

## ADJUVANT TREATMENT IN LARYNGEAL PAPILOMATOSIS

### Authors:

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***Abstract:** Human Papilloma Virus is incriminated in a wide range of conditions, one of them being recurrent laryngeal papillomatosis (RRP). Depending on the onset a juvenile and an adult form have been described. Numerous authors classify RRP in aggressive and non-aggressive by the numbers of total surgical interventions or the number of interventions per year. Although gold standard in treating RRP remains surgical removal of the tumours several adjuvant therapies have been tried with varying results over the years such as Cidofovir, alpha interferon, indole-3-carbinol, cis-retinoic acids, Bevacizumab, HPV vaccine, PPI's and photodynamic therapy. The aim of this paper is to review the available published data pertaining to adjuvant therapies on the lookout for a consensus guideline. After performing a systematic review on 62 articles available on PubMed, Wiley Online Library and Springer Nature, the authors concluded the need for further larger studies in order to establish a unanimously accepted protocol.*

***Keywords:** recurrent laryngeal papillomatosis, adjuvant treatment.*

## ADJUVANT TREATMENT OF JUVENILE ANGIOFIBROMA

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***Abstract:** Juvenile nasopharyngeal angiofibroma is a benign tumour found mainly in male patients, with a very rich vascularization, being also called the male pubertal tumour. The positive diagnosis of this tumour is based on imaging investigations represented by CT and MRI, but also on videofibrosopic study (White Light Endoscopy and Narrow-Band Imaging). The treatment of juvenile nasopharyngeal angiofibroma is most often surgical, the endoscopic approach being preferred. Even if the surgical approach is endoscopic, external or using a combined technique, the embolization of the tumour must be done priorly. Radiotherapy, chemotherapy and biological therapy are the adjuvant treatments of this pathology being reserved for inoperable cases or post-surgical tumour recurrences. This article aims to highlight the main treatment alternatives for juvenile nasopharyngeal angiofibroma for inoperable cases or in case of recurrences and tumour remnants. In the treatment of juvenile nasopharyngeal angiofibroma, there are some cases in which surgical treatment is not sufficient, requiring adjuvant therapy. This is represented by radiotherapy, chemotherapy, but also by biological treatment. The surgeon's experience is essential in treating this pathology because there are evolutionary stages of the disease in which the tumour spreads in places difficult to reach surgically, requiring advanced training and anatomical knowledges of the operator. The treatment of this pathology is done in a multidisciplinary team, involving the ENT surgeon, the*

*interventional radiologist for preoperative embolization, but also the radiotherapist and the oncologist.*

**Keywords:** juvenile angiofibroma, adjuvant treatment, adjuvant strategy

## **BILATERAL VOCAL FOLD PALSY - SURGICAL OPTIONS**

**Authors:**

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***Abstract:** Bilateral vocal fold palsy is a rare pathology, compared to unilateral vocal fold palsy and it has multiple causes that have to be discovered.*

*This paper aims to present the most used surgical procedures for bilateral vocal fold palsy.*

*The perfect procedure does not exist, but we can say that this pathology is always a challenge for the ENT surgeon, that has to create an equilibrium between the functions of the larynx.*

**Keywords:** bilateral vocal fold palsy, arytenoidectomy, cordotomy, Kashima, LASER CO2

## **EFFECTIVENESS OF EMBOLIZATION IN THE SURGERY OF JUVENILE ANGIOFIBROMA**

**Authors:**

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***Abstract:** Juvenile angiofibroma is affecting exclusively young males between 9 and 19 years of age. It is a benign vascular tumour encountered quite rarely, representing about 0.05% of all the head and neck tumours. The capital issue when managing a case of nasopharyngeal angiofibroma is the bleeding during the surgical ablation of the lesion. Because of the challenge, this pathology poses for the ENT and head and neck surgeon it stimulated the development of various techniques and technologies. Minimal surgical techniques tend to have high rates of residual lesions, while expanded external approaches sometimes lead to facial growth disturbance, as well as cosmetic and functional complications. Preoperative embolization became a standard procedure to reduce blood loss when performing surgical resection. This paper analyses the effectiveness of preoperative embolization, according to the materials and techniques used, as well as the complication that may appear during this process. The therapeutic strategies evolved significantly in the last decades, especially due to the development of endoscopic techniques and preoperative embolization. The improving techniques and materials assure good results for preoperative embolization.*

