Uses of vessel loops in plastic surgery

Sir,

Vessel loops are disposable, single-use medical device made of soft silicone rubber having multiple uses in different surgical specialties. These are available in multiple colours – red, blue, green, yellow, white and transparent. Apart from this, they are available in different size, thickness and cross-sections (round and oval) to be used for the size of the structures they are tagged with.

These loops are radiopaque and need to be sterilised (preferably gamma radiation) before use. The simplest method to secure it with the tagged structures is to hold it with the haemostat or else a ligaclip can be applied in place of haemostat to avoid excessive instrumentation in the operating field.
We enumerate the uses of vessel loops in plastic surgery.
1. Identification of structures – artery, vein, nerve, tendon
2. End-to-side or side-to-side vascular anastomosis
3. Atraumatic retraction on perforator during its dissection
4. Delivery of nerve through a tunnel for coaptation
5. Small loops of vessel loops are used for retraction on nerve, vessels for endoscopic procedures
6. Closure of fasciotomy wounds
7. Finger Tourniquet.

Most common use of vessel loop is the identification of tagged structures as per colour of loops. The standard color for identification include: red for artery, blue for vein and yellow for nerve.

Vessel loop is very helpful for identification when multiple structures are available and having some common origin as in the infraclavicular dissection in brachial plexus. The branches from cords can be tagged with different coloured loops to avoid confusion.

Vessel loops are commonly used for end-to-side and side-to-side anastomosis of blood vessels. The vessel loops can be tightened adequately to stop the blood flow in the vessel so that bloodless field aids in perfect anastomosis.[1]

Vessel loops are very useful for atraumatic retraction of tagged structures. Even for fine vascular structures such as perforators during dissection for perforator-free flaps [Figure 1].

A small loop of a vessel loop can be used for retraction of nerve or vessels in endoscopic procedures.

It is used for delivery of nerve at the time of nerve transfer through the tunnel during direct coaptation of contralateral C7 through retropharyngeal route [Figures 2 and 3]. In this technique, a loop is passed through the tunnel (both the ends of vessel loop are in recipient area), the donor nerve is passed through the loop which is gently pulled to deliver the nerve to recipient area.

Vessel loops are used by many surgeons to slowly close the wounds, with the staples applied to the edges and vessel loops passed through these in the form of shoelace. The vessel loops are slowly tightened to get approximation of skin edges thus avoiding skin grafting.[2,3]

It can be used as a tourniquet during surgeries on finger and in hypospadias. The vessel loop can be used to exsanguinate the finger if the application starts from distal to proximal. After reaching the base of finger the
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distal part can be opened and tourniquet held in place with haemostat.

Apart from these uses in plastic surgery, vessel loops are used in other surgical specialties—gynaecology (ensuring the patency during LeFort colpocleisis),[4] paediatric/general surgery (incision and drainage with vessel loops).[5]

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

Hardeep Singh, Rakesh Kumar Khazanchi, Aditya Aggarwal, Sanjay Mahendru, Vimalendu Brajesh, Sukhdeep Singh
Division of Plastic, Reconstructive and Aesthetic Surgery, Medanta-The Medicity, Gurgaon, Haryana, India

Address for correspondence:
Dr. Hardeep Singh,
Department of Plastic, Reconstructive and Aesthetic Surgery, Medanta-The Medicity, Sector 38, Gurgaon - 122 001, Haryana, India.
E-mail: drhardeepaulakh@gmail.com

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Pneumothorax: A rare or underreported complication following latissimus dorsi muscle flap

Sir,

Latissimus dorsi (LD) is one of the most commonly used muscles for coverage of moderate-to-large-sized defects post-tumour excision or trauma.[1] Seroma (21%–79%) is the most common donor site complication after LD muscle harvest. Other common complications include haematoma, skin margin necrosis and contour deformity.[2] Rarely, brachial plexus injury and lumbar hernia are also reported. Pneumothorax following LD harvest is a potential and probably an underreported complication.[2,3] We report two patients who developed pneumothorax after raising the flap. Both patients sustained Gustilo–Anderson type III B lower limb fracture. There were no pre-operative symptoms or signs suggestive of chest trauma in either of them. They underwent debridement, skeletal stabilisation with external fixator and microvascular LD flap cover. LD muscle was raised in a standard manner after infiltrating local anaesthetic solution over the back. After completion of the muscle harvest, intermittent quilting sutures were taken on the back to reduce the dead space and prevent seroma formation. Intraoperative and immediate post-operative periods were uneventful. However, on the second post-operative day, both the patients complained of tightness of the chest and difficulty in breathing. There was decreased air entry on the donor side. X-ray revealed pneumothorax with collapse of ipsilateral lung. Emergency intercostal drain (ICD) was put. Chest physiotherapy with incentive spirometer was started. The pneumothorax resolved and lung

Access this article online

Quick Response Code:
Website:
DO:
10.4103/ijps.IJPS_221_17

How to cite this article: Singh H, Khazanchi RK, Aggarwal A, Mahendru S, Brajesh V, Singh S. Uses of vessel loops in plastic surgery. Indian J Plast Surg 2018;51:103-5.

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