

DETECTION OF THE COMPLICATIONS IN THOSE PATIENTS WHO UNDER GOING IN DIFFERENT TYPES OF THYROID SURGERIES, WITH IN ONE WEEK.

Ghulam Akbar Khaskheli¹, Ahsan Ali laghari², Arsalan Ahmed Shaikh³, Abdul Gafoor Delwani⁴, Gulshan Ali Memon⁵, Amjad Ali Bhurt⁶.

ABSTRACT

Introduction: Thyroid swelling is a common problem all over the world, enlargement of thyroid gland may be physiological, puberty induced, pregnancy induced, Pathological simple nodule, simple multi nodular, toxic nodule, toxic multi nodular, toxic diffuse, infective, inflammatory, viral benign, & malignant. **Objective:** To determine the detection of the complications in those patients who undergoing in different types of thyroid surgeries, within one week. **Study design:** Prospective observational study. **Place & Duration:** Two years' study from May 2018 to April 2020 was conducted in Liaquat university of Medical and health sciences Jamshoro/Hyderabad. **Patients & Method:** The study comprises 50 patients. All were admitted from Out Patients Department (OPD). The patients were evaluated fully after history, Clinical examinations and specific investigations. Before surgery of thyroid swelling. Thyroid profile (T3, T4, TSH), Auto antibodies, Ultra sound of Neck, Fine needle Aspiration Cytology (FNAC) Thyroid scan, indirect laryngoscopy, Serum Calcium, X-ray chest. If Suspicious malignant then do Image guided biopsy. X-Ray cervical spine, CT scan of neck, MRI of neck, and general assessment. **Results:** - In this study of 50 patients of Thyroid swelling. The maximum number of patients was in age group between 15 to 60 years. Out of 50 patients 21 patient were diagnosed Simple multi nodular goiter, 14 patients were diagnosed Simple nodular goiter, 3 patients were diagnosed Toxic multi nodular goiter, 2 patients were diagnosed Toxic solitary nodular goiter, 4 patients were diagnosed diffuse toxic goiter, 4 patients were diagnosed Papillary adenoma, 2 patients were diagnosed follicular adenoma. Out of 50 patients 15 patients were treated lobectomy, 8 patients were treated Subtotal Thyroidectomy, 18 patients were treated near total Thyroidectomy, 9 patients were treated total thyroidectomy. 17 patients were developed post-operative tetany, 6 patients were developed Hoarse ness of voice. 5 patients were developed seroma formation, 2 patients were developed wound infection, 1 patient was developed dysphagia and 1 patient was developed Thyroid storm. **Conclusion:** Patients of thyroid swelling admitted, investigated and operated after post operatively. Patients developed Critical complications if not treated earlier and councils the patient or attendant they will create lot of problem.

KEY WORDS: Thyroid surgeries, complications, with in one week.

How to cite this article: Khaskheli GA¹, laghari AA², Shaikh AA³, Delwani AG⁴ Memon GA⁵ Bhurt AA⁶.

DETECTION OF THE COMPLICATIONS IN THOSE PATIENTS WHO UNDER GOING IN DIFFERENT TYPES OF THYROID SURGERIES, WITH IN ONE WEEK.
JPUMHS;2020;10:04,145-148.

DOI: <http://doi.org/10.46536/jpumhs/2020/10.02.276>

1. Assistant Professor of surgery Liaquat University of Medical & Health sciences Jamshoro.
2. Associate Professor of Surgery at Liaquat University of Medical & Health Sciences Jamshoro.
3. Professor of ENT liaquat university of Medical & Health sciences jamshoro.
4. Professor of Surgery surgical unit 1V Liaquat University of Medical & Health sciences Jamshoro.
5. Professor of Surgery, PUMHSW, SBA.
6. Consultant surgery, LUH hyderabad.

Correspondence Author Dr.Ahsan Ali Laghari, Associate Professor, Liaquat University of Medical & Health Sciences Jamshoro .E-mail: drahsanalilaghari@gmail.com

INTRODUCTION.

Thyroid swelling is a common problem all over the world, enlargement of thyroid gland may be physiological, puberty induced, pregnancy induced, Pathological simple nodule, simple multi nodular, toxic nodule, toxic multi nodular, toxic diffuse, infective, inflammatory, viral benign, & malignant¹. Thyroid swelling is commonly seen in those patients who have endemic, pandemic problem, mutations of gene, hormones, reproductive factors, dieting factors, drugs may play role for formation of thyroid swelling.² What ever type of thyroid swelling patients present in Outpatient department (OPD) With complain of swelling in front of neck move up with deglutition with or without pain. Young female unmarried or married commonly presented with physiological thyroid swelling based treated on the basis of

