Robotic spleen-preserving splenic hilar lymphadenectomy for advanced proximal gastric cancer: A feasible and simplified procedure☆

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ABSTRACT

Background: Robotic systems recently have been introduced to overcome technical limitations of conventional laparoscopic gastrectomy, especially for complex procedures [1]. We developed a set of procedural operation steps for robotic spleen-preserving splenic hilar lymphadenectomy, which is difficult and recommended in D2 lymph node (LN) dissection during total gastrectomy [2–4].
Methods: The robotic operative procedures of splenic hilar lymphadenectomy using the da Vinci® Si system were demonstrated in a step-by-step manner, with technical tips for each step, in the video clip. The above procedures were performed on 40 consecutive patients with stage cT2-3 proximal gastric cancer between July 2016 and September 2017. The learning curve was analyzed based on the cumulative sum method (CUSUM).
Results: The mean age and body mass index of patients were 55.3 ± 10.4 years (range 29–78) and 23.0 ± 2.7 kg/m^2 (range 15.4–28.4), respectively. All spleen-preserving surgeries were successfully performed without open or laparoscopy conversion. Mean operation time of splenic hilar lymphadenectomy was 20.3 ± 6.4 min (range 13.3–46.3); mean blood loss was 13.7 ± 5.3 ml (range 8.0–40.0). The overall average of 38.8 ± 13.1 LNs (range 19–81) was retrieved, including a mean 3.3 ± 1.4 (range 0–8) splenic hilar area LNs, with a 10% (4/40) metastatic rate. No immediate postoperative mortality was observed. 6 patients (15.0%) experienced a complication after surgery; the operation-related complications consisted of one wound complications, one abdominal infection, and one anastomosis leakage. At a median follow-up of 12 months, one patient had experienced lung metastasis. According to the CUSUM, the cut-off point of splenic hilar LN dissection time and blood loss were 15th and 20th cases, respectively.
Conclusion: Robotic surgery can improve the quality of surgery and promote the D2 LN dissection. This procedure is feasible and simplifies complicated splenic hilar lymphadenectomy.

Disclosures

The authors, including ZQ, CQY, ZCH, and HCM made no disclosures.

Human rights statement and informed consent

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1964 and later versions. Informed consent or substitute for it was obtained from all patients for being included in the study.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.suronc.2018.11.014.

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