

## A DYNAMIC WOUND CLOSURE METHOD USING CABLE TIES

Darshan Krishna Kumar<sup>1</sup>,Low Chin Aun<sup>1</sup>,Mohd Azrin Muhammad Asihin<sup>1</sup>,Sree Raja Lakshmy Chandra Sekaran<sup>1</sup>,Dziya Faqhran<sup>1</sup>,Philemon Paul<sup>1</sup>,Velman Shri Jaya<sup>1</sup>,Nur Rahimah Abdul Rahim<sup>1</sup>

<sup>1</sup>Hospital Shah Alam

**Introduction:** Wound closure by secondary intention has been a widely used practice for large wounds. Individuals who are immunocompromised are prone to opportunistic infected wounds which require multiple debridement. These often result in a large, sizeable almost circumferential soft tissue opening that are often impossible to close in a delayed primary fashion.

**Discussion:** A 41 years old male, immunocompromised due to underlying Hepatitis C, was admitted for left lower limb necrotizing fasciitis. He underwent transfemoral amputation, but unfortunately the amputation stump became infected. This resulted in multiple debridement which lead to an almost circumferential wound (Figure 1). He was a poor candidate for plastic surgery due to his immunocompromised status. Therefore, a dynamic cable tie method was placed for the wound. Surgical staples were applied parallel to wound edges, with the cable tie passed through the staples. Both ends of the cable ties will then be closed, simultaneously providing tension free approximation of wound. This is followed with daily tightening of 1-2mm for gradual wound closure (Figure 2). Secondary intention closure was achieved within 10 days post-operatively, with patient not requiring any further surgery since. The cable tie suture method is a technique using a device that allows for dissipation of the workload across the wound margin allowing for successful delayed primary closure. It is easily available, purchased and sterilized. Being devoid of any needle use, it offers a safer option for the healthcare provider. At the same time, it reduces the need for multiple surgeries and prolonged hospital stay with early mobilization of patients. Figure 1: Wound prior to procedure Figure 2: Progress of secondary intention closure of wound

**Conclusion:** Wound closure with the cable tie system is possible regardless of the size, shape of wound and patient's underlying co-morbidities. It offers a versatile solution in managing complicated wounds.