

## Post-Necrosectomy Debridement, Drain Exchange & Continuous Lavage

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### Abstract

Necrosis is a complication of pancreatitis that carries high morbidity and mortality. The traditional open surgical debridement techniques are being phased out due to the advent of minimally invasive techniques. The evolution of radiologically guided drainage has facilitated the use of video-assisted retroperitoneal debridement (VARD). Following this, many surgeons have opted to utilise ongoing lavage to facilitate post-operative irrigation on the ward. Few lavage and debridement techniques have been described in the literature with the majority describing intercostal catheter drain exchange over a radiologically guided pigtail drain in the operating theatre under image intensification guidance. In this case we describe the use of lavage using an infant feeding tube suture-attached to a single large-bore chest tube to provide simultaneous irrigation and drainage. This showed good outcomes for several patients and observably less discomfort for patients. Further comparative research would need to be conducted to compare length of hospital stay and total morbidity and mortality.

**Keywords:** Surgery; Wound Closure; Surgical Stitch

## Introduction

Necrosis is a complication of pancreatitis that carries high morbidity and mortality [1]. The traditional open surgical debridement techniques are being phased out due to the advent of minimally invasive techniques. The evolution of radiologically guided drainage has facilitated the use of video-assisted retroperitoneal debridement (VARD) [2]. Following this, many surgeons have opted to utilise ongoing lavage to facilitate post-operative irrigation on the ward [3-6]. Few lavage and debridement techniques have been described in the literature with the majority describing intercostal catheter drain exchange over a radiologically guided pigtail drain in the operating theatre under image intensification guidance.

In this case we describe the use of lavage using an infant feeding tube suture-attached to a single large-bore chest tube to provide simultaneous irrigation and drainage.

## Surgical Technique

The operative technique includes the following:

1. Following insertion of a radiologically-guided percutaneous drain, the tract is dilated in the operating theatre under general anaesthesia using an obturator under image intensification guidance and a guide-wire is placed into the cavity to facilitate railroading
2. A nephroscope is inserted into the necrotic cavity under direct vision and debridement is performed using various biopsy forceps under irrigation
3. A guide-wire is placed into the necrotic cavity following debridement to allow for a drain exchange
4. An 8 French-sized infant feeding tube is suture secured to a 36 French-sized intercostal catheter with an 0-ethibond suture
5. The intercostal catheter is guided over the guide-wire into the cavity with the sutured infant feeding tube
6. The infant feeding tube is connected to a 1 litre bag of sodium chloride 0.9% via an intravenous infusion giving set to allow irrigation of the cavity at 100mL per hour whilst the intercostal catheter allows free drainage of the irrigation fluid and debrided tissue

7. The intercostal catheter and infant feeding tube are secured to the skin with 0-Silk sutures and dressings and covered with a cotoplast bag to prevent spillage and soiling of the patient's dermis, gown and bed linen

## Discussion

Multiple approaches to the management of necrotising pancreatitis have been described and illustrated in the literature. Good evidence exists to support the use of retroperitoneal lavage following retroperitoneal necrosectomy; as an effective alternative to surgical washout [2-6]. We have found that utilisation of a smaller (paediatric) feeding tube attached to the single-lumen chest drain can facilitate retroperitoneal lavage; whilst minimising the use of large-bore chest drains. This technique has been utilised by this surgical department showing good outcomes and showing that this is a potential alternative to lavage with 2 or more large-bore chest tubes. Patient discomfort has been observably less. Length of hospital stay, total morbidity and mortality have not been studied.



**Figure 1:** 8Fr infant feeding tube suture secured to 36Fr intercostal catheter with 0-ethibond suture

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