

# Gasless endoscopic thyroidectomy using trans-axillary approach; our experience in Pakistan.

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## Objective

>> To report our initial experience with the transaxillary endoscopic hemi thyroidectomy with gasless approach in limited resources and E-learning .

## Background

The concept of endoscopic neck surgery for thyroid or parathyroid gland started with gagner in 1996 ,where he first case of para thyroidectomy was performed , after one-year hemi thyroidectomy was performed by hushner . After that, the concept of minimal invasive neck surgeries especially thyroid and parathyroid gland has started in different endoscopic techniques .

## Method

42 yrs old lady with a right sided solitary thyroid nodule underwent transaxillary endoscopic hemi thyroidectomy with gasless approach in a trust hospital .the main outcome measures feasibility of that approach without availability of robot and some fancy instrument ,gland and patient characteristics,operative time , cost effective,cosmesis,and complication .

## Results

There was no conversion to open surgery .

Operative time is 180mints.estimated blood loss was 10-12ml .patient tolerated the surgery well .discharge on first postoperative day .no perioperative or postoperative complications .low cost as compared to other endoscopic techniques.no evidence of postoperative vocal cord palsy or paresis.

## Conclusions

Our first and initial experience demonstrates that this technique is feasible ,effective and safe method for hemi thyroidectomy for a small and benign thyroid lesion in starting and with experience sub total or total thyroidectomy can b performed.the use of this approaches very cost effective as compared to robotic and other endoscopic techniques and with excellent cosmesis improved patients confident and trust on minimal invasive surgery .

## Introduction

Surgery continues to be the most effective therapeutic strategy for treating benign pathology ( size up to 6 cm) and in malignant especially papillary thyroid carcinoma (PTC), the most prevalent cancer among endocrine malignancies [1, 2]. The obvious surgical scar on the anterior

neck, sometimes known as the "suicide incision," was a significant disadvantage of the conventional open thyroidectomy (COT), despite its convenience and intuitiveness. The patients' quality of life may be adversely affected by this noticeable scar. Surgeons have spent the last few decades investigating solutions that would shorten the surgical incision for thyroid surgery and minimize scarring.

When Huscher performed the first endoscopic thyroidectomy (ET) in 1997, a significant milestone was reached [3]. At first, ET was thought to be most suited for the excision of benign thyroid cancers. However, PTC's use grew to include thyroid cancers as experience mounted and the treatment's positive prognosis became clear [4, 5].

Of the different methods for ET, the breast strategy has become one of the most used strategies [6–9]. Furthermore, in recent years, transaxillary thyroidectomy has progressively gained popularity in our nation [10]. However, more research is necessary to determine the safety and viability of transareola and transaxillary thyroid surgeries for the treatment of thyroid pathology. For several years, COT and endoscopic thyroidectomy using the areola technique (ETA) have been standard practices at our institution.

## **Surgical procedure**

Laboratory tests included blood routine examination, electrolyte, thyroid function, parathyroid hormone(PTH) and calcitonin was tested before the operation to eliminate surgical contraindications and determine the basal level. High-resolution ultrasound and contrast-enhanced CT. assessed thyroid lesion The assessment of cN0 was determined based on a combination of preoperative examination and intraoperative inspection The procedure included **six steps.**

(1) body position to draping

(2) proper skin crease incision and flap raising

(3) identification of the two heads of sternocleidomastoid muscle and strap muscles , retract the strap muscles

(4) inferior thyroid artery , recurrent laryngeal nerve and inferior parathyroid identification and preserved , ligation of capsular branch of inferior thyroid artery .

(5) superior Pedicle management

(6) inferior thyroid vessels management

7-thyroid dissection from bed

8-recheck all the Pedicles and tracheal bed for secured hemostasis

9-drain placement .

10 -wound closure .

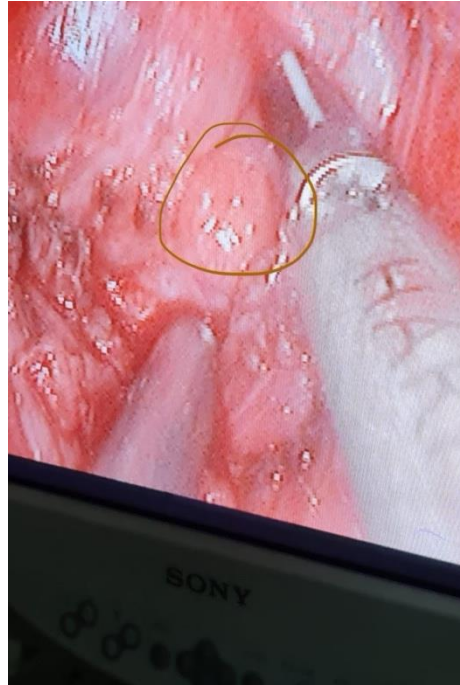
**IMAGE ILLUSTRATION IS FOLLOWS**



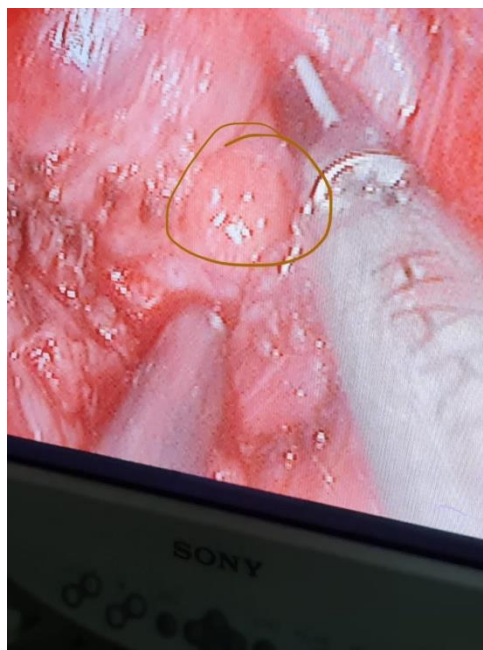
**MARKING AND LANDMARKS**



**FLAP RAISED AND TWO HEADS OF STERNOCLIDOMASTOID**



**THYROID NODULE**



## INFERIOR PARATHYROID



## DRAIN PLACEMENT AND WOUND CLOSURE



## SPECIMEN

## Results

No conversion to open surgery took place. It takes 180 minutes to operate. A blood loss of 10–12 milliliters were estimated. The surgery was well tolerated by the patient. discharge on the first day following surgery. neither postoperative nor perioperative problems. inexpensive as compared to alternative endoscopic methods. no signs of vocal cord paresis or palsy following surgery.

## Conclusions

Based on our first and preliminary experience, this procedure is safe, effective, and viable for performing a hemi thyroidectomy for a tiny, benign thyroid lesion. With more expertise, a subtotal or whole thyroidectomy can be performed. Patients' confidence and trust in minimally invasive surgery were increased using this technique, which was also very cost-effective when compared to robotic and other endoscopic techniques.

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