobacco, alcohol use and body mass index in oral and pharyngeal cancer. *International Journal of Epidemiology* 1994; 23:1137-44.
- Graham S, Dayal H, Rohrer T, et al.**, Dentition, diet, tobacco and alcohol in the epidemiology of oral cancer. *J Natl Cancer Inst* 1977; 59: 1611-1618.
- Larsson LG, Sandstrom.**, A relationship of Plummer-Vinson disease to cancer of the upper alimentary tract in Sweden. *Cancer Res* 1975; 35:3308-3316.
- World Health Organization Classification of Tumours.** Pathology and Genetics of Head and Neck Tumours – Barnes L, Eveson JW, Reichart P, Sidransky D (Editori) Lyon: IARC Press 2005; 107-110.
- Bryne M, Koppang HS, Lilleng R, Kjaerheim A.**, Malignancy grading of the deep invasive margins of oral squamous carcinomas has high prognostic value. *Journal of Pathology* 1992; 166: 375-381.
- Goldenber D, Goldstein BJ.** Handbook of Otolaryngology and Head and Neck Surgery; Ed. Thieme 2011 – : 364-369, 378-383, 383-388.
- Odell MJ, Walz BJ, Reimers HJ, Varvares MA.**, Carcinoma of the Oropharynx in Head and Neck Cancer – An evidence – based team approach – Ed. Thieme 2007 :24-43.
- Corbiere S, Pandraud L.**, Cancer de l'oropharynx in *Impact/Internal Nr 20/apr 1988 ISSN 07584237*, 95-102.
- Hicks WL Jr, Kuriakose MA.**, Surgery versus radiation therapy as single modality of treatment of tonsillar fossa carcinoma; The Roswell Park Cancer Institute Experience (197-1991). *Laryngoscope* 1998; 108:1014-1019.
- Harnsberger, Hudgins, Wiggins, Davidson.** Head and Neck Top 100 Diagnosis / Pocket Radiologist. Ed. Amyrsis 2002 : 160-165, 181-187, 199-202.
- Anghelide R, Sbenghe-Tetu Liliana.** Aspecte de patologie oto-rino-laringologica; Ed Medicala, Bucuresti 1986, :242,258,260-279.
- Laurell A.**, Malignant lymphomas in the ear, nose and throat area in Anniko M, Bernal-Sprekelsen M, Benkowsky V, Bradley P, Iurato S: *Otorhinolaryngology, Head and Neck Surgery*, Ed Springer 2010. Manual acreditat UEMS :623-628.
- Tsang WYW, Chan JKC.**, Lymphoepithelial carcinoma. In: Barnes L, Eveson JW, Reichart P, Sidransky D (Editori). *World Health Organization Classification of Tumors* Lyon: IARC Press 2005; 132.
- Puscas L.**, The role of human papiloma virus infection in the etiology of oropharyngeal carcinoma. *Curr Opin Otolaryngol Head and Neck Surg* 2005; 13:212-216.
- Schoder H, Yeung HW.**, Head and Neck Cancer: Clinical usefulness and accuracy of PET/CT image fusion. *Radiology* 2004; 231:65-72.
- Mac Williams JE, Evans AJ, Beer TM, et al.**, Genetic polymorphism in head and neck cancer risk. *Head Neck* 2000; 22:604-617.
- Rafferty MA, Fenton JE, Jones AS.**, The history, aetiology and epidemiology of carcinoma. *Clinical Otolaryngology* 2001; 26:442-446.
- Mac William JE, Evans AJ, Beer TM et al.**, Genetic polymorphism in head and neck cancer risk. *Head Neck* 2000; 22: 609-617.