



# QUALITY OF LIFE OF PATIENTS AFTER PARTIAL LARYNGECTOMY

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## ABSTRACT

### Objectives

To assess the quality of life in patients previously treated for early stage laryngeal cancer by open partial laryngectomy or CO<sub>2</sub> laser-assisted endoscopic surgery versus healthy controls.

### Methods

A total of 65 male patients aged from 45 to 80 years (mean 64.87 ± 8.9 years), who diagnosed for early (T1/T2) laryngeal cancer, treated by open partial laryngectomy (OPL group, n=54) or CO<sub>2</sub> laser-assisted endoscopic V/VI type cordectomy (LEC group, N=11) with the follow-up at least of 1 year after operation, who were alive and free of recurrence included to the study. Control group consisted of concurrently assessed 50 healthy similar age and gender adults. QOL was evaluated using validated EORTC QLQ-C30 and H&N35 questionnaires. Emotional distress was assessed using Hospital Anxiety and Depression (HAD) scale. Data were collected from 2016 December to 2018 January.

### Results

Majority (70.3 %) of OPL group considered their global health status is moderate to good. However, the majority (72.7 %) of LEC group rated their global health status significantly higher – as good to excellent, similarly to healthy controls. Only OPL group patients showed significantly lower scores for most functional QOL scales in comparison to control group (p< 0.05). OPL significantly more concerned on fatigue, pain and insomnia than LEC group did. Financial difficulties caused by patient's physical condition and medical treatment were actual for both groups. Specific H&N symptoms analysis showed that mean scores of majority (13 of 18) assessed QOL items were worse for OPL patients vs. controls. No significant differences were found between data of LEC and control groups. Emotional distress on HAD scale was in the same level for all patients and controls.

### Conclusions

Global health status for patients treated for early stage laryngeal cancer seems to be good with predominant rating from moderate to excellent. However, the majority of QOL aspects were worse in patients treated by open partial laryngectomy in comparison to patients after CO<sub>2</sub>-assisted endoscopic surgery and healthy controls.

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## INTRODUCTION

- Laryngeal cancer is one of the commonest of all head and neck malignant tumors in the world.<sup>1</sup>
- Surgical treatment could lead to changing of quality of life (QOL).
- QOL is an important consideration in medical care; it refers to patients ability to enjoy normal life activities.<sup>2</sup>
- Understanding such patients general and disease specific health problems enables to prevent from psychological distress and to direct for specialized rehabilitation.
- QLQ-C30 and specific H&N35 scales are recommended by The European Organisation for Research and Treatment of Cancer (EORTC) and are translated in more than 100 languages, including Lithuanian.<sup>3</sup>

