

Does Fibrin Sealant Reduces the Seroma After Immediate Breast Reconstruction Utilizing A Latissimus Dorsi Myocutaneous Flap?

Ho Seong Shin, MD, PhD; Yong Bae Kim, MD, PhD; Han Gyu Cha, MD; Yim Don Choi, MD

Abstract

Background: The most common complication of latissimus dorsi myocutaneous flap in breast reconstruction is the seroma formation in the back. Many clinical studies have shown that fibrin sealant reduces seroma formation and we have investigated where there was a statistically significant difference in postoperative drainage and seroma formation when utilizing the fibrin sealant on the site of latissimus dorsi harvested for immediate breast reconstruction after skin sparing partial mastectomy.

Methods: Total 46 patients underwent immediate breast reconstruction utilizing a latissimus dorsi myocutaneous island flap. 23 patients were performed without fibrin sealant and other 23 with the use of fibrin sealant. All flaps were elevated with manual dissection by the same surgeon and were analyzed as to the potential benefits of fibrin sealant. The correlation analysis and Mann/Whitney test were used for the analysis of drainage volume according to age, weight of breast specimen and body mass index.

Results: Although statistically not significant, the cumulative drainage fluid volume showed higher in control group until postoperative day 2 (530.1 mL compared to 502.3 mL), but the fibrin sealant group showed more drainage from postoperative day 3 (Figure 1). Comparing the donor site, the fibrin sealant group showed more drainage from postoperative day 3 and the drain was removed 1 day faster in the control group (Table 1).

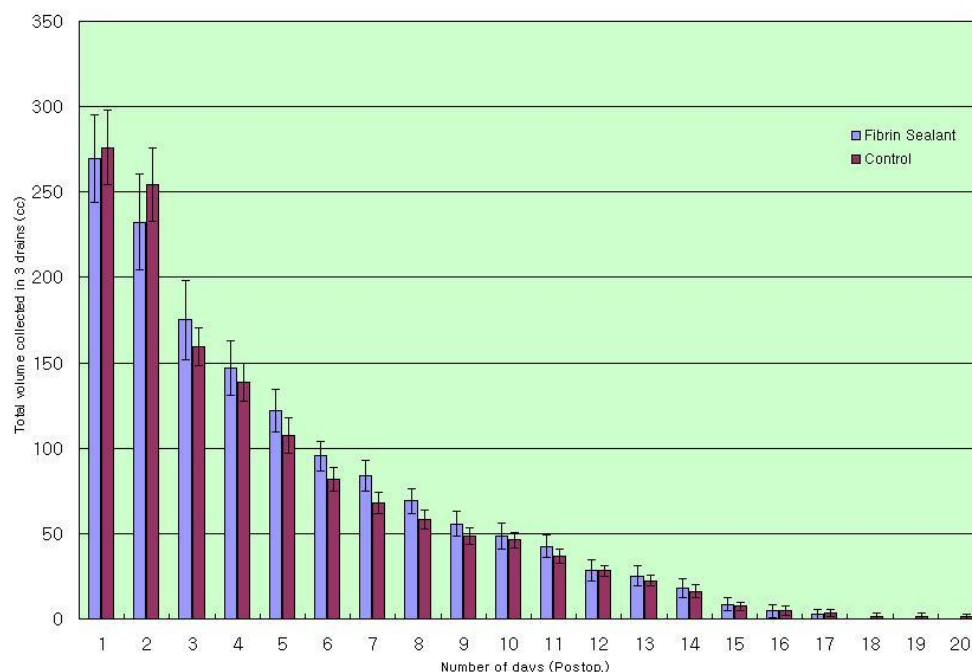


Figure 1. Volume of drain output during two weeks

	Fibrin sealant Group	Control Group
Cumulative drainage fluid volume in three drains (mL)	1429.4 (±626.9)	1361.3 (±421.0)
Day of drain removal (days)	12.8 (±3.1)	11.8 (±3.0)
Rate of seroma formation (%)	0	0

*Mean (±S.D.)

Table 1. Comparison of outcome measure

Conclusions: The use of fibrin sealant resulted in no reduction of seroma formation. Because the benefits from the fibrin sealant are not clear, the use of fibrin sealant must be fully discussed with the patients before its use, as a part of informed consent.

References

1. Kulber DA, Bacilious N, Peters ED, et al. The use of fibrin sealant in the prevention of seromas. *Plast Reconstr Surg* 99: 842–849, 1997.
2. Anne LD, Mubashir C, Sunil ST. A prospective randomized trial of the efficacy of marginal quilting sutures and fibrin sealant in reducing the incidence of seromas in the extended latissimus dorsi donor site. *Plast Reconstr Surg* 125: 1309, 2010.
3. Gilly FN, Francois Y, Sayag-Beaujard AC, et al. Prevention of lymphorrhea by means of fibrin glue after axillary lymphadenectomy in breast cancer: prospective randomized trial. *Eur Surg Res.* 30: 439-443, 1998.

Disclosure/Financial Support

No disclosures.

None of the authors has a financial interest in any of the products, devices, or drugs mentioned in this manuscript.