clinically or with help of thyroid profile.³ If patient presented with pathological swelling means having nodular swelling is difficult to reverse because changes in size of the nodule either necrosis or Colloid deposit so best option to take detailed history from tip to toe, Irritation, sleep, appetite, Alopecia, Eye signs lid lag lid retraction, Ophthalmoplegia, chemosis, dry skin, dyspnea, tachycardia, bradycardia, constipation, diarrhea, ascites, Amenorrhea, menorrhagia, increased or decreased reflex. Weight loss, weight gain, pretibial myxedema, symptoms of myxedema coma, change of voice.⁴ Best way of Investigation, Thyroid profile (T3, T4, TSH) Ultrasound of Neck, FNAC of Thyroid Swelling, Thyroid Scan, Serum Calcium confirmation of diagnosis. Then do indirect laryngoscopy, cardiac fitness if age

above 40 years, or toxic patient, anesthesia fitness. If patient fit for surgery, then council the patient complication of thyroid surgery. Perform type of surgery, Lobectomy, Subtotal Thyroidectomy, Near total Thyroidectomy, Total Thyroidectomy ⁵ and Lobectomy with frozen section biopsy. After surgery patients developed post-operative complications, Reactionary bleeding, respiratory problem due to edema or sub cutaneous hematoma, Hoarseness of voice, Thyroid crisis or Thyroid storm tetany, Trousseau sign (carpal spasm, Chvostek sign), Infection, Secondary hemorrhage, Stich granuloma, Keloid, Hypertrophic scar, Recurrence, Thyroid failure, Hypothyroidism.⁶

Prevent complication after surgery patient's need Close Observation of the patient prevent reactionary hemorrhage re open the patient packing, and stiches. Prevent change of voice keep in mind Neuropraxia, Axontomasis, Neurotamesis, reassurance, vit B 12 Supplement. If patient developed thyroid thyroid storm. Fever, tachycardia, Hypotension, dehydration, Risk Pulmonary edema⁷. Patients given antipyretic, antibiotics, Betablocker, Digitalis, Fluids Lugols iodine, Hydrocortisone, prevent tetany replacement of Calcium gluconate, if hematoma open the stiches and evacuate hematoma, prevent respiratory problem shift the patient in Intensive care unit, need oxygen support, prevent infection dressing culture sand sensitivity of pus. Replacement of thyroxin.⁸

PATIENTS & METHODS

The study comprises 50 patients. All were admitted from Out Patients Department (OPD). The patients were evaluated fully after history &

Clinical examinations and specific investigations Before surgery Of Thyroid swelling Thyroid profile (T3, T4, TSH), Autoantibodies, Ultra sound of Neck, Fine needle Aspiration Cytology (FNAC) Thyroidscan, indirect laryngoscopy, Serum Calcium. X-ray chest. If Suspicious malignant then do Image guided biopsy. X-Ray cervical spine, CT scan of neck, MRI of neck, and general assessment. Evaluated patients were evaluated fully after history, Clinical examinations & specific investigations were recorded on a preform Designed for the study. Statistical package for social sciences SPSS version 10 was used for statistical analysis of the data.

RESULTS:

-In this study of 50 patients of Thyroid swelling. The maximum number of patients were in Age group 15 to 60 years. Out of 50 patients 21 patient were presented with Simple multi nodular goiter, 14 patients were Presented with Simple Solitary nodular goiter, 3 patients were presented with Toxic Solitary nodular goiter, 2 patients were presented with Toxic multi nodular goiter, 4 patients were presented with Diffuse toxic goiter, 4 patients were diagnosed with Papillary adenoma, 2 patients were diagnosed follicular adenoma. (Table 1) Out of 50 patients 15 patients were treated lobectomy, 8 patients were treated Subtotal Thyroidectomy, 18 patients were treated near total Thyroidectomy, 9 patients were treated total thyroidectomy. (Table 11) 17 patients were developed post-operative tetany. 6 patients were developed Hoarse ness of voice. 5 patients were developed seroma formation, 2 patients were developed wound infection, 1 patient were developed dysphagia, 1 patients developed storm. Table (11)

Thyroid disease	No of Patients	Percentage
Simple multinodular goiter	21	42.0%
simple solitary nodular goiter	14	28.0%
Toxic solitary nodular goiter	3	6.0%
Toxic Multinodular goiter	2	4.0%
Diffuse toxic goiter	4	8.0%
Papillary adenoma	4	8.0%
Follicular adenoma	2	4.0%

Type of surgery	No: of Patients	Percentage
Lobectomy	15	30.0%
Subtotal thyroidectomy	8	16.0%
Near total thyroidectomy	18	36.0%
Total Thyroidectomy	9	18.0%