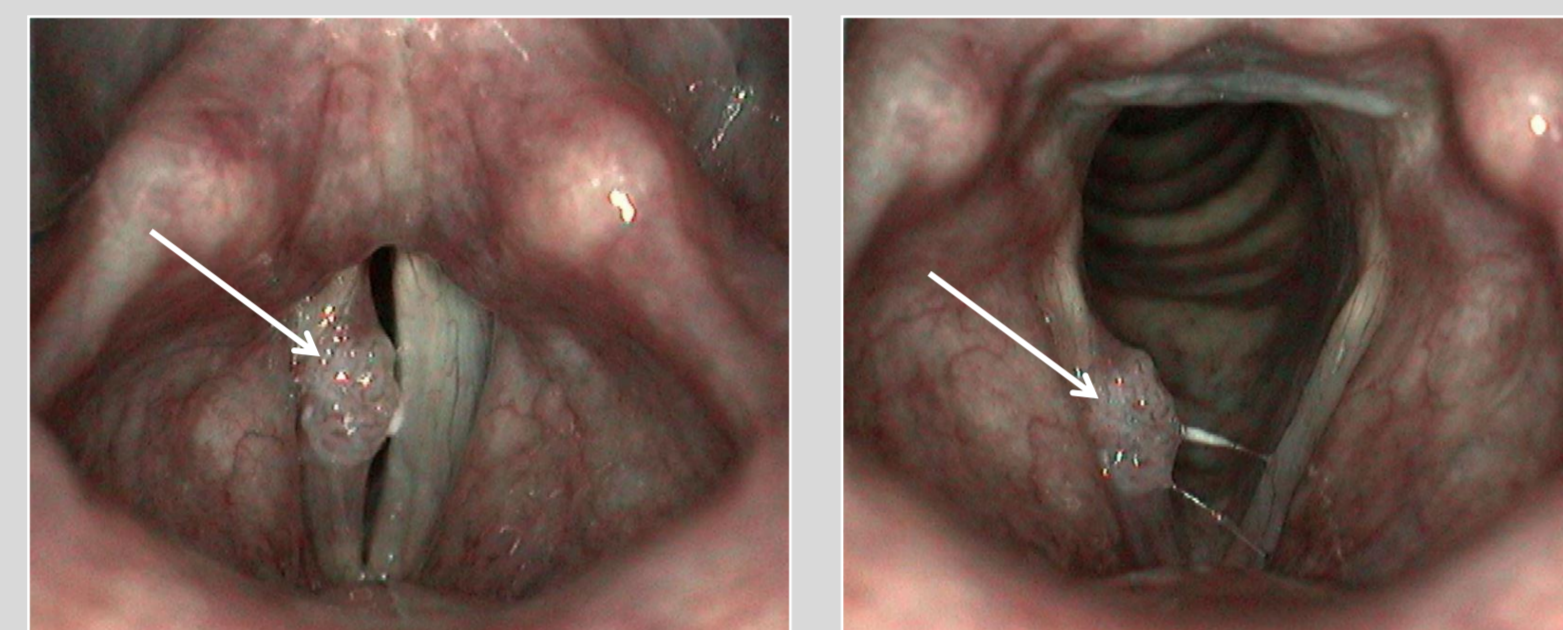


Fig.1. Early stage of right vocal fold laryngeal cancer

## AIM

- To assess the quality of life in patients previously treated for early stage laryngeal cancer by open partial laryngectomy or CO<sub>2</sub> laser-assisted endoscopic surgery versus healthy controls.

## Patients

- A total of 65 male patients aged from 45 to 80 years (mean 64.87 ± 8.9 years), who diagnosed for early (T1/T2) laryngeal cancer, treated by **open partial laryngectomy** (OPL group, n=54) or **CO<sub>2</sub> laser-assisted endoscopic V/VI type cordectomy** (LEC group, N=11) with the follow-up at least of 1 year after operation, who were alive and free of recurrence included to the study. Patients groups were similar with regard to age, gender, disease stadium and unhealthy habits (Table 1). The mean time after surgery was 48.49 ± 23.9 months.
- Control group consisted of concurrently assessed 50 healthy similar age (mean 61.32 ± 9.8 years) and gender adults

Table 1. Patients characteristics

Characteristics	OPL group	LEC group
I stage	26 (48.1%)	9 (81.8%)
II stage	28 (51.9%)	2 (18.2%)
NO (nodes)	50 (92.6%)	11 (100%)
N1	4 (7.4%)	-
G1 (high)	10 (18.5%)	7 (63.6%)
G2 (moderate)	38 (70.4%)	4 (36.4%)
G3 (low)	6 (11.1%)	-
Smokers	37.8%	36.4%
Use of alcohol	11.3%	-
Surgery	40 (74.1%)	11 (100%)
Surgery + Radiotherapy	14 (25.9%)	-

## MATERIALS AND METHODS

3 Questionnaires were completed:

- Physical and psychosocial functioning and symptoms** that are general for cancer patients were assessed using QLQ-C30. This is 30-item questionnaire consisted of 6 functional and 9 symptoms scores.<sup>4</sup>
- Specific symptoms associated with head and neck cancer and it's treatment** were assessed using H&N35- a 35-item questionnaire, which can be condensed into 7 multi-item and 11 single-item scales.<sup>4</sup>
- Emotional distress was assessed using Hospital Anxiety and Depression (HAD) scale.** Scores range from 0 (no symptoms) to 21 (maximum distress). Possible depression or anxiety morbidity 8-10 on either scale, and probable psychological distress - more than 10 on either scale.<sup>5</sup>

