Endoscopic laser-assisted cordectomies classified by Remacle and Rudert (type I-V cordectomies) comprise a vast range of procedures from simple vocal cord stripping or submucosal cordectomy (type I) through more extensive surgery (subligamentous cordectomy- type II, transmuscular chordectomy- type III) to complete (type IV) or extended cordectomies (type V) used when tumour involves the anterior commissure, arytenoid region, subglottic region etc. Endoscopic laser-assisted surgery of the larynx is usually indicated in early stages of infiltrative malignant disease of the glottic region (Tla-b, T2) or in preneoplastic conditions (laryngeal intraepithelial neoplasia - LIN I, II or III). Radiotherapy is also believed to be an equivalent type of oncological therapy for these diseases. Both surgery and radiotherapy can worsen one of the main functions of the human larynx- the human voice. Because the overall survival rates and local control rates are quite similar in both types of therapy, one should always have in mind something that is beyond the main goal of achieving radical removal of the tumour- patients quality of life (QoL) and quality of voice. It is very interesting to compare QoL and voice quality in different types of treatment. The possibility to conserve the radiotherapy for the possible recurrence of the disease should be also considered.

128 patients diagnosed with an early glottic cancer or severe dysplastic lesion of the glottis and treated by means of surgical removal of the disease or radiotherapy have been included into a retrospective study conducted by the Department of Otorinolaryngology and Head and Neck Surgery of the 1st Faculty of Medicine of the Charles University in collaboration with the Department of Phoniatrics of the 1st Faculty of Medicine of the Charles University. Patients were divided into 2 groups according to the selected treatment modality. Stroboscopic findings (symmetry, amplitude, periodicity of the mucosal wave, extension of nonvibrating mucosal segment, time of and completeness of the glottic closure), total phonation time, vocal range according to the voice range profile (VRP- phonetograph), subjective voice quality analysis and objective voice analysis (using MDVP software) were compared between patients in both groups. Moreover we compared similar parameters in groups of patients treated by different types of cordectomy. QoL 30 questionnaire and Voice Handicap Index tool were chosen for the quality of life evaluation.

There were no statistically significant differences in the above mentioned parameters when comparing patients treated by cordectomy type I-III and by radiotherapy. In contrast patients treated by cordectomy type IV and V showed significantly worse results compared to both of the above mentioned groups.

Surgical therapy (type I-III cordectomies) in early stages of disease can be considered highly efficient treatment modality according to these results and could be considered the method of choice in this indication taking into account the possibility of radiotherapy as an invaluable treatment option for the recurrent disease.

There were no statistically significant differences in results between patients treated by endoscopic laser-assisted cordectomy type I-III or by radiotherapy. Vast majority of evaluated parameters in laser cordectomy IV and V subgroup were found significantly worse when compared with radiotherapy or choredectomy I-III subgroups.