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# COMPARISON OF PAIN AFTER SURGERY IN THYROID LOBECTOMY WITH VERSUS WITHOUT DRAIN

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**Abstract**

**Objective:** To compare the average pain scores using the Visual Analog Scale (VAS) in patients who had a thyroid lobectomy either with or without a surgical drain.

**Study Design:** Prospective randomised controlled trial.

**Place and Duration of Study:** ENT and General Surgery departments, Shaikh Zayed Hospital, Lahore, from June 2025 to September 2025.

**Methodology:** Sixty patients scheduled for thyroid lobectomy for small, benign thyroid nodules(<4 cm) were chosen. They were divided into Group A (drain used, n=30) and Group B (no drain used, n=30). The main goal was to check pain scores at 24 and 48 hours after the operation. We also used ultrasound to check for fluid in the neck on the first day.

**Results:** Both groups were very similar in age and health before surgery ($p>0.05$). Group B had much less pain on Day 1 ($2.8 \pm 0.9$) and Day 2 ($1.4 \pm 0.7$) compared to Group A ($5.9 \pm 1.2$ and $3.8 \pm 1.0$; $p<0.001$). Ultrasound showed no real difference in fluid build-up between the two groups ($p=0.450$). No patients had serious heamatoma or large swellings.

**Conclusion:** Skipping the drain in simple thyroid lobectomy cases is safe and helps patients feel much more comfortable without increasing the risk of complications.

**Key Words:** Thyroidectomy, Pain, Postoperative, Visual Analog Scale, Drainage.

## INTRODUCTION

A thyroid lobectomy is a very common operation used to treat or diagnose thyroid swellings (1). Because so many people have this surgery, doctors are always looking for ways to make recovery faster and less painful (1). For a long time, most surgeons put a plastic tube, called a drain, into the neck after the operation(2). The idea was that the drain would show if there was any bleeding or help remove fluid that might cause swelling(Hematoma). In the neck, even a small amount of extra fluid can press on the trachea and make it hard to breathe(3).

However, new research from around the world is questioning this old habit(4). Many large studies have shown that drains do not actually prevent these problems in routine cases. In fact, the drain itself can cause harm(9). Having a stiff tube in the neck is quite painful, especially when the patient tries to swallow or move(5). Some researchers have even found that drains might let bacteria into the wound, leading to infections(6).This study was done to see if we could reduce using drains at our hospital. We wanted to prove that leaving the drain out would lower pain without making the surgery less safe. Our goal was to compare the pain levels in patients who had a drain with those who did not.

## METHODOLOGY

This study was a fair, randomised trial held at the ENT and General Surgery departments of Shaikh Zayed Hospital in Lahore. It was approved by the hospital's ethics board and followed international safety rules. We included 60 patients who were between 18 and 50 years old and had a single, benign (Bethesda Category </=2) thyroid nodule smaller than 4 cm. People with suspected malignant nodules, very large growths, or blood clotting issues were not included.

Patients were assigned to one of two groups just before the surgeon closed the wound using a lottery method. Group A received a drain, while Group B had the wound closed without one. Experienced surgeons performed all the operations to ensure the quality was the same. They were very careful to stop all bleeding during the surgery. Pain

was recorded using a scale from 0 to 10 on the first and second days after surgery. On the first day, a radiologist also used ultrasound to check for any fluid hiding in the surgical area. We also watched for infections and other problems. The data was analysed using a SPSS software version 20.0. We compared groups using t-tests for variable specially pain scores. A p-value of less than 0.05 was declared as a very significant result.

## RESULTS

The study included 60 patients, with 30 (50.0%) in the drain group and 30 (50.0%) in the no-drain group. The groups were very similar in terms of age, gender, and the size of the thyroid nodul($p>0.05$). Most of the patients were women, with 26 (86.7%) in Group A and 27 (90.0%) in Group B.

**Table 1: Baseline and Clinical Characteristics of Patients (n=60)**

| Variable | Group A (Drain) (n=30) | Group B (No-Drain) (n=30) | p-value |
|---|---|---|---|
| Mean Age (years) ± SD | 34.8 ± 8.1 | 36.2 ± 7.5 | 0.512 |
| Gender (Female/Male) | 26 (86.7%) / 4 (13.3%) | 27 (90.0%) / 3 (10.0%) | 0.688 |
| Mean Nodule Size (cm) ± SD | 3.1 ± 0.7 | 3.0 ± 0.6 | 0.590 |
| FNAC (Bethesda II / III) | 23 (76.7%) / 7 (23.3%) | 25 (83.3%) / 5 (16.7%) | 0.495 |

The biggest difference was found in the pain scores. On the first day, the patients with drains had a pain score of 5.9, while those without drains only had a 2.8. By the second day, the pain for the no-drain group dropped to a very low 1.4, compared to 3.8 for the drain group ($p<0.001$). When we used ultrasound, the amount of fluid in the neck was almost identical for both groups (11.2 ml vs. 10.1 ml; $p=0.450$). No one in either group (0.0%, n=0/60) had a serious bleed or a large fluid collection that needed further treatment. Only one person in the drain group (3.3%, n=1) had a minor skin infection, while no infections occurred in the no-drain group.

**Table 2: Comparison of Postoperative Pain (VAS)**

| Outcome Variable | Group A (Drain) (n=30)Mean ± SD | Group B (No-Drain) (n=30)Mean ± SD | p-value |
|---|---|---|---|
| **VAS Score (Day 1)** | 5.9 ± 1.2 | 2.8 ± 0.9 | **<0.001** |
| **VAS Score (Day 2)** | 3.8 ± 1.0 | 1.4 ± 0.7 | **<0.001** |

## DISCUSSION

This trial shows that for routine thyroid surgery, using a drain makes the patient feel much more pain without providing any real protection. Our results match what many other experts have found: drains are often unnecessary for simple cases. The main benefit of skipping the drain was the significant drop in pain. Patients who did not have a tube in their neck felt much better on both the first and second days. Other researchers have also found that the drain itself is what causes the most discomfort because it pulls on the skin and makes swallowing difficult.

We also found that drains do not necessarily make the surgery safer. Not a single patient in our study suffered from a dangerous bleed. Since the ultrasound showed that fluid levels were nearly the same in both groups, it is clear that the body can naturally handle the tiny amount of fluid left after a careful surgery. Interestingly, the drains in Group A removed about 38.5 ml of fluid, yet the remaining fluid in the neck was the same as in Group B. This suggests the drain itself might irritate the area and cause the body to produce more fluid. While our study was small, it adds to the proof that drains are not needed and might even slightly increase the risk of infection.

## CONCLUSION

Our study adds weight to the point that avoiding drains in simple thyroid lobectomy cases is a better way to care for selective patients. It leads to much less pain and a better recovery without any extra risk of bleeding. Surgeons should

focus on careful work during the operation instead of relying on a drain.

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