## RESULTS

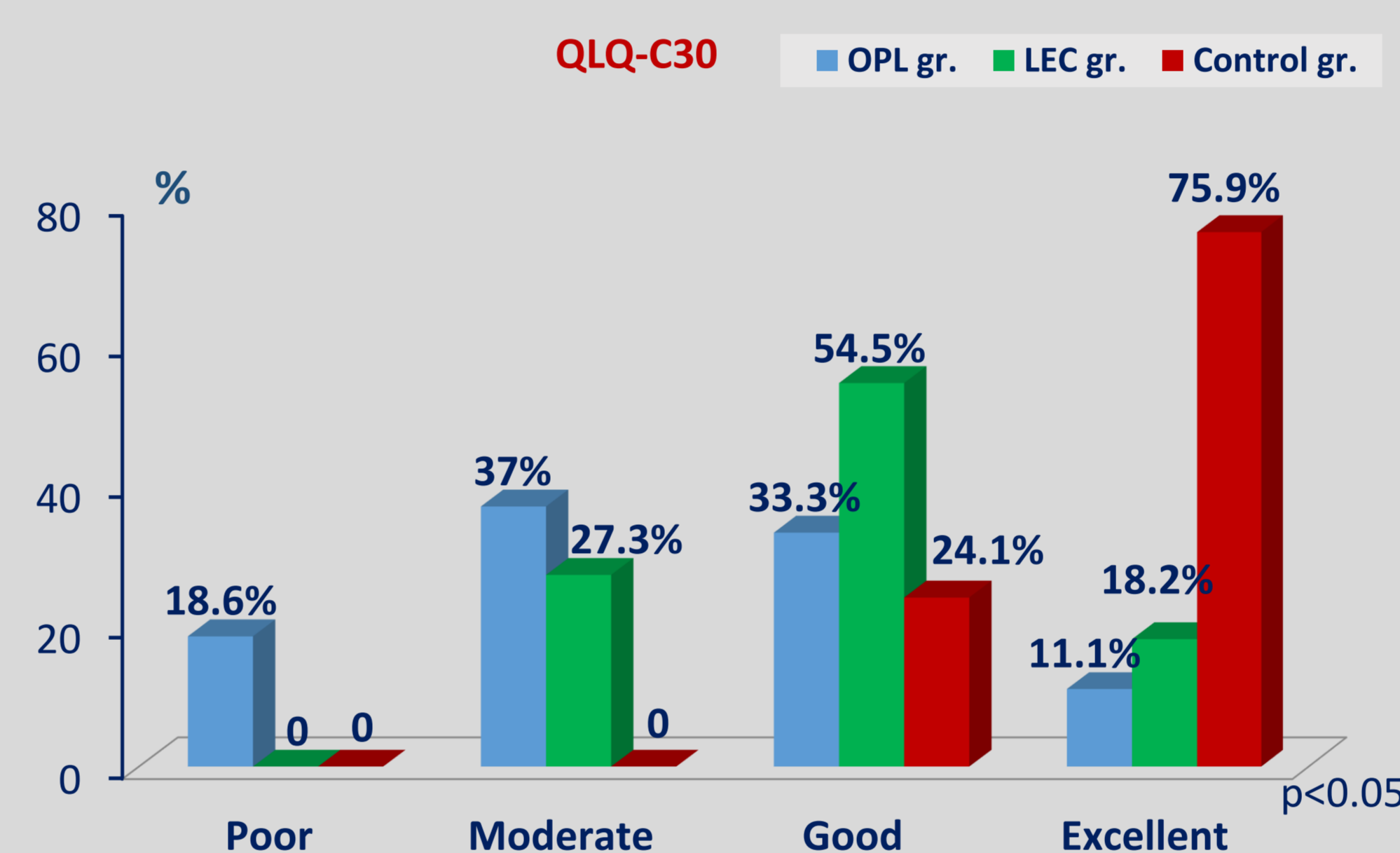


Fig. 2. Global health status

- Majority of OPL group (70.3%) considered their global health status is **moderate to good** (Fig.2).
- Majority of LEC group (72.7%) rated their global health status significantly higher – as **good to excellent**, similarly to healthy controls.

