

An Unusual Complication of Pelvic Fracture Hematoma: A Giant Gluteal Defect Case Report

Pelvik Kırık Hematomunun Nadir Görülen Bir Komplikasyonu: Dev Gluteal Defekt Olgu Sunumu

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ABSTRACT

The authors present a case of large gluteal defect developed due to pressure of a giant gluteal hematoma resulted from a pelvic fracture. The defect is reconstructed with a vertical split local gluteus maximus flap. Giant hematoma after a pelvic fracture is an unusual complication and to our knowledge, in the literature this is the first case of a gluteal defect resulting from a hematoma.

Key words: Fracture, Hematoma, Gluteal Defect.

ÖZET

Bu çalışmada yazarlar pelvik fraktür sonrası gelişen dev kırık hematomunun basısına bağlı olarak oluşan ve vertikal split gluteus maksimus flebi ile rekonstrükte edilen bir gluteal defekt vakası sunmaktadırlar. Pelvik fraktür sonrası gelişen dev hematoma nadir görülen bir komplikasyon olup, bilindiği kadarı ile literatürde hematoma sonrası gelişen gluteal defekt ile ilgili ilk yayındır.

Anahtar Kelimeler: Kırık, Hematom, Gluteal Defekt.

INTRODUCTION

Soft tissue defects in gluteal region are traditionally treated by grating or local flaps. The isolated skin defects could be amended with grafting or if the defect is small, local flaps would be sufficient. If the defect is more complex including the subcutaneous tissue with or without the skin, classical musculocutaneous flaps or muscle flaps could be necessary and the preference for the donor site to supply the tissue is the crucial point in minimizing the morbidity(1).

In pelvic fractures bleeding to some extent occurs in all cases and it is unavoidable. Hemorrhage is the most common complication associated with pelvic fractures and also remains the major cause of death in patients with pelvic fractures. Other complications of pelvic fractures could be listed as genitourinary injury, gastrointestinal injury, infection, thromboembolism, fat embolism (acute respiratory distress syndrome (ARDS)), malunion, nonunion, tetanus, gas gangrene.

The most common complication, hematoma is not pretended to perform any surgical intervention if the hematoma is stable and if there is no active bleeding. The methods of treating hemorrhage associated with pelvic fractures include; vascular ligation, extra peritoneal packing, pneumatic antishock garment, angiography and embolization, open reduction and internal fixation, closed reduction and percutaneous fixation, external fixation.

We present a case report of a giant hematoma following a pelvic fracture, causing a large defect and the treatment with local muscle flap.

CASE REPORT

A 45 years old female patient with a pelvic fracture due to a traffic accident was hospitalized in orthopedics service with immobilization. A giant hematoma

developed in pelvic region of the patient but no intervention was carried out since it was not threatening vital structures and there was no active hemorrhage. The hematoma became infected one year after the accident and drainage was carried out leading to a 30X10 cm defect including subcutaneous and muscle tissue (Figure 1-2). The defect was closed with a local flap with the viable parts of gluteus maximus muscle by splitting (Figure 3).

The obliteration of the subcutaneous defects helped in primary closure of the skin over the defect in one session. The patient had no complications post operatively (Figure 4).



Figure 1: Pre-operative image of the defect

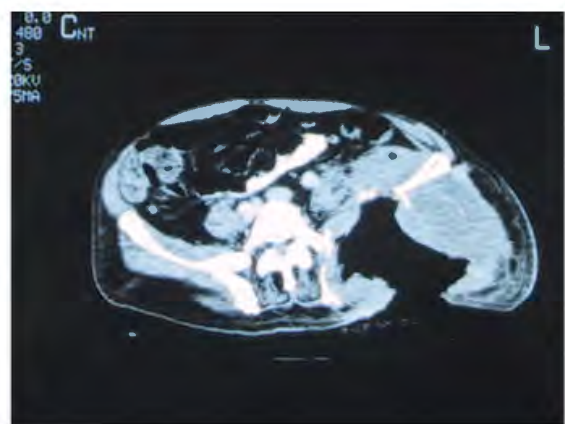


Figure 2: Image of the Computerize Tomography



Figure 3: Image of the flap and defect during the operation. F: Splitted gluteus maximus muscle flap



Figure 4: The patient had no complications post operatively

DISCUSSION

The defects of gluteal region are generally seen as pressure sores in clinic. The reconstruction of a gluteal defect resulting from a giant fracture hematoma has not been reported previously. The defect was complex including the subcutaneous tissue without a skin defect and it was caused by the pressure of the hematoma that was not evacuated.

The methods of treating hemorrhage associated with pelvic fractures include; vascular ligation, extra peritoneal packing, pneumatic antishock garment, angiography and embolization, open reduction and internal fixation, closed

reduction and percutaneous fixation, external fixation. In the patient described, the hematoma was not evacuated until it was infected. The giant hematoma with the effect of the pressure caused a giant defect of the surrounding tissues.

A number of surgical procedures have been described for the reconstruction of soft tissue defects in gluteal region: Local rotation or transposition flaps (1), tangentially split gluteus maximus flaps (2), V-Y gluteus maximus flaps(3), free flaps consuming superior gluteal vessels as recipient(4), fasciocutaneous flaps(4). The reconstruction of large and infected defects requires transfer of well vascularised and bulky tissue. The gluteus maximus muscle which is a type 3 muscle according to Mathes-Nahai Classification provide a bulky and well vascularised tissue for reconstruction of defects in its territory and described as an ideal flap with the advantage of capability of being splitted (2).

The limitations of a local flap for the reconstruction of a defect are: compromised vascularity of local tissue due to previous interventions such as surgical procedures or irradiation therapy, frequent wound break down throughout the post operative course due to the pressure on suture lines (1) and limited arc of rotation (2). Local rotation or transposition flaps are known to be suitable options for the reconstruction of the small defects and in this case we have managed to close the giant gluteal defect with local rotation of splitted gluteus maximus muscle flap. The utilization of the local rotation of a muscle flap obliterated the large defect with its vascularized and bulky properties.

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