

## Case Report

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# A Simple Syringe Suction Drain for Surgical Procedures

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### Abstract

Closed suction drainage is well accepted method of drainage of wounds. It prevents development of seroma, haematoma, wound dehiscence and leading to infection. There are different types of drainage of wound, like tube, corrugated rubber tube drainage, and negative suction drainage. We present to you the simplest negative suction drainage system by using readily available resources in the operation theatre, with no extra cost for innovation.

**Keywords:** Syringe drain; Needle cap; Tube drain

### Case Report

The readily available resources in the operation theatre like, tube drain, disposable syringe and needle cap were used for the suction drainage. After the surgical procedures like thyroidectomy, submandibular salivary gland surgery, subcutaneous benign lesion excision, a tube drain with terminal holes was kept in wound cavity and closure of the wound was done. A plastic syringe is then connected to the tip of the tube drain (5 cc, 10 cc, 20 cc). The size of the syringe can be chosen depending on the depth of the cavity. Then suction is created by pulling the piston and it is stayed by using needle cap in the groove of the piston (Figures 1 and 3). The suction in the syringe can be maintained by repeating the release of piston and reapplication of piston. It will exactly notify about the amount and type of fluid in the drain. The drain can be removed once the amount of fluid lowers down. In our case we used it in thyroid surgery, patient underwent hemithyroidectomy and we kept a tube drain in situ connected to syringe suction drain (10 cc syringe) (Figure 2).



Figure 1: Drain tube, syringe, needle cover.



Figure 3: Syringe with Piston and needle cap institution.

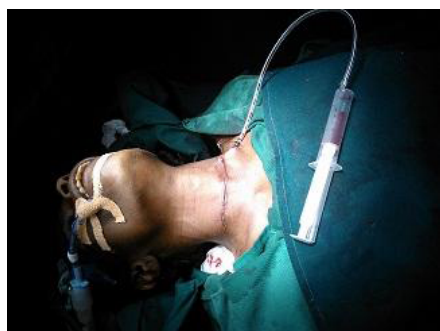


Figure 2: Syringe drain in Hemi thyroidectomy.

### Discussion

Negative suction drain is used to prevent seroma, hematoma and related complications. The drainage system prevents fluid collection and prevents flap separation. The present day suction drains are more costly and most of the patients will not be able to purchase, hence our syringe suction can be used as replacement to regular suction drain. The simple syringe suction drain is made in the operation theatre with use of syringe and tube drain (either infant feeding tube, scalpe vein set) and needle cap is cheaper and ready to use. The syringe suction produces uniform suction and can be used with ease. Both qualitative and quantitative assessment of drainage fluid can be done. This system is ready to use in all the small surgical procedures in the neck, breast, foot, and extremities. Our simple syringe suction drain is more economical and easy to handle similar to the one used by Gopal and Mohan kumar [1] and Park et al. [2]. The method used by Sundearraj [3] with the 5 cc piston in the place of the needle cap is also comparable to our method. The method used by Singh and Singh [4] with the use of K wires in the place of needle cap for charging the piston is more cumbersome compared to our method. A spring used by Singh et al. [5] requires special spring for the purpose of suction.

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## Conclusion

Our simple syringe suction drain is more economical and easily available and ready to use for small surgical procedures and benign thyroid surgery. The use of the syringe suction should be encouraged in view of its easy availability and cost factor.

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