

## **Rubber Band Technique - A Simple, Cost-Effective Method As Self-Retaining Retractor For Thyroidectomy**

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### **INTRODUCTION**

Surgical assistance in thyroid surgeries is a must needed thing for smooth outcome of various types of surgery subplatysmal flap retraction is always a key step for that, conventional use of ligating it with drape seats or pulling it away with thyroid retractors always require a decent cost instrumentation or engaged manpower this can often lead to prolonged time and its related fatigue among the assistant surgeons To overcome this problem different sets of ideas can be implemented and had been developed for continuous exposure during surgery.1-3

Thyroidectomy is an established procedure where different types of Thyroidectomy deals with the pathological variation of thyroid diseases, Thyroidectomy is a very intricate surgical procedure and having many surgical steps which are supposed to be performed very very meticulously , securing the subplatysmal flap raises up and down by proper retraction is the key step for thyroid gland to be rejected exposure , a simple rubber band technique is a very effective , safe , cheap and home made tool which we use in our thyroid surgery and can be reliable upon , it's a simple , safe and cost effective idea and improvisation we discuss in our study here.

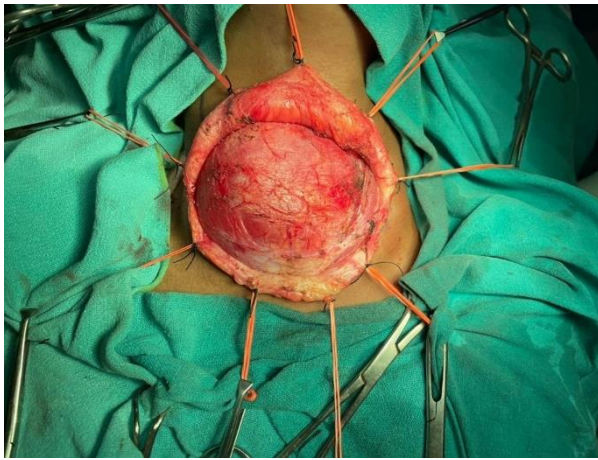


Fig 1

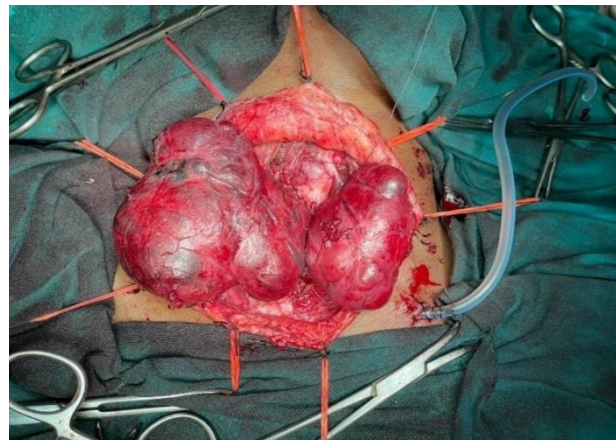


Fig 2

### SURGICAL TECHNIQUE

The retraction is made from simple small rubber band available in the routine departmental and cosmetic shops sterilised well for more than 24 hours in antiseptic cidex and paraceff solution in operating room. It is tied to the edges of raised superior and inferior subplatysmal flaps at equidistant points and place taking platysmal and subcutaneous planes with a 0 silk suture bite with rubber band and than ligating it with it , doing that saves alot of suture thread and precious time , multiple equidistant rubber bands are than lighted superiorly and inferiorly once its been done one by one each rubber band is stretched to its tensile strength and the flap retraction is established by placing an allis forceps or an artery forceps at the stretched end of the rubber band and the surrounding drape seats fig.1 , once all the rubber bands are stretched and secured keeping in mind to avoid any contact with skin of face a very wide neat and clean less time and energy consuming retraction is been done the thyroid mass along with the strap muscles over it can be well visualised and the surgical dissection can be proceeded further. Fig 2

### DISCUSSION

We have used this rubber band cost effective home-made self-retaining retractor technique for thyroidectomies in more than 30 cases, It has become one of the standard retraction tool for thyroid surgery in our institution. Its effectiveness and safety, in our experience, has stood the test of time. This rubber band retractor technique is a very very cheap, versatile, readily available, userfriendly, inexhaustible and simple to remove. The surgical assistants can participate more actively in the surgery. The absence of the metallic thyroid retractor further prevent the over stretching and micro ischemia of subplatysmal flaps. Since this technique stretches the flaps well the operating surgeon has alot of ease going well above till the level of suprahyoid zone if needed and retrosternal notch below . Our retractor also enables single-surgeon procedures for patients with thyroid masses. Complications related to the use of a self-retaining retractor have been described previously. Noldus and colleagues<sup>4</sup> reported 4

instances of colon damage and in stance of femoral neuropathy out of 4000 applications of self-retaining retractors. Judicious placement of the rubber band carefully with stitching it with subplatysmal tissue with a sharp needle has to be done very carefully though chances of injuring any vital structures both in the neck and at artery or allis Placement site is extremely rare and can always be avoided. Excessive traction is always avoided to prevent bruising of the skin. The home-made simple rubber band self-retaining retractor has the potential to be applied in other types of procedures like neck dissections ,laryngectomies , neck lump excisions etc. It is increasingly being used during neck surgeries in our institution.

## REFERENCES

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