Type of surgery	Complications	No of Patients	Percentage
Lobectomy	infection	1	2.0%
Subtotal Thyroidectomy	Tetany	2	4.0%
Subtotal Thyroidectomy	seroma	1	2.0%
Near total Thyroidectomy	Tetany	7	14.0%
Near Total Thyroidectomy	Hoarseness of voice	3	6.0%
Near total thyroidectomy	Thyroid storm	1	2.0%
Near total thyroidectomy	Seroma	1	2.0%
Total thyroidectomy	Tetany	8	16.0%
Total thyroidectomy	Hoarseness of voice	3	6.0%
Total thyroidectomy	Seroma	3	6.0%
Total thyroidectomy	Infection	1	2.0%
Total Thyroidectomy	Dysphagia	1	2.0%

DISCUSSION

Patients of Thyroid swelling presented in Outpatient department (OPD) with complain of swelling in front of neck ,swelling may be simple solitary nodule, simple Multi nodular goiter ,toxic solitary nodule, Toxic multi nodular goiter ,Diffuse toxic goiter, Benign papillary adenoma, benign Follicular adenoma ,Malignant Thyroid Tumors⁹ after detail history of patients related symptoms of euthyroid, Hypothyroidism, Hyperthyroidism¹⁰ Clinical examination of patients who presented with sign and symptoms of Thyroid disease needs of investigation of Thyroid Profile (T3,T4,TSH), Ultra Sound Of thyroid swelling. FNAC of Thyroid swelling exclude malignant ones¹¹, After confirmation of diagnosis simple solitary nodule, simple multi nodular goiter, drug controlled hyperthyroidism and hypothyroidism, take fitness of patients All base line investigations Complete blood picture, Serum calcium, HBSAG, HCV, HIV and COVID _19, Indirect Laryngoscopy, Echocardiography, ECG, Cardiac and anesthetic fitness. Then keep patient on coming list, select the procedure according to preoperatively diagnosis , after anesthesia ,scrubbing and drabbing the neck toweling the area, with maintain the position of patient Reverse tendon berg position mark incision both border of sternoceloido mastoid muscle two finger above the supra sternal notch identified the structure, skin, subcutaneous tissue, Platysma muscle ,investing layer of deep cervical fascia, apart the muscle of thyroid ,Mobilize the lobe of gland avoid primary bleeding ,Ligate the superior thyroid artery with upper pole ,avoid to damage the recurrent laryngeal nerve, parathyroid gland, damage to trachea, divided the branches of inferior thyroid arteries¹² , after surgery put a Redevac drain in side ,close layer by layer avoid dead space due to collection, seroma formation after surgery patient keep in recovery room,shift patient in ward ,record blood pressure ,pulse, Respiratory rate And temperature, check change of voice, Reactionary and secondary bleeding, Dyspnea ,Dysphagia , Thyroid storm ,Tetany, Seroma formation ,Infection after different types of surgery¹³. Lobectomy, Subtotal Thyroidectomy, Near total Thyroidectomy and total thyroidectomy. Chahardahmasumi E et al.¹⁴ In his study, out of 204 ,111 were presented with Hypocalcaemia, 68 patients were presented with Hoarse ness ,67 patients were presented with

Dysphagia, 7 patients were presented with wound infection, Alqahtani SM et al¹⁵. In his study out of 182 patients, 116 patients were presented with temporary hypocalcaemia, 5 patients were presented with change in voice, seroma, hematoma and tracheal injury. Samuel SA et al¹⁶. In his study out of 72 patients , 6 patients were diagnosed simple goiter , 51 patients were diagnosed nontoxic multi nodular goiter,6 patients were diagnosed toxic nodular goiter ,2 patients were diagnosed graves' disease ,5 patients were diagnosed toxic multinodular,1 patients were diagnosed simple multi nodular goiter, 1 patients were diagnosed Solitary Thyroid Cyst .out of 72 15 patients were operated total thyroidectomy ,13 patients were operated subtotal thyroidectomy, 33 patients were operated near total thyroidectomy,10 patients were operated lobectomy 1 patients were operated extended thyroidectomy. 9.7%temperry recurrent laryngeal nerve palsy, 5.6% were presented Hypocalcaemia, 4.2% were presented hematoma formation. Khanzada et al¹⁷.In his study out of 140 patients 52 patients were operated hemi thyroidectomy ,57 patients were operated sub-total thyroidectomy ,11 patients were operated near total thyroidectomy, 19 patients were operated total thyroidectomy,1 patient were operated isthumusectomy .3.5% were presented with Hypocalcaemia. 2.8% patients were presented with Recurrent laryngeal nerve injury, 2 patients were presented with bleeding 2 patients were presented seroma formation,2 patients were presented stich granuloma,1 patient were presented with wound infection In this study of 50 patients of Thyroid swelling. The maximum numbers of patients were in age group 15 to 60 years. Out of 50 patients 21 patient were presented with Simple multi nodular goiter, 15 patients were Presented with Simple Solitary nodular goiter, 3 patients were presented with Toxic Solitary nodular goiter, 2 patients were presented with Toxic multi nodular goiter, 4 patients were presented with Diffuse toxic goiter, 4 patients were diagnosed with Papillary adenoma, 2 patients were diagnosed follicular adenoma. Out of 50 patients 15 patients were treated lobectomy, 8 patients were treated Subtotal Thyroidectomy, 18 patients were treated near total Thyroidectomy, 9 patients were treated total thyroidectomy. Out of 50

