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CLINICAL RESEARCH

The value of a Gluteal Muscular Flap

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ABSTRACT

A 10-year-old girl had the removal of a sacro-pelvic teratoma. Later she had to be re-operated under the suspicion of recurrence but that proved to be an abscess. After drainage a fistulous tract reappeared and the classical surgical approaches were unsuccessful. Inspired by a technique having been used, sometimes, in orthopedic surgery in cases of chronic osteomyelitis, to introduce fresh blood supply to the contaminated wound and aid in tissue healing and resolution of the infection, one was able to solve the problem of the sacral fistula, by the use of an original gluteal muscular flap.

KEYWORDS

Sacro-pelvic teratoma; Orthopedic Surgery

BACKGROUND AND PURPOSE

To demonstrate the use of a gluteal muscular flap as a solution for the treatment of a persistent sacral fistula.

MATERIAL AND METHODS

A 10-year-old caucasian girl was submitted to laparotomy for removal of a trigeminal mature teratoma. One month later she required further surgery, through a posterior sagittal approach, to remove a presumed residual tumor in the Douglas Pouch, which turned out not to be a tumor but to be an abscess, which was drained. One week later persistent drainage appeared in the mid-third of the suture, giving rise to a fistula that was resistant to all possible combinations of antibiotics and surgical solutions(from simple drainage to fistulectomy and complex dressings, for 3 years.

Surgery was performed under general endotracheal anesthesia, with the patient in the prone position, A posterior midline sagittal incision was used, circumventing the fistulous opening, and carefully dissecting the fistulous tract. The fistula seemed to end in a small presacral cavity, which was carefully curated. Haemostasis was obtained by simple temporary packing with moist swabs. Then, an additional transverse incision in one of the buttocks was

used to expose the gluteus major. After mobilizing the skin flap to expose the gluteus major muscle, its medial portion was individualized (matching the cavity size) and mobilized (after severing its inferior attachment), being rotated medially and introduced to fully fill the gap created by the previous dissection.

RESULTS AND DISCUSSION

One was faced by an almost impossible solution as one was aiming not only to stop infection but simultaneously to fill up the sacral cavity. Classical methods of excision, packaging, antibiotics, etc., had all been used with no success.

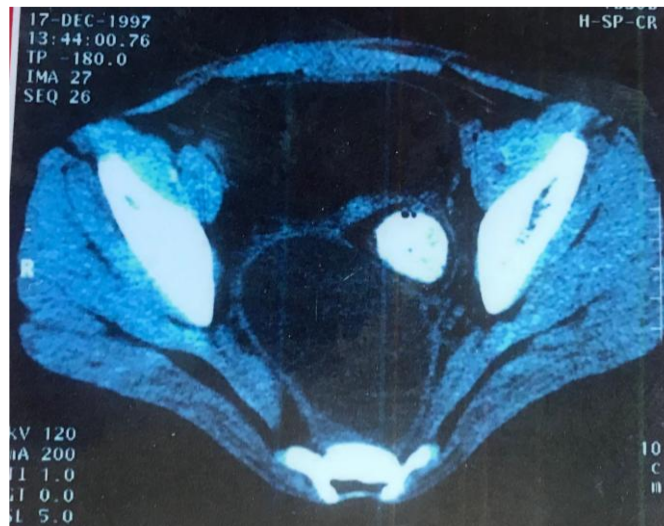

Figure 1: Pelvic CTScan showing the pelvic teratoma.

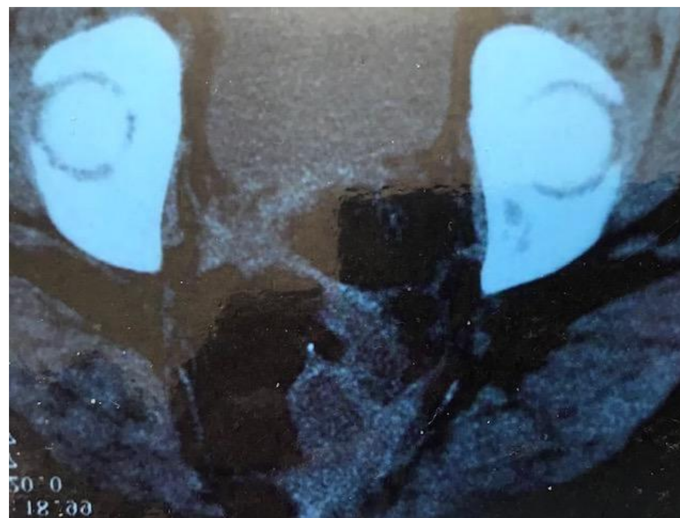

Figure 2: Pelvic CTScan showing the “residual “ pelvic lesion.

