Case Study: Reduction of Gluteal Implant Infection Rates with Use of Retention Sutures

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Summary: The intramuscular technique has been the most popular technique among plastic surgeons for gluteal implantation. Complication rates of up to 30% including infection, hematoma, seromas, and dehiscence are reported in several studies. One main question that arises is whether the wound dehiscence occurs first followed by infection or vice versa. We present a case study of 3 patients who received gluteal augmentation. We used an alternative technique in closure of the gluteal flap which included the use of retention sutures along the sacral incision. Follow-up included postoperative day 2, every week for 6 weeks, and then every month for 6 months. Postoperatively patients were advised to not sleep in supine position for 3 weeks and avoid pressure to the area. The 3 patients remained infection free at 2 days and weekly for 6 weeks. The use of retention sutures along the flap closure site may be a useful and simple technique to avoid high gluteal implant infection rates that have been reported in the literature. We plan to apply this technique to all of our future gluteal augmentations and track long-term results. Preventing complications will result in improved aesthetic results, increased patient satisfaction, less frequent office visits, and less financial cost to both patient and physician. (Plast Reconstr Surg Glob Open 2015;3:e289; doi: 10.1097/GOX.0000000000000262; Published online 13 January 2015.)

METHODS

A case study was performed of 3 patients who received gluteal augmentation with AART, Inc. solid round silicone implants. All patients were initiated on a 10-day course of perioperative antibiotics. The intramuscular technique has been previously described, and infections requiring removal and reduced injury and irritation of the sciatic nerve. Plastic surgeons continue to search for new techniques and approaches to reduce complication rate of gluteal implants given the high demand for this surgery. In this case study, we hypothesize that infection of implants may come secondary to incision dehiscence allowing stool species to colonize the incision and dissection planes. To prevent the latter, we used a simple alternative closure technique combined with intramuscular gluteal implantation that may reduce tension and dehiscence and ultimately reduce infection rates.

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scribed: a 7-cm incision was made along the intergluteal fold. Slight subcutaneous dissection until the desired pocket was reached before entering the gluteal fascia. A 2-cm intramuscular pocket was created and the implant inserted. A 3-layer closure was then performed to secure the implant: 0 Monocryl (Ethicon) in the gluteal fascia, 2-0 Monocryl in the dermis, and 3-0 chromic simple running stitch in the skin layer. Final layer of closure of the gluteal flap included the use of retention sutures of 2-0 nylon tied over 2-cm pieces of silicone tubing cut from Jackson Pratt drains along the sacral incision as shown in Figure 1. Careful attention was given to not place too much pressure on the skin.

RESULTS

Follow-up included postoperative day 2, followed by every week for 6 weeks, and then every month for 6 months. Postoperatively patients were advised to not sleep in supine position for 3 weeks and avoid pressure to the area. The 3 patients remained infection free at 2 days and weekly for 6 weeks and 6 months. The surgical drains were removed at 1-week follow-up visit or when drain output was less than 30 ml in 24 hours. The retention sutures were removed at 3-week follow-up visit. Healing was uneventful with no signs of infection or wound dehiscence. Patients resumed full activity at 6 weeks.

DISCUSSION

Prior to these 3 patients, the primary surgeon had 2 wound dehiscences/infections in consecutive gluteal augmentation patients. The bacterial cultures from those patients grew. Due to the location of the incision and the tension on the closure due to the implants and positioning of the patient during daily living activities, the primary surgeon debated whether the dehiscence or the infection occurred first. Trying to prevent dehiscence seemed like a logical first step, and this approach was applied to the next 3 patients. These patients healed uneventfully as previously noted. The use of retention sutures along the flap closure site therefore may be a useful and simple technique to avoid high gluteal implant infection rates that have been reported in the literature. We plan to apply this technique to all of our future gluteal augmentations and track long-term results. Preventing complications will result in increased patient satisfaction, less frequent office visits, and less financial cost to both patient and physician.

CONCLUSIONS

The use of retention sutures is a simple and inexpensive technique that may allow better healing following gluteal implant surgery and decrease complication rates. Preventing complications will result in increased patient satisfaction, less frequent office visits, and less financial cost to both patient and physician. We plan to apply this technique to all of our future gluteal augmentations and track long-term results. A larger series will be needed to confirm the above findings.

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Fig. 1. The use of retention sutures and bilateral drains at 3 weeks.