## LIFE EXPECTANCY OF PATIENTS WITH LARYNGEAL CANCER AS PART OF MULTIPLE PRIMARY TUMOURS: A RETROSPECTIVE COHORT STUDY BASED ON TREATMENT MODALITIES IN THE GRODNO REGION, BELARUS (2001-2018)

Mohamed Al Sabry Suha Al Fathima<sup>1</sup>, Mohomed Ali Sabry Haya Ali Fathima<sup>2</sup>, Perera Gamage Ravindi Lakma<sup>1</sup>

University Clinical Hospital, Grodno, Belarus<sup>1</sup>, Grodno State Medical University, Grodno, Belarus<sup>2</sup>

**Introduction.** Laryngeal cancer is a malignancy most frequently presented in otolaryngology. In Belarus, incidence rate for laryngeal cancer is 9.8%, predominantly affecting men aged 50-60.

Multiple Primary Tumors (MPT) are defined by presence of two or more primary independent malignancies in a patient. The lack of awareness about MPT causes inadequate diagnoses, leading to poor outcomes.

**Aim of the study.** The aim of this study is to evaluate life expectancy of laryngeal cancer patients as a part of MPT, depending on the detection sequence and type of treatment received. Findings could guide clinical decision making and improve patient care.

Materials and methods. The retrospective cohort study was conducted to determine the survival rates of 66 adult patients with a diagnosis of laryngeal cancer in combination with neoplasm of other organs in Grodno, Belarus between 2001-2018. The patients taking part in the study had a clinical diagnosis of laryngeal cancer as a part of MPT and had complete medical records and follow-up data. Patients with incomplete records and those diagnosed with metastatic laryngeal cancer were excluded. The life expectancy of the patients based on tumor sequence, treatment modalities and the 5-year survival rate were calculated.

**Results and discussion.** 66 patients were involved, with 65 men (98.48%) and 1 woman (1.52%). The mean age was calculated to be 59 years, with 71.2% of patients aged 50-60 years.

Laryngeal cancer was first tumor diagnosed in 23 patients (34.85%), second tumor in 33 patients (50.0%) and was synchronously diagnosed in 10 patients (15.15%). Therapeutic tactics employed were: surgery in 2 cases (3.03%), radiation therapy in 32 (48.48%), chemotherapy in 1 (1.52%), combination therapy in 24 (36.36%) and no treatment in 7 (10.61%).

Average life expectancy was determined according to the tumor sequence. In cases where laryngeal cancer was diagnosed as first tumor, it was 24.87±14.45 months. As second diagnosed tumor, it was 51.22±25.52 months.

Five-year survival rate was calculated. In patients with laryngeal cancer as first tumor, it was 21.74%; when it was second presented tumor, it was 39.39%. In cases of synchronous tumors, it was determined as 30%.

This study highlights role of tumor diagnosis sequence and treatment strategies in patients with laryngeal neoplasms as a part of MPT.

Radiation was the frequently used mode of intervention. Second highest was combined therapy, showing potential for better improved outcomes and may increase survival rates. Treatment was absent in 7 cases due to patient's refusal to undergo anti-cancer therapy.

Patients with laryngeal cancer as second tumor had a longer mean life expectancy in comparison to when laryngeal neoplasm was discovered first. This may stem from the fact that detection of subsequent malignancies would have been faster after the discovery of an initial tumor. This could lead to early detection of possible silent tumors, greatly impacting survival rates. The lower 5-year survival rate for laryngeal cancer as first tumor in comparison to when it was second tumor discovered, also supports the hypothesis that late detection of primary tumors adversely impacts patient's prognosis.

The high proportion of laryngeal tumor as a part of MPT cases presenting as second tumor underscores importance of careful surveillance of already diagnosed patients to detect metachronous malignancies as early as possible.

The relatively small sample size limits ability to generalize its findings. The lack of data on comorbidities, tumor stage and lifestyle factors (whether patient ceased smoking post-diagnosis, etc.) may further limit this study.

The predominance of male patients is also a limitation. This gender disparity aligns with global epidemiological trends of laryngeal cancer, likely due to higher exposure to established risk factors like tobacco use, alcohol consumption and occupational toxins. This emphasizes the need for preventative strategies and screening methods in high-risk patients. Future studies with larger sample sizes that take into account these limitations would offer further insight on this topic. Modern management methods, such as immunotherapy, would help to refine prognosis and therapeutic strategies.

**Conclusion.** In patients with laryngeal cancer as a part of MPT, life expectancy is affected by sequence of tumor detection as well as treatment strategies employed. Combined therapy in case of metachronous tumors has been shown to improve poor outcomes. These findings emphasize importance of clinical vigilance in patients with MPT; early detection is vital in improving life expectancy.

## EFFECT OF BURNOUT ON ACADEMIC PERFORMANCE OF MEDICAL STUDENTS IN VITEBSK STATE MEDICAL UNIVERSITY

Mohamed Izka

Vitebsk State Medical University, Vitebsk, Belarus

**Introduction.** Researches indicate higher level of stress and burnout amongst medical students compared to general population. Christina