



## Bacteremia and endotoxemia after endoscopic submucosal dissection for gastric neoplasia: pilot study.

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Abstract: Because the invasive procedure of endoscopic submucosal dissection (ESD) entails a large mucosal defect which is left open, with extensive submucosal exposure to the indigenous bacterial flora, the procedure may have a substantial risk for bacteremia. Our aim was to examine gastric ESD-related bacteremia and endotoxemia in gastric neoplasia patients.

In patients who underwent ESD for superficial gastric neoplasia, blood cultures and plasma endotoxin measurements were done before, immediately after, and on day 2 after ESD. Clinically manifest infections and inflammatory markers, including C-reactive protein (CRP) and white blood cells, were monitored.

Fifty patients (aged  $69 \pm 8$  years; mean  $\pm$  SD) were enrolled. The diameter of the resected specimens was  $38 \pm 18$  mm and the procedure time of ESD was  $66 \pm 53$  min. Two percent (2/100) of blood cultures after ESD were positive, with findings as follows: Propionibacterium species immediately after ESD, and Enterobacter aerogenes on day 2 after ESD, but no clinically manifest infection was observed. In 30% of the enrolled patients, CRP on day 2 after ESD had increased to levels higher than 1.0 mg/l. Plasma endotoxin levels, immediately after and on day 2 after ESD were correlated with CRP levels on day 2 after ESD.

In spite of the invasive procedure with massive submucosal exposure to the indigenous bacterial flora, gastric ESD has a low risk for bacteremia. Gastric ESD-related endotoxemia may be linked to inflammatory reactions such as those shown by the increase of CRP or fever observed after ESD.

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