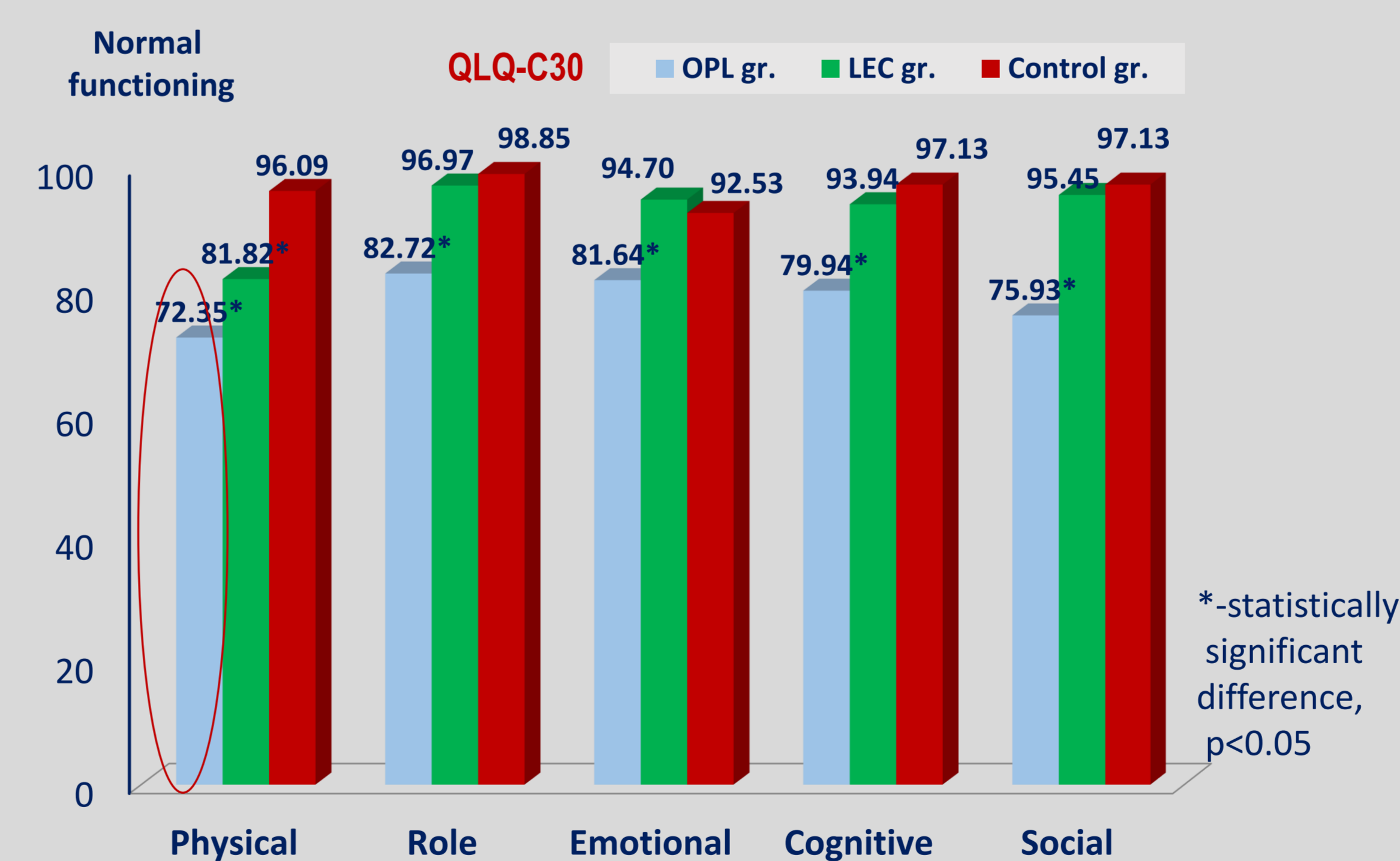


Fig. 3. Mean functional score

- Analyzing separate QOL components, only OPL group patients showed significantly lower scores of all functions – physical, emotional health, cognitive and social activity in comparison to LEC group and control group (p< 0.05) (Fig.3).
- Physical factors** gave significantly more trouble to the OPL patients than to LEC and control group.
- Role functioning was least disturbed in all groups.

