

Clinical paper

Medtronic clinical summary of a skin-sparing mastectomy using LigaSure™ small jaw and electrocautery.

TITLE Comparison of skin-sparing mastectomy using LigaSure™ small jaw and electrocautery

AUTHORS Young Woo Chang, Hwan Soo Kim, Seung Pil Jung, Sang Uk Woo, Jae Bok Lee, Jeoung Won Bae and Gil Soo Son

JOURNAL World Journal of Surgical Oncology; Chang et al. World Journal of Surgical Oncology (2017) 15:129

WHY THIS IS IMPORTANT

The purpose of this study was to compare clinical outcomes for skin-sparing mastectomy using either electrocautery or the LigaSure™ small jaw for hemostasis. The present study showed that the use of LigaSure™ small jaw could significantly reduce the total volume and duration of drainage in skin-sparing mastectomy. The authors found that the patients in the LigaSure™ small jaw group had a smaller volume and shorter duration of drainage, which may have been the result of subdermal lymphatics being properly sealed with the device.

METHODS

This retrospective study included 81 Korean breast cancer patients from a single center who underwent skin-sparing mastectomy. Data was collected from January 2012 to December 2015. Clinical outcome data was collected and compared for total drain volume, drainage indwelling period, operative time, and complications. Postoperative skin necrosis requiring debridement was also analyzed.

RESULTS

Of the 81 patients, 50 patients were in the electrocautery group and 31 patients were in the LigaSure™ small jaw group based on the devices utilized for the skin-sparing mastectomy procedure. The electrocautery group and LigaSure™ small jaw group consisted of similar age groups (mean age 44.1 ± 7.5 vs. 46.4 ± 6.4 years, respectively, $p = 0.164$) and similar BMI (23.7 ± 3.3 vs. 22.7 ± 2.6 , respectively, $p = 0.173$). The tumor, node, metastasis staging classifications did not differ between the groups. Nipple-sparing mastectomy was performed in both groups, and weights of the removed breast tissue were comparable between the groups.

The LigaSure™ small jaw group had significantly shorter operative times (117.5 ± 16.9 vs. 104.0 ± 23.6 min, $p = 0.004$), the mean total volume of drainage was less (805 ± 278 vs. 694 ± 131 mL, $p = 0.017$), and mean duration of drainage was also significantly shorter (11.3 ± 2.5 vs. 10.1 ± 2.0 days, $p = 0.029$). Additionally, the LigaSure™ small jaw group had lower complication rates for skin necrosis, seroma formation, and hematoma, though not statistically significant.



CONCLUSION

The use of the LigaSure™ small jaw device during skin-sparing mastectomy was associated with reduced operative time, total volume of drainage, and duration of drainage.

Study Limitations

The study limitations of this study include the retrospective design as well as the small sample size. Moreover, there was an unequal number of patients in the study groups. A selection bias was unavoidable since the choice of using LigaSure™ small jaw was made by the patient. The authors suggest a prospective investigation to better understand the correlations between devices and clinical outcomes.

****THIS CONCLUDES THE CLINICAL SYNOPSIS OF THIS PUBLICATION****

©2025 Medtronic. Medtronic, Medtronic logo, and Engineering the extraordinary are trademarks of Medtronic. ™*
Third-party brands are trademarks of their respective owners. All other brands are trademarks of a Medtronic company. ce-se-2600025-comparison-of-skin-sparing-mastectomy-using-ligasure-small-jaw-and-electrocautery-chang-clinical-summary-en-gb-emea-21979039