

DUO

CASE STUDY USING DUO INSTILLATION PUMP FOR ONE WEEK TO SPEED UP THE HEALING PROGRESS OF A LAPAROTOMY WOUND MIDLINE LINEA ALBA TO AID DISCHARGE.

The word laparotomy is derived from the Greek words lapara, meaning flank. In surgical practice, this translates to a big cut in the abdomen to gain access to the peritoneal cavity. Usually, a standard laparotomy is a cut made in the midline along the linea alba.

This surgery is usually performed for surgeons to examine and diagnose the abdominal organs where problems such as abdominal pain, abdominal trauma, peritonitis (which is an inflammation of the inner lining of the abdomen), a perforated organ in the abdomen, infection in the abdomen, internal bleeding and the spread of conditions such as cancer or endometriosis.

Side effects can be abdominal adhesions (a band of tissue that forms in the abdomen and sticks organs together, caused by the body trying to repair itself following surgery this may stick to the abdominal wall). Abdominal adhesions can kink, twist, pull, or compress the intestines and other organs in the abdomen, causing symptoms and complications, such as intestinal obstruction or blockage. Wound breakdown can also occur as seen in the first picture.

The patient seen below is a 69- year- old Chinese male. With a history of diabetes Mellitus and Hypertension. (Patients exhibit hyperinsulinemia with insulin resistance

due to impaired glucose tolerance and early-stage diabetes. Hypertension occurs because of increased body fluid volume. After reaching mid-stage diabetes the vascular remodelling has progressed and peripheral vascular resistance also contributes to hypertension. Moreover, vascular remodelling strongly influences diabetic complications), Ohishi (2018).

He recently developed a wound following laparotomy procedure.

Aim of applying instillation therapy was to clear colonisation within the wound as no new granulation or epithelisation was seen within the wound. The wound was not clinically infected as seen in picture one.

The patient was discharged after one- week therapy on conventional dressings as wound decreased in size and showed new tissue growth.

References:

Laparotomy :Everything you need to know Medically reviewed by Andrew Gonzalez, M.D., J.D., MPH — By Beth Sissons on April 24, 2020
National Institute of diabetes +Digestive and Kidney Disease (N.I.H) Reviewed July 2019
Hypertension with diabetes mellitus: physiology and pathology.
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Figure 1 | 29.01.24

Start of therapy
Support sutures seen within wound slough is seen collecting around these within the wound bed.
No health new granulation or epithelium
Therapy 20 ml normal saline every two hours. Twice weekly



Figure 2 | 06.02.24

Pump removed clinicians happy with wound.
Depth reducing epithelium spreading wound bed healthy all signs of slough removed.
Support sutures are almost covered by granulation.
Conventional dressings used as per the formulary for discharge.