

Aspects of mechanical dysphagia

Assessment, treatment and consequences

Akademisk avhandling

Som för avläggande av medicine doktorsexamen vid Sahlgrenska akademien, Göteborgs universitet kommer att offentligens försvaras i Hörsal Arvid Carlsson, Academicum, Medicinargatan 3, Göteborg, den 9 juni 2017, klockan 13.00.

av **Jan Persson**

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Avhandlingen baseras på följande delarbeten:

- I. Jan Persson • Erik Johnsson • Srdjan Kostic • Lars Lundell • Ulrika Smedh**
Treatment of achalasia with laparoscopic myotomy or pneumatic dilatation:
Long-term results of a prospective, randomized study
World Journal of Surgery 2015; 39:713–720
- II. Jan Persson • Cecilia Engström • Henrik Bergquist • Erik Johnsson • Ulrika Smedh**
Validation of instruments for the assessment of dysphagia due to malignancy of the oesophagus
Submitted manuscript.
- III. Jan Persson • Ulrika Smedh • Åse Johnsson • Bo Ohlin • Magnus Sundbom
Magnus Nilsson • Lars Lundell • Berit Sunde • Erik Johnsson**
Fully covered stents are similar to semi-covered stents with regard to migration
in palliative treatment of malignant strictures of the esophagus and gastric cardia:
Results of a randomized controlled trial
Surgical Endoscopy 2017; 24 February (Epub ahead of print).
- IV. Jan Persson • Monika Fagevik Olsén • Britt-Marie Iresjö • Ulrika Smedh**
Body composition and sarcopenia before and after surgery with curative
intention in a cohort of patients with oesophageal cancer or cancer
of the gastro-oesophageal junction
Submitted manuscript.

SAHLGRENSKA AKADEMIN
INSTITUTIONEN FÖR KLINISKA VETENSKAPER



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ABSTRACT

Background: Dysphagia is a symptom that negatively impacts patients' quality of life. In the present thesis, aspects of dysphagia were explored in patients with primary achalasia and in patients diagnosed with cancers of the oesophagus or of the gastro-oesophageal junction.

Aims: To validate commonly used dysphagia scores for malignant strictures of the oesophagus; to evaluate surgical and conservative treatments against primary achalasia, as well as evaluate stent treatments for dysphagia in advanced oesophageal cancer; and to describe and evaluate body composition, sarcopenia, and physical performance before and during follow-up after resection surgery in patients with oesophageal cancer.

Methods and results:

Paper I – A randomized controlled trial was performed in which laparoscopic myotomy was compared to endoscopic dilatation for achalasia-associated dysphagia, using treatment failure as the primary variable. At the five-year follow-up, there was a significant difference in favour of the surgical approach with fewer treatment failures. Both dysphagia and QoL were better in the operated group at three years, although these differences diminished at five years. Treatment costs in the operated group were significantly higher.

Paper II – A validation of scales for assessment of dysphagia due to malignancy was made in patients with cancer of the oesophagus. Self-reported dysphagia from the Watson score, Goldschmid score and the Ogilvie score was compared to a food diary and to the already validated QoL questionnaire, QLQ-OG25. All scores had good reliability, and the Ogilvie score and QLQ-OG25 had the strongest correlation.

Paper III – A randomized controlled trial was conducted to explore the potential difference in stent migration between a conventional semi-covered stent, and a fully covered stent of a newer design, in palliative treatment of dysphagia due to malignancy. The primary variable was the frequency of migration > 20 mm. There were no significant differences in any of the studied variables of dysphagia, QoL or re-intervention frequency, indicating that a fully-covered stent of a newer design is similar to a conventional semi-covered stent with regard to migration.

Paper IV – Body composition and sarcopenia were investigated in a prospectively collected patient cohort with cancer of the oesophagus who were planned for surgery with curative intent. Prior to surgery, a majority of the patients displayed deteriorated physical performance; almost two of five were judged to be severely malnourished in spite of a normal BMI, and one of five had sarcopenia. Muscle mass continued to deteriorate for at least three months post-operatively. High physical performance, female sex and a high global QoL score positively predicted overall survival.

Conclusions: The Ogilvie score and the dysphagia module in QLQ-OG25 can be selected for assessment of dysphagia due to malignancy. In primary achalasia, laparoscopic myotomy gives a better long-term result and can thus be recommended as a primary treatment method. A fully-covered stent of a newer design is comparable to a conventional semi-covered stent with regard to migration. Patients with potentially curable oesophageal cancer have a high pre-operative prevalence of malnutrition and sarcopenia in spite of normal average BMI. Surgery has a long-lasting catabolic impact. This highlights the importance of optimal pre- and post-operative nutritional support in oesophageal cancer.

Keywords: Dysphagia, Watson, Ogilvie, Goldschmid, QoL, Sarcopenia, Laparoscopic myotomy, Achalasia, Oesophageal cancer.

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