## RESULTS

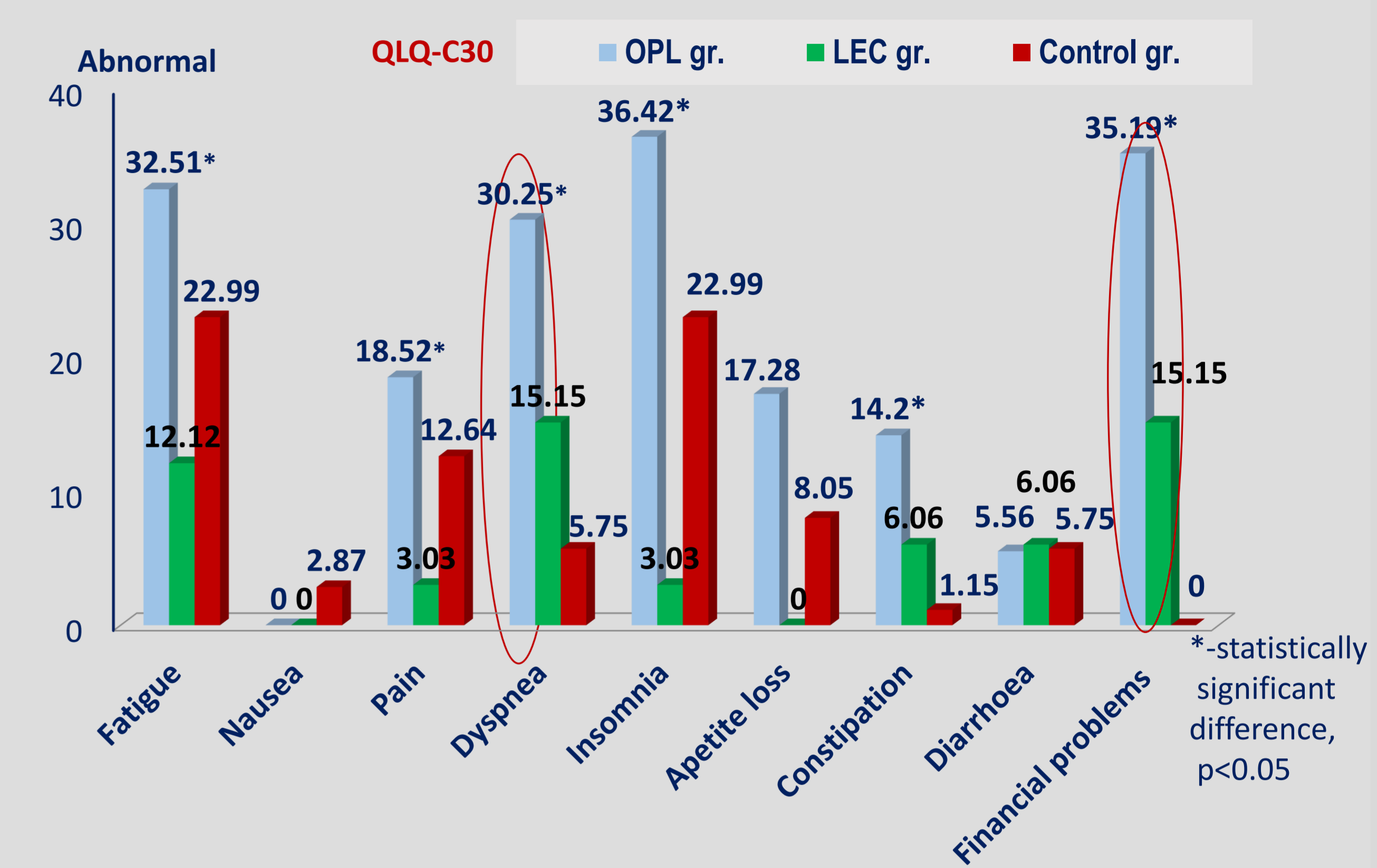


Fig. 4. General Head and Neck symptoms mean scores

- When analyzing general symptoms, OPL patients were significantly more concerned on fatigue, pain, dyspnea, insomnia and financial problems than LEC group did (Fig.4).
- Dyspnea** and **financial problems** achieved greatest difference in comparison to controls.