One knows that vascularized muscle flaps provide not only soft-tissue cover but also introduce fresh blood supply to the ischemic and contaminated wounds, helping in tissue healing and resolution of the infection. So we hoped that using a muscular segment would not only fill the cavity but also could control infection, which fortunately happened. One month after the operation the fistula had completely healed and now, many years later, she is free from recurrence, both from the tumor and the fistula.

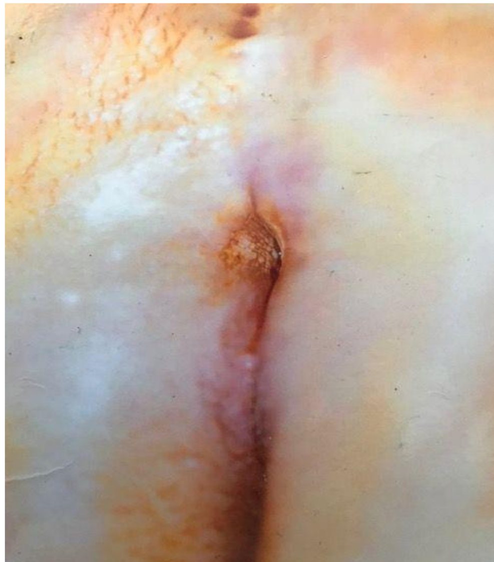

Figure 3: Persistent sacral fistula.

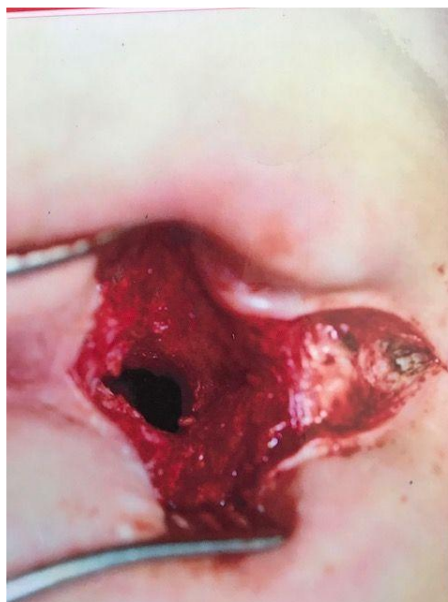

Figure 4: Surgical wound after excision of the fistulous tract.

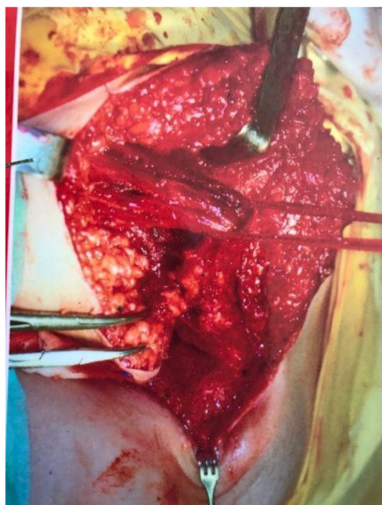

Figure 5: Isolation of the long gluteus flap obtained for the inner portion of the gluteus major.

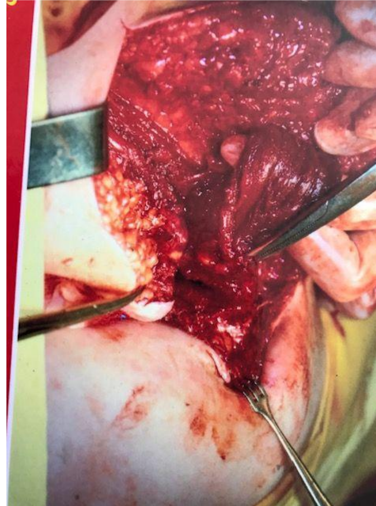

Figure 6: Introducing the muscle flap into the cavity.

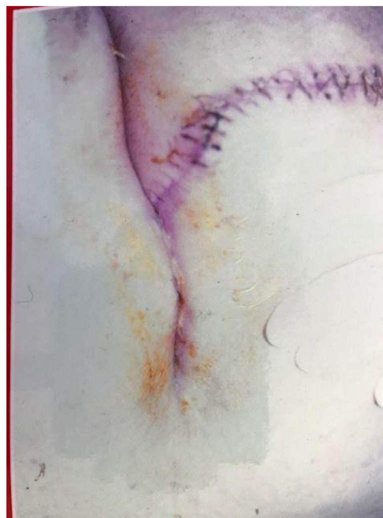

Figure 7: Buttock incision to expose the gluteus major.

CONCLUSION

Gluteal muscular flaps, to fill residual cavities, are a possible solution to treat persistent sacral fistulas resistant to other first-line surgical solutions.

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