

Benefits of a multi-professional preoperative information day in head and neck cancer patients after complex surgery

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INTRODUCTION

Multi-disciplinary perioperative management of patients undergoing complex surgery for head and neck cancer (HNC) is widely implemented¹⁻³. However, the impact of multi-professional preoperative information, assessment and briefing on postoperative outcome has not been evaluated.

Based on the observation in the past that a large proportion of HNC patients undergoing complex surgery seemed inadequately prepared despite informed consent provided by the surgeon, and were often overwhelmed by the physical and psychological stress inherent to the post-operative period, our Department of Oto-Rhino-Laryngology, Head and Neck Surgery, implemented a structured out-patient multi-professional preoperative information day (MUPID) in 2015 (**Fig. 1**).

The aim of this day was to provide individualized, structured and comprehensive information to the patients and their families, to identify and address individual medical and socio-economic risk factors. Further, the communication and coordination between experts from different professions involved in the management, including advanced nurse practitioners, psycho-oncologists, speech therapists, social workers and surgeons shall improve.

AIMS

To evaluate the impact of the MUPID for HNC patients undergoing complex oncologic surgery on postoperative complications, length of hospital stay (LOS), readmissions and costs per case, compared with a control group without this information and assessment day.

METHODS

- Single center, retrospective, before/after implementation study
- Inclusion: HNC patients with complex oncologic surgery
- Approval by the Ethics Committee, Switzerland

Control group without MUPID: 80 patients
Period: 2012 - 2014
Intervention group with MUPID: 81 patients
Period: 2015 - 2018

Figure 1: Structure of multi-professional preoperative information day (MUPID)

Team member	Content	Time
Advanced nurse practitioner	Information MUPID, distress thermometer	08.30 – 09.00
Resident	Planned surgery, risks, prognosis	09.00 – 09.35
Psycho-oncologist	Psychological burden, support patient / relatives	09.45 – 10.45
Speech language therapist	Speech, swallowing, vocal prosthesis	11.00 – 11.30
Social worker	Work, housing, family, insurances	11.30 – 12.00
Lunch break		
Advanced nurse practitioner	Hospital stay, communication, tubes	12.45 – 13.45
Nurse outpatient clinic	Malnutrition risk score, supplemental nutrition	13.50 – 14.20
MUPID Team	Consensus on the most appropriate treatment	14.30 – 14.45
Chief surgeon	Surgery in detail, organization, distress thermometer	14.45 – 15.30

RESULTS

The groups showed no significant differences in socio-demographic, disease and procedural characteristics.

The MUPID group presented **decreased**:

- degree of complication severity** (Clavien-Dindo score median: III [I-V] vs. II [I-IV]; $p=.011$ for local / II [I-V] vs. I [I-V]; $p=.009$ for general complications) (**Fig. 2**)
- median total / initial LOS** (18 days [IQR, 13.5-23] vs. 12 days [IQR, 11-16]; $p<.001$ / 16.5 days [IQR, 12-23] vs. 11 days [IQR, 10-16]; $p<.001$) (**Fig. 3**)
- median costs per case** (69,602 USD [IQR, 47,076-94,696] vs. 50,848 USD [IQR, 42,543-62,513]; $p<.001$) (**Fig. 4**)