**Keywords:** juvenile angiofibroma, embolization, bleeding.

## ENDOSCOPIC DRIVEN TRANSORAL APPROACH IN PARAPHARYNGEAL TUMORS

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**Abstract:** *Parapharyngeal space tumors are not a common encounter in ENT practice and represent a challenge even for the experienced surgeon. The difficulty in treating these tumors resides in the limited access and at-risk content, internal carotid artery, internal jugular vein and cranial nerves. Surgical approach to parapharyngeal space can be achieved by several techniques, among which, the transoral approach is increasingly used for selected cases. Combined with endoscopic means, it offers positive results with no scarring and faster healing. The authors are presenting criteria and indications for the endoscopic transoral approach of the parapharyngeal space.*

**Keywords:** *parapharyngeal space, transoral approach, endoscopic control.*

## EXTENSIVE INVERTED PAPILLOMA SURGICAL STRATEGY

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**Abstract:** *Inverted papilloma is a benign sinonasal tumour, having the most common surgical indication amongst them. It originates from the mucosal lining of the lateral nasal wall and paranasal sinuses. With still an unclear pathogenesis, this neoplasm has aggressive local growth, with a risk of malignant transformation and a high post-surgery recurrence rate. The paper will focus on the extensive cases of inverted papilloma tumours, that invade the orbit, skull base, or associate malignancy, corresponding to the T4 stage of the Krouse staging and its treatment strategies. Depending on the extent and localization of the tumour, surgeons should take into consideration various treatment strategies, including surgical, radiation, and medical therapy, or even a combination of them. The procedures used were: the external approach: lateral rhinotomy, midface degloving, modified frontal craniotomy, a combined approach with endoscopy, and pure endoscopic approach. There has also been used adjuvant therapy such as radiation therapy and medical therapy. The extensive inverted papilloma is a challenge even for an experienced otorhinolaryngologist, because of its aggressive nature, extranasal and extrasinusal localization, or possible malignancy association. Therefore the surgeon should have a proper preoperative evaluation of the tumour before choosing the right approach. We consider the purely endoscopic approach to be insufficient in T4 inverted papilloma and prefer using combined or external approaches, the modified frontal craniotomy being suitable for the most advanced tumours. Postoperative radiotherapy proved to be a helpful adjuvant for the residual tumour.*

**Keywords:** *inverted papilloma, external approach surgery, radiotherapy, benign sinonasal tumour.*

## FRONTOETHMOIDAL MUCOCELE MANAGEMENT

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**Abstract:** *Mucoceles are benign, cystic-like masses that develop in the paranasal sinuses, most frequently fronto-ethmoidal. They may be asymptomatic at first, but due to their location can expand into adjacent structures and cause essential complications. The proper investigation of such pathology is paramount since it can help establish the best course of treatment. CT scanning seems to be the best way to assess the mucocele location and extent. Surgical excision of the mucocele is the best course of treatment. Lately, the endoscopic approach has become more and more preferred, but there are still cases in which the external approach can be of great help. Good investigation and treatment planning help properly manage this pathology that could otherwise lead to severe complications. Nevertheless, when discussing the surgical management of this pathology the experience and the anatomical knowledges of the surgeon are of great interest.*

**Keywords:** *fronto-ethmoidal mucocele, orbital invasion, endoscopic surgery*

## HOW TO HARVEST FASCIA LATA

### Authors:

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**Abstract:** *The fascia lata is a deep fibrous sheath which encloses the muscles of the thigh. It is robust, but, at the same time, the foldable structure makes it an excellent graft material, used by many surgical specialties. The ENT surgeon may use this in skull base reconstruction surgery (anterior and middle cranial fossae) following tumor resections, fronto-naso-orbital and skull base fractures, treatment of recurrent cerebrospinal fluid (CSF) fistulae, sinonasal surgery, rhinoplasties or ear surgery. Many procedures for harvesting fascia lata have been developed over the years. The purpose of this article is to present two of these procedures, the open approach and the endoscopic approach while highlighting the important surface anatomical landmarks and critical structures.*

