

**Splenectomy Does Not Increase Early Morbidity in Patients Undergoing Total Gastrectomy:
A Case-Control Study with Propensity Score Analysis**

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Abstract

Aim: In gastric cancer (GC), D2 lymph node dissection is, alongside negative-margins gastrectomy, of paramount importance. There is a debate between Western and Eastern scientific communities concerning the risk-benefit balance with respect to splenectomy, as Western countries are inclined to perform spleen-preserving gastrectomy due to an increased risk for postoperative complications. In Eastern countries (such as Japan) this is not the case. Our study aimed to determine whether or not spleen-sacrificing total gastrectomy for GC was associated with a higher rate of early postoperative morbidity or mortality.

Method: We performed a retrospective case-control study in which we included patients who underwent total gastrectomy with D2 lymphadenectomy for GC (stages I-III) with curative intent, in a single high-volume tertiary oncologic centre. We divided the cases into two groups: spleen-preserving (SP) and spleen-sacrificing (SS) and evaluated the early complications rate following surgery. Afterwards, we performed propensity score matching (PSM) and analysis of the two groups.

Results: We included 74 patients, 29 in the SS group and 45 in the SP group. Fifteen cases (20.2%) developed early postoperative complications and the complication rate was 53% (n=8) in the SS group and 46% (n=7) in the SP group. The overall 30-day mortality rate was 2.7%.

Conclusions: Splenectomy is not associated with increased early morbidity following total gastrectomy with D2 lymphadenectomy if performed by an experienced surgeon.

Key words: gastric cancer, gastrectomy, splenectomy, D2 lymphadenectomy, morbidity