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Case Report

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Novel Surgical Technique to Improve Wound Healing Outcomes of Suprapubic Pfannenstiel Incision Surgical Wounds in Obese Patient.

Dr. Mohammad Shujauddin*, Dr. Elhadi Babikir, Dr. Mohd Mubarak M AL-Khayarin

Department of Orthopaedics Surgery, Hamad General Hospital, Doha, Qatar.

***Corresponding author**
Dr. Mohammad Shujauddin (ORCID ID: https://orcid.org/0000-0002-4962-5736), Department of Orthopaedics Surgery, Hamad General Hospital, Doha, Qatar.

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Introduction

Surgical site infections (SSI) can become surgeon's nightmare, complicating even a very well done surgical procedure. Therefore, the focus has always been on minimizing the SSIs by targeting the associated risk factors. One of the very challenging factors is Obesity [1]. Abdominal wounds in obese population need special care to prevent infection especially beneath the panniculus – an overhanging "apron" of skin and fatty tissue in the lower abdomen. The incision under the panniculus may create suboptimal environment for wound healing. The moisture and friction between the skin folds may lead to skin inflammation called as Intertrigous dermatitis. Therefore, the incisions are planned to avoid such complications whenever possible. Our novel technique utilizes simple sutures to keep the belly overhang lifted off the underlying skin incision to allow adequate environment for wound healing and wound care [2-9].

Case Presentation

A 57 years old male pedestrian hit by a car sustained open book pelvic fracture. Significant medical history included hypertension and diabetes. On examination he weighed 105kg, with height of 1.70 m, and BMI: 36.3 kg/sqm. Panniculus grading 1. He underwent open reduction and internal fixation of pubic symphysis, through Pfannenstiel incision, right sacroiliac joint percutaneous screw fixation.

Surgical Technique

Patient in supine position. Three anchoring sutures through the skin and subcutaneous tissue of anterior abdominal wall used to lift the belly fat using synthetic nylon non-absorbable sutures of size 2-0. Pfannenstiel incision done, Pubic symphysis open reduction and internal fixation done using reconstruction plate (as standard technique). Fascia and subcutaneous tissue closed with absorbable, synthetic polyglactin 910 of size 0 and 2-0 respectively. Skin closed with synthetic nylon non-absorbable sutures of size 2-0. Gauze used for padding of skin under the anchor sutures. Postoperativly until the discharge of the patient, the wound remained healthy. Subsequent regular Outpatient follow ups showed good wound healing.

There were superficial pressure stripes due to the three anchoring sutures which healed with minimal scar on subsequent follow up.

Discussion

Wound healing and wound care of abdominal incisions in obese population can be challenging. In certain cases, requiring adequate surgical exposure to reach the target structures, the incision under the panniculus cannot be avoided. In our case, the patient had pubic symphysis diastasis requiring surgical fixation. Hence, suprapubic Pfannenstiel incision was needed to address the injury. As the patient was obese, this incision came under the panniculus. Our technique using simple sutures to lift the panniculus off the surgical site is a simple and quick surgical procedure with improved wound care and healing outcomes. Our novel technique can be utilized to enhance the wound care outcomes. We recommend the use of padding under the anchoring sutures to avoid pressure areas over the skin.

X-Ray Images:

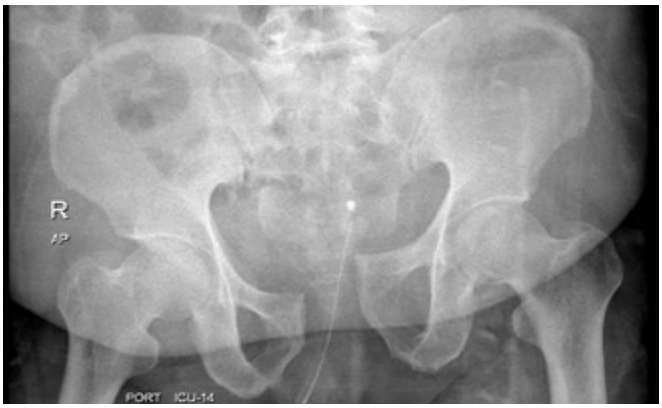

Figure 1: X-ray pelvis (Preoperative image)

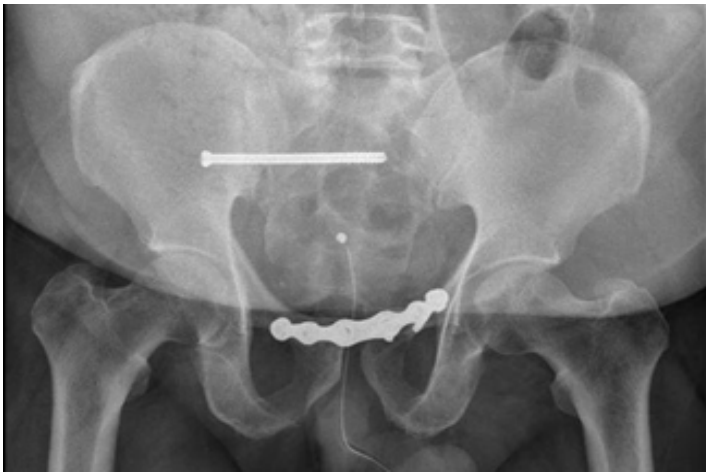

Figure 2: X-ray pelvis (Postoperative image)

Clinical Image Section:

Figure 3: Postoperative image showing the technique using anchoring sutures to lift the panniculus (belly overhang)

Figure 4: Clinical image of wounds 1 week postoperative after removal of anchor sutures.

Figure 5: Clinical image of wounds 2 weeks postoperative after removal pfannenstiel incision sutures.

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