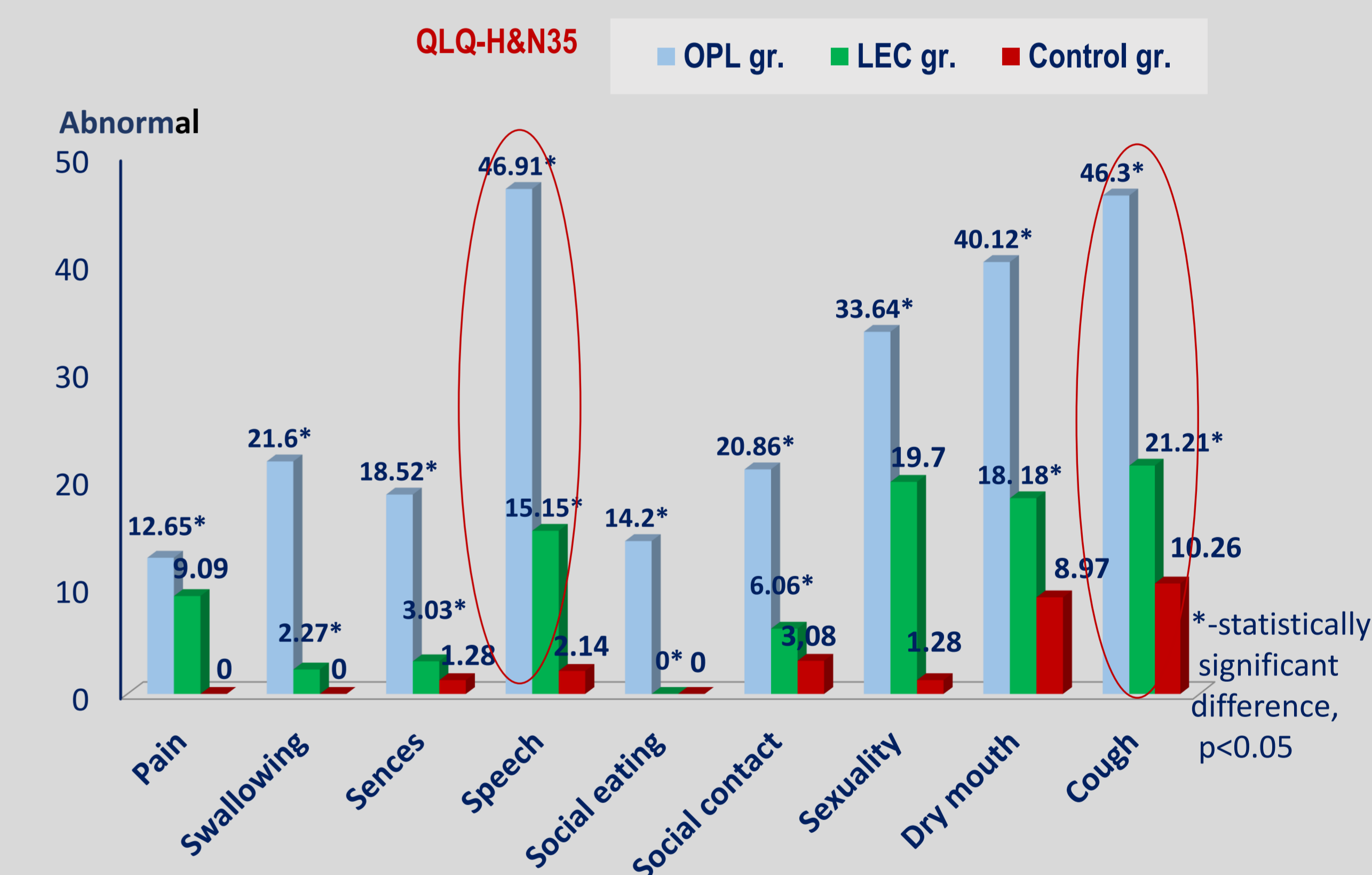


Fig. 5. Specific Head and Neck symptoms mean scores

- Specific H&N symptoms analysis showed that mean scores of majority (13 of 18) assessed QOL items were worse for OPL patients vs. controls (Fig.5).
- OPL group mostly suffered from moderate **speech** problems and **coughing**.
- No significant difference were found between data of LEC and control groups.
- Emotional distress on HAD scale was in the same level for all patients and controls.

## CONCLUSIONS

- Global health status for patients treated for early stage laryngeal cancer seems to be good with predominant rating from moderate to excellent. However, the majority of QOL aspects were worse in patients treated by open partial laryngectomy in comparison to patients after CO<sub>2</sub>-assisted endoscopic surgery and healthy controls.
- Main health problems were related to voice, speech and breathing difficulties indicating further need of post-operational voice rehabilitation.

## REFERENCES

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