Appraisal of the Surgical Outcomes and Oncological Efficiency of Intraoperative Adverse Events in Robotic Radical Gastrectomy for Gastric Cancer

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INTRODUCTION & AIM

Surgical quality control is a crucial determinant of evaluating the tumor efficacy. The increasing number of surgeries and complex preoperative comorbidities in gastric cancer(GC) patients often lead to an increase in intraoperative adverse events (iAE). Although conventional metrics, such as operative time, blood loss, and postoperative complications, can provide an overall description of surgical outcomes in robotic surgery, they may not reliably reflect surgical skill and competency.

This study aimed to explore Class-Intra grading as a routine surgical quality control indicator and evaluate its effectiveness in predicting long-term prognosis by collecting clinical and pathological data from patients undergoing robotic GC radical surgery in high-volume teaching hospitals.

METHOD

Data of patients undergoing robotic radical surgery for GC at a high-volume center were retrospectively analyzed. Patients were categorized into two groups, the iAE (intraoperative adverse event) group and the non-iAE group, based on the occurrence of intraoperative adverse events. The iAEs were further classified into five sublevels (ranging from I to V according to severity) based on the Class-Intra grade. Surgical performance was assessed using the Objective Structured Assessment of Technical Skill (OSATS) and the General Error Reporting Tool(GERT).

RESULTS & DISCUSSION

This study included 366 patients (iAE group: n=72 [19.7%] and non-iAE group: n=294 [80.3%]). The proportion of ClassIntra grade II patients was the highest in the iAE group (54.2%). The overall survival (OS) and disease-free survival of the non-iAE group were significantly better than those of the iAE group (Log rank P<0.001). Uni- and multi-variate analyses showed that iAEs were key prognostic indicators, independent of tumor stage and adjuvant chemotherapy (P<0.001).
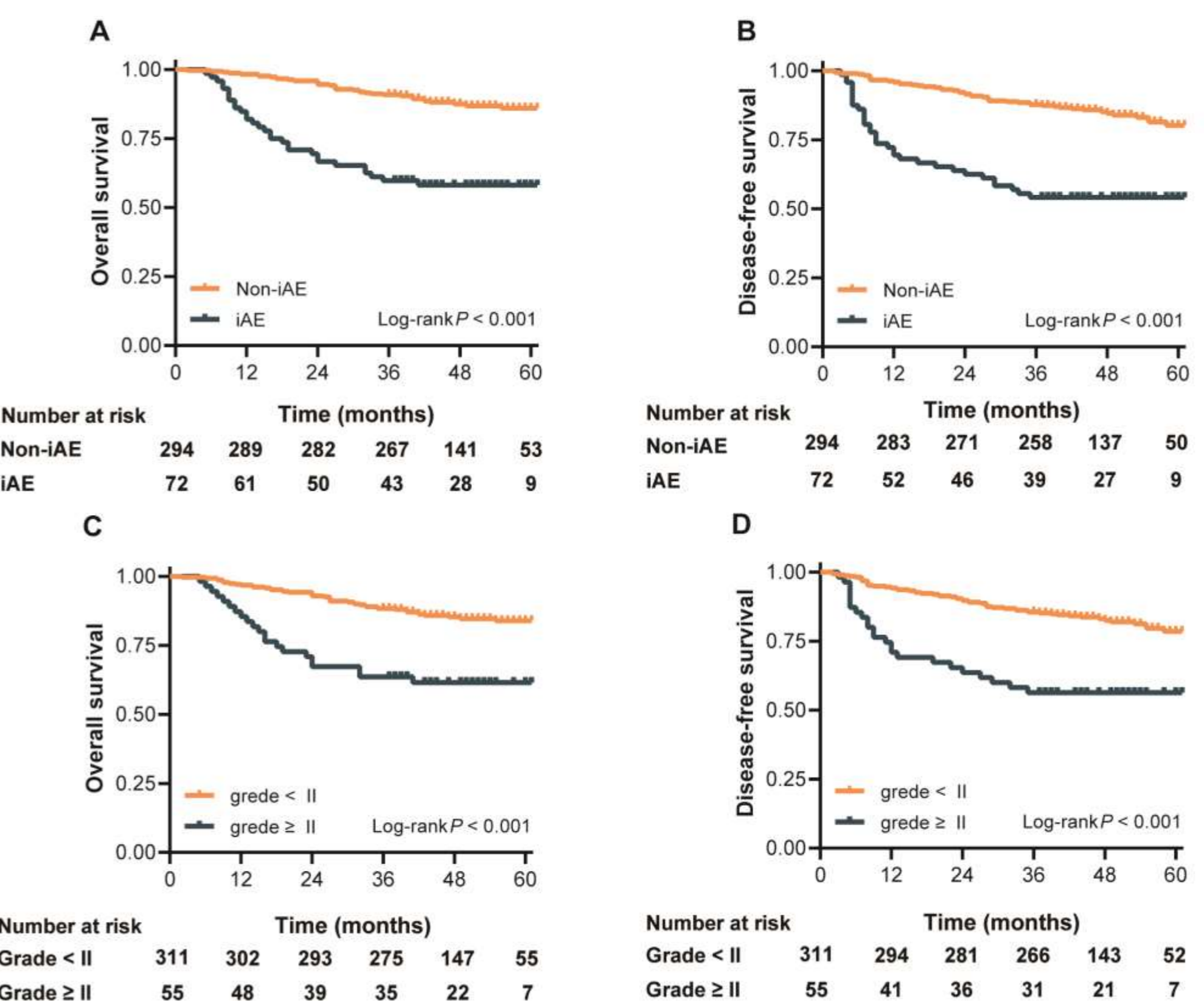
CONCLUSION

iAEs in patients who underwent robotic radical gastrectomy significantly correlated with the occurrence of postoperative complications and a poor long-term prognosis.

FUTURE WORK / REFERENCES

In the future, we hope to further improve and design a corresponding GC Class-Intra grade that considers the characteristics of radical GC surgery, and provides a more detailed overview of complications for each surgical procedure during GC surgery.