

## Treatment of esophageal perforations: The role of the Pittsburgh Severity Score to guide the therapeutic approach

Lucia Moletta

University of Padova, Italy

Esophageal Perforation (EP) is characterized by high morbidity and mortality. The Pittsburgh Severity Score (PSS) is a scoring system based on clinical factors at the time of EP presentation, intended to guide treatment. The aim of the study is to verify PSS usefulness in stratifying EP severity and in guiding clinical decisions. All patients referred to our Unit for EP between January 2005 and January 2020 was enrolled. Patients were stratified according to their PSS into 3 groups (PSS 2; 3-5 and  $\geq$  5) the postoperative outcomes were compared. The predictive value of the PSS was evaluated by simple linear and logistic regression for the following outcomes: Need for surgery, Complications, In-hospital mortality, ICU and Hospital stay, and time to refeeding and need for reintervention.

Seventy-three patients were referred for EP (M/F: 46/27). Perforations were more frequently **iatrogenic** (41.1%) or spontaneous (38.3 %). The median PSS was 4 (IQR 2-6). Surgery was required in 60.3% of cases. PSS was associated with ICU admission, hospital stay, need for surgery and reintervention, post-perforation complications and mortality. After regression analysis, PSS was significantly predictive of post perforation complications ( $p < 0.01$ ); in-hospital mortality ( $p=0.01$ ); ICU admission ( $p < 0.01$ ); need for surgical treatment ( $p < 0.01$ ) and need for reintervention ( $p=0.02$ ).

**Conclusion:** PSS is useful in stratifying patients in risk groups with different morbidity and mortality. It is also useful in guiding the therapeutic conduct, selecting patients for non-operative management. Prospective studies are needed to confirm the role of the PSS in the treatment of **esophageal perforation**.

### Biography

Lucia Moletta graduated at the University of Padua Medical School in 2008, and finished her Residency in General Surgery (2015) at the same University. Since 2017, she had been working as Research Associate at the Department of Surgical, **Oncological** and Gastroenterological Sciences (DISCOG), Clinica Chirurgica 3, University and Hospital of Padua. She attended in 2015 as a visiting physician the Hepatobiliary and Pancreatic Surgical Unit at the Academisch Medisch Centrum (Amsterdam). Her main interest lies in the oncologic diseases of the pancreas, as far as both the diagnosis and surgical treatment are concerned and in the oncologic diseases of the esophagus and stomach. She is Author and Co-Author of 42 papers dealing with Oncologic Surgery.

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