Figure 2: Degree of complication severity

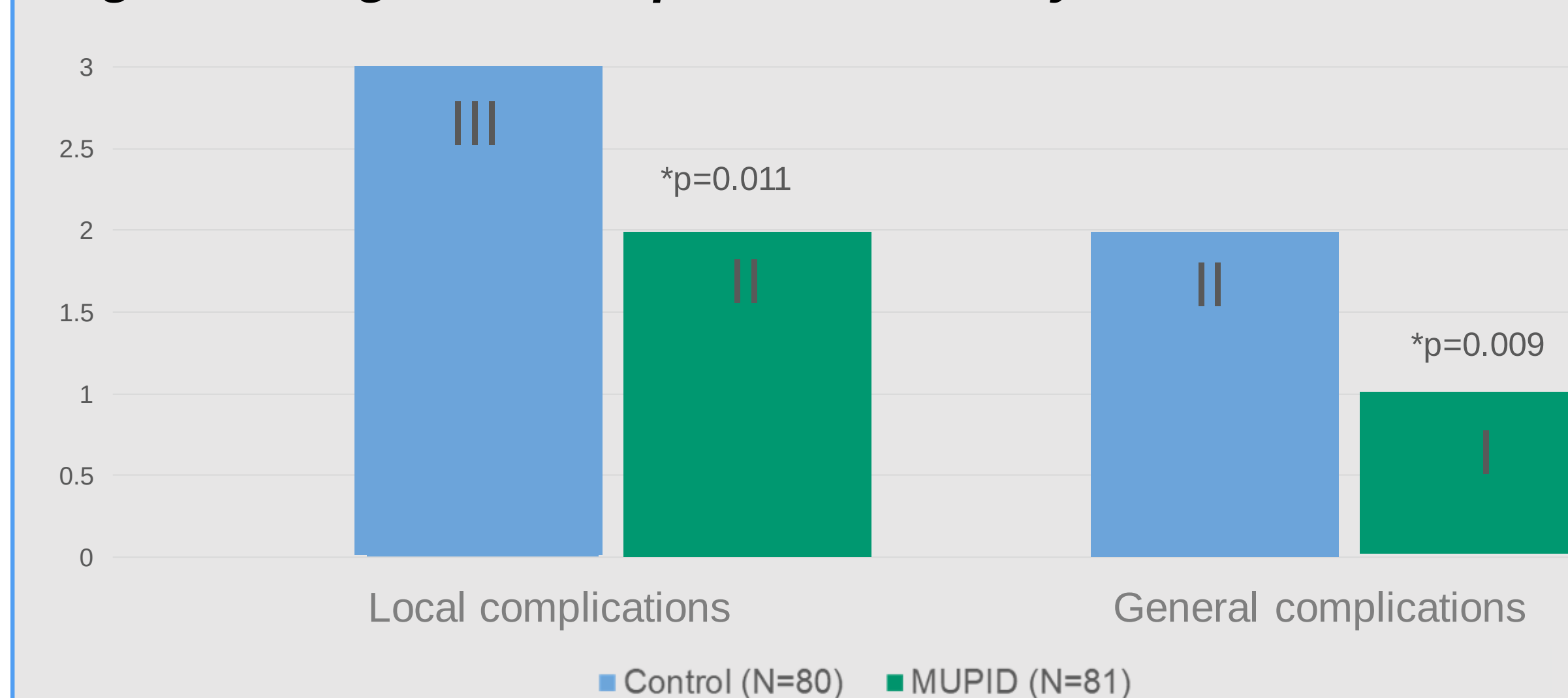


Figure 3: Length of hospital stay

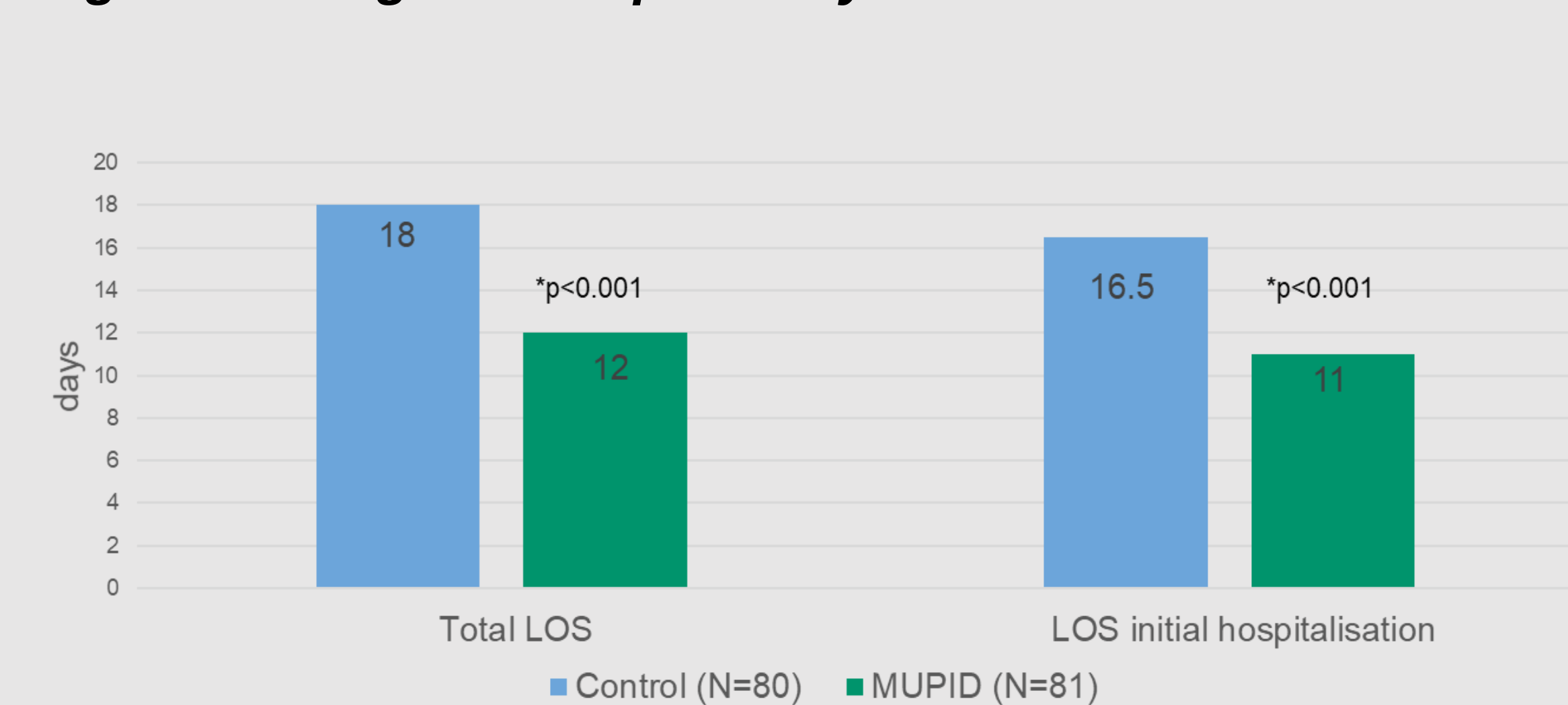
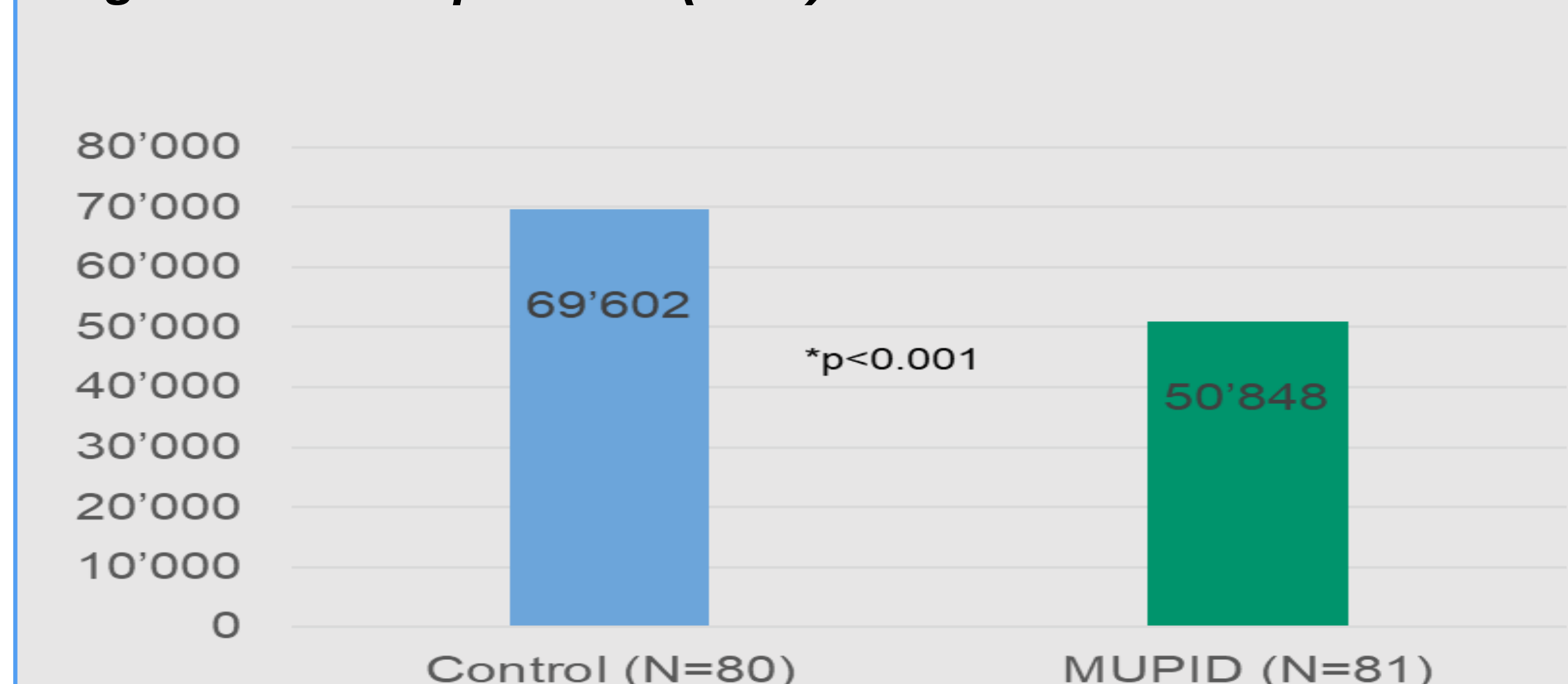


Figure 4: Costs per case (USD)



CONCLUSION

The results of this study demonstrate the benefits of systematic and multi-professional preoperative management in patients undergoing complex oncologic HNC surgery. Interventions such as the presented MUPID may help to reduce the severity of complications, LOS and costs.

These results are promising on a patient level by minimizing the individual treatment burden, as well as on an institutional and health care system level by significantly optimizing surgical outcomes and financial aspects.

Furthermore, in our experience, the MUPID fosters a positive relationship between the treating medical team and patients together with their families. Further studies could complement our results from a patient perspective and focus on soft factors such as stress levels or knowledge gain of patients and their relatives.

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