

A simple negative suction drainage for small surgical wounds

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Drains are used to prevent or treat an unwanted accumulation of fluid after surgery. Different methods are followed for drainage. They include corrugated rubber drainage, tube drainage and negative suction drainage. We present a new system of continuous negative suction drainage for small surgical wounds.

TECHNIQUE

The readily available materials like tube drain, disposable plastic syringe and plastic needle cover are used [Figure. 1]. Before closure of small surgical wounds that require suction drainage, a tube drain with multiple terminal holes (infant feeding tube or scalp vein set) is fixed in the surgical cavity. The wound is then closed in layers up to the skin. A plastic syringe is fixed on the other end of the tube drain. The syringe size (5, 10, 20 or 50 ml) and the tube size can be selected based on the size of the cavity. A negative suction is applied and the piston of the syringe is kept in position using a needle cover that comes along with the disposable plastic syringe [Figure. 2]. In this way, constant suction is maintained. The volume and the colour of the fluid can be easily noted. The syringe is changed once it becomes full. The drain is removed once the volume of the drainage comes down.

DISCUSSION

Vacuum suction drainage system prevents accumulation of fluid at the operated site and reduces the complications such as seroma and hematoma. Vacuum drainage also plays impor-



Figure 1: Materials used in the new technique – disposable syringe, needle cover and tube drain with multiple terminal holes



Figure 2: The syringe suction drainage system in place after submandibular gland excision. The arrow points to the needle cover supporting the piston

tant role in keeping tissue repair in place during healing process.^[1] The commercially available suction

drainage systems are relatively high in cost.^[2] Our suction drainage system using disposable syringe, tube drains and a needle cover is cheap, easily available and easy to use. This system produces sustained uniform suction. The qualitative and the quantitative assessment of the drainage fluid can be easily made out. It can be easily secured to the operated site. This system is very useful in small surgical wounds situated in hand, foot and extremities. It can be safely used in head and neck operations and minor breast operations.

A similar suction drainage was previously described by Park et al. for ear reconstruction.^[1] In his system, a wooden tongue depressor was used for keeping the piston in place. In our system, we used the readily available plastic needle cover as supporting device. The needle cover can be easily kept in place and fixed. Another similar suction device described by Lapid *et al.* used a vacuum test tube (for blood sampling) instead of plastic disposable syringe.^[3]

The suction pressure can be easily controlled in our system. If a lower suction pressure is required, certain amount of air is aspirated into the syringe and then it is fixed to the tube drain. In Park's method, the length of the tongue depressor determined the pressure of vacuum suction.

In conclusion, this syringe suction drainage device is very economical and effective for small surgical wounds. Its use should be encouraged in view of its easy availability and cost effectiveness.

REFERENCES

1. Park DH, Song CH, Han DG, Ahn KY, Byun JS. A simple negative suction drain for ear reconstruction. *Plast Reconstr Surg* 1999;103:972-5.
2. Brent B. The correction of microtia with autogenous cartilage grafts: I. The classic deformity? *Plast Reconstr Surg* 1980;66:1.
3. Lapid O, Kreiger Y, Glesinger R, Berezovsky AB. An improved design for vacuum tube drains. *Ann Plast Surg* 2000;45:565-6.

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