**Keywords:** *fascia lata, harvesting, procedure*

## INVERTED PYRAMID STRATEGY IN THE SURGERY OF JUVENILE ANGIOFIBROMA

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**Abstract:** *Juvenile angiofibroma is a specific type of vascular, benign tumour. It is encountered quite rarely, representing only 0.05% of all head and neck tumours, interesting exclusively young adolescent males.*

*The clinical manifestations include persistent or progressive nasal obstruction and epistaxis. Left*

*untreated, the tumour expands and produces facial swelling due to orbital and infratemporal fossa extension.*

*The invasion of orbital apex and cavernous sinuses rare, but when it happens, it determines ophthalmoplegia due to cranial nerve compromise. The management of the juvenile angiofibroma is challenging due to the complexity of the anatomy of the skull base, the young age of the patient and mainly due to the risk of massive bleeding caused by the abundant vascular blood supply of the lesion. The development of the techniques is mostly based on the understanding of the etiology of the lesion as well as the pattern of spread. Best results are obtained using a combination of techniques: preoperative embolization, minimally invasive endoscopic techniques and open techniques. Whenever possible is advisable to use the inverted pyramid strategy in order to reduce blood loss and avoid tumoral residual tissue.*

**Keywords:** *juvenile angiofibroma, embolization, surgery, bleeding.*

## **ISOTRETINOIN-INDUCED OCULAR SIDE EFFECTS AND THEIR AEROMEDICAL IMPLICATIONS**

**Authors:**

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**Abstract:** *Isotretinoin is a first-generation retinoid used mainly for the treatment of refractory Acne Vulgaris.*

*It has been known to cause a wide range of side effects, from mild to severe, involving multiple organs. Cutaneous and ocular symptoms are by far the most prevalent. The current article reviews a rare and unusual ocular finding due to Isotretinoin usage and its potential impact on aeronautical candidate selection.*

**Keywords:** *isotretinoin, ocular side effects, aeronautical candidate selection*

## **LASER ASSISTED VOCAL FOLD CORDECTOMY TYPES**

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**Abstract:** *Cordectomy is a surgical intervention by which the ablation of a vocal fold is performed. Strong's use of the CO<sub>2</sub> LASER was the starting point for the present LASER CO<sub>2</sub> cordectomy technique. The European Laryngological Society (ELS) classified LASER assisted cordectomies into eight types. Each type of cordectomy is indicated for a certain tumour extension and a certain type of cancer. Nowadays, LASER assisted cordectomy represents the gold standard for early stages of vocal fold carcinomas.*

*Being minimally invasive, the recovery of the patient is faster and easier, and there is a lower risk of intraoperative and postoperative complications.*

**Keywords:** *LASER, cordectomy, ELS*

## LIMITS OF LASER SURGERY OF THE MALIGNANT VOCAL FOLD TUMORS

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**Abstract:** *Despite increasingly positive outcomes in the treatment of laryngeal cancer, it still represents a highly debilitating condition, with high morbidity. Since the introduction of LASER cordectomies, this approach has generally been accepted as conservative treatment for early stage tumors. Many authors have extended its indications to intermediate and advanced tumors, alone or in multimodal treatment, with positive oncological outcomes and superior functional results. The authors review the indications and limitations of LASER surgery of the vocal fold tumors.*

**Keywords:** *LASER surgery, malignant tumor, vocal fold*

## PARAPHARYNGEAL TUMORS-SURGICAL STRATEGY IN TRANSCERVICAL APPROACH

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**Abstract:** *Parapharyngeal space tumors are rare head and neck neoplasms, and most of them are benign. The complete excision of the tumor can be difficult because of the complex anatomy of the surrounding structures. Usually, complete resection of the tumor is the treatment of choice for parapharyngeal masses, but due to the complex anatomy of this space, the surgical approach is difficult and challenging for the surgeon. This paper aims to discuss and expose the surgical strategy in the transcervical approach of the parapharyngeal tumors. Parapharyngeal space surgery is complex and challenging even for experienced head and neck surgeon due to the complex anatomy and the anatomic and surgical risk elements. A thorough preoperative assessment (clinic, endoscopic, imagistic) is of paramount importance for the surgical planning.*

**Keywords:** *parapharyngeal tumor, transcervical approach*

## REFINED OPTICAL TECHNOLOGIES IN INVERTED PAPILOMA

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**Abstract:** *Inverted papilloma is a particular benign tumour that occurs at the nasopharyngeal level characterized by an inverted proliferation of the epithelium in the chorion of digitiform appearance. This type of tumour has been described for the first time at the nasopharyngeal level by Ward and contributors in 1984. Inverted papilloma is also called Schneider papilloma, Ewing papilloma, or transitional cells papilloma. This article aims to highlight the management of the inverted papilloma and the role of refined optical technologies, such as Narrow-Band Imaging (NBI) endoscopy and*

*Storz Professional Image Enhancement System (SPIES), in observing epithelial and/or subepithelial microvascular irregularities in inverted papilloma when taking into discussion the preoperative evaluation of the tumour, intraoperative control as well as for future follow-ups. Inverted papilloma treatment is almost always surgical, and the trend in recent years is to resort to endoscopic surgery, if tumor extension allows. This type of surgery has become the “gold standard” for experienced surgeons and with the development of refined optical technologies, such as NBI and SPIES that are more sensitive methods for detecting and diagnosis of inverted papilloma, the surgeon will gain a better pre-, intra- and post-operative control.*

**Keyword:** *refined optical technologies, inverted papilloma, endoscopic surgery*

## **SINUSAL MALIGNANT MELANOMA SURGICAL STRATEGY**

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**Abstract:** *Melanoma represents a form of malignant mass that originates in pigment-secreting cells called melanocytes. This tumour has a very aggressive character both by the risk of local recurrence and by distant metastasis. The diagnosis of malignant melanoma is based on both ENT clinical examination and paraclinical examinations represented by videofibroscopic examination (white light endoscopy and narrow-band imaging) but also imaging (CT and MRI). The treatment of this pathology is done eminently surgically in the localized stages, either by endoscopic approach or by classical surgery, with the practice of resection with negative oncological safety margins. If the tumour is surgically outgrown, adjuvant therapy is represented by radiotherapy and chemotherapy. In the surgical treatment of sinus localized malignant melanoma, it is essential to obtain negative oncological safety margins, this influencing, in the long run, the risk of recurrence, distant metastasis and even death of patients. This pathology needs to be addressed in the multidisciplinary team of ENT surgeon, radiotherapist, oncologist, dermatologist, and neurosurgeon needed.*

**Keywords:** *sinusal malignant melanoma, surgical therapy, melanoma malign*

## **TRANSCERVICAL VERSUS TRANSORAL SURGERY IN PARAPHARYNGEAL TUMORS**

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**Abstract:** *Tumors located in the parapharyngeal space are rare head and neck masses, and most are benign lesions. The complete resection of these tumors is difficult due to the complex anatomy of the parapharyngeal space. The surgical strategy is based on the characteristics of the tumor. The purpose of this study was to discuss the advantages and disadvantages of the endoscope-assisted transoral approach over the traditional techniques. MRI evaluation is vital to determine the boundaries of the mass and the relation with the adjacent anatomic structures. Endoscope-assisted trans-oral surgery for excision of parapharyngeal space tumors yields an excellent outcome and should be a feasible, safe, and economical method for these patients. Transoral and endoscope-*

*assisted transoral approaches are suitable in managing parapharyngeal space tumors located in the medial portion of the carotid sheaths and extending toward the skull base.*

**Keywords:** *parapharyngeal tumors, endoscope assisted, transoral*