patients' 17 patients were developed post-operative tetany. 6 patients were developed Hoarseness of voice. 5 patients were developed seroma formation, 2 patients were developed wound infection, 1 patient were developed dysphagia, 1 patient were developed Thyroid storm. **CONCLUSION:** -Patient of thyroid swelling presented in OPD. Swelling move up with deglutition, means swelling arises from thyroid, patient going to thyroid surgery, identified the complication during surgery, after surgery, if complication developed try to treat it, and council the patient and attendant to avoid the unnecessary overcrowding. **ETHICS APPROVAL:** The ERC gave ethical review approval **CONSENT TO PARTICIPATE:**

written and verbal consent was taken from subjects and next of kin **FUNDING:** The work was not financially supported by any organization. The entire expense was taken by the authors **ACKNOWLEDGEMENTS:** We would like to thank the all contributors and staff and other persons for providing useful information. **AUTHORS' CONTRIBUTIONS:** All persons who meet authorship criteria are listed as authors, and all authors certify that they have participated in the work to take public responsibility of this manuscript. All authors read and approved the final manuscript. **CONFLICT OF INTEREST:** No competing interest declared.

REFEENCES:

- Lloyd-jones W, Giles GR. Disordered Thyroid gland. In: Chieri A, Giles GR, Moosa AR, editors. Essential surgical practice 4th ed Oxford: Butterworth Heine mann, 2002:103-10
- Konder IJ, Fry RD, Fleshman W, Brimbun EH, Red TE. Thyroid and Parathyroid, In: Schwartz SI, Shires GT, Spencer FC, Daly JM, Fisher JE, Galloway AC, editors. Principals of surgery. 7th ED. New York; McGraw-Hill 1999L:790-797
- Harach HR, Sanches SS, Williams ED. Pathology of the autonomously functioning (hot) thyroid nodule. *Ann Diag Pathol* 2002; 6:9-10.
- Lin JD, Chao TC, Huag BY, Chen ST, Chang HY, Hsueh C. Division of endocrinology and metabolism, department internal medicine, Chang Gung Memorial Hospital, Taiwan, R.O.C einjd adm, egmh, org. tw. *Thyroid*. 2005;15(7):708-17.
- Afolabin AO, Oyandipo OO, Agundayin AO. A fifteen year experience of total thyroidectomy for the management of Simple multi nodular goiter in a low medium income country. *S Afr J Surg* 2016; 54:40-5
- Rao JS. Clinical study of post-operative complications of thyroidectomy. *AJ Dent Med Sci*. 2016; 15:20-30.
- Hung CF, Jeng Y, Chen KD, Yu Jk, Shih CM, the pre-operative evaluation prevent The postoperative complications of thyroidectomy. *Ann Med Surg (Lond)* 2015; 4:5-10
- Berri T, Hourri R. Complications of thyroidectomy for large goiter. *Pan Afr Med J*. 2013; 16:138.
- Al Hakami HA, Al Garni MA, Malas M, Abughanim S, Alsuraihi A, and Al Raddadi T: Surgical complications after thyroid surgery: a 10-year experience at Jeddah, Saudi Arabia. *Indian J Otolaryngol Head Neck Surg*. 2019, 71:1012-1017. 10.1007/s12070-019-01692-x
- Seo ST, Chang JW, Jin J, Lim YC, Rha KS, Koo BS. Transient and permanent hypocalcaemia after total thyroidectomy: Early Predictive factors and long-term follow-up results. *Surgery*. 2015;158:1492-9.
- Joliat G-R, Guarnero V, Demartines N, Schweizer V, and Matter M: Recurrent Laryngeal nerve injury after thyroid and parathyroid surgery: Incidence and postoperative evolution assessment. *Medicine (Baltimore)*. 2017, 96: e6674. 10.1097/MD.0000000000006674
- Christou N, Mathonnet M, Complications after total thyroidectomy. *J Visc Surg* 2013; 150: 249-56
- Arif M, Ahmed I. Recurrent laryngeal nerve palsy during Thyroidectomies' *Surg Pak* 2001; 6:12-5.
- Chahardahmasumi E, Salehidoost R, Amini M, Aