Procedure Guidelines for Transoral Removal of Glottic Laryngeal Tumours Using Microelectrodes

Indications and contraindications
The indications and contraindications for resections of laryngeal tumours using ARROWtip™ micro-electrodes correspond to those for the surgical removal of benign and malignant glottic tumours. However, it is a prerequisite that the patient can be properly prepared for resection of the tumour with the micro-laryngoscope or distending laryngoscope.

Patient preparation
General anaesthesia is used. A local anaesthetic (e.g. Ultracaine 1% Suprarenine) may be injected with a vasocostrictr, depending on the surgeon's preferences. Since monopolar needles are used, a neutral electrode is attached to the patient (e.g. upper arm).

Intervention
The surgical procedure begins with an operating laryngoscope (e.g. Kleinsasser microlaryngoscope). The hand instruments still required are microforceps and a monopolar suction tube (REF 715017) for haemostasis, which are also used in conventional laryngeal microsurgery. Smaller tumour lesions are normally removed with the help of an excision biopsy if they are only developed superficially. Injecting some local anaesthetic into the superficial vocal fold at the outset is certainly helpful here. If the tumour now separates, a superficial process rather than a deeply infiltrating carcinoma can be assumed. First the incision line with a safety distance to the tumour is established. Now it can be resected using a straight ARROWtip™ (REF 360371) or angled ARROWtip™ (REF 360375).

First performing a resection of the aryepiglottic fold may be sensible depending on the findings (Fig. 1). However, this should be carefully considered since the possibility of post-operative voice rehabilitation is at the vestibular fold level when the vocal fold is missing. Should resection of the vestibular fold be required, it should be carried out with a straight ARROWtip™. Resection of the vocal fold (Fig. 2) can be performed in the next step. The resection can now be performed with a 90° angled ARROWtip™ (REF 360373). It is applied at the subglottic edge of the vocal fold. Next the incision is made from caudal to cranial in the anterior area (near the anterior commissure) and in the posterior area of the vocal fold (near the arytenoid cartilage) to establish the anterior and posterior limits of the resection. Now the resection of the vocal fold and tumour can again be performed using the straight ARROWtip™. The resection of the vocal fold is performed from anterior to posterior along the lateral limit of the tumour. A temporary precautionary tracheotomy and feeding by stomach tube may be required. This has to be decided on a case-by-case basis.

Post-operative treatment
The patient is discharged 1 to 5 days post-operatively depending on the extent of resection (may deviate depending on findings). A temporary precautionary tracheotomy should be performed for larger resections. Partial or complete voice rest in the first few days is recommended. Logopaedic exercises may already be indicated at this stage as well. Antitussives may be used to suppress a nervous cough and corticosteroids if there is a risk of oedema.

Post-operative treatment is similar to that of patients who undergo the CO2 laser procedure.

Fig. 1: Resection of the aryepiglottic fold (REF: 360371)
Fig. 2: Incision at the subglottic edge and vocal fold resection (REF: 360373)
Fig. 3: Coagulation with a monopolar suction tube (REF: 715017)

Disclaimer: These procedure guidelines have been carefully researched and compiled with the help of specialist physicians. They are not meant to serve as a detailed treatment guide. They do not replace the user instructions for the medical devices used. Sutter accepts no liability for the treatment results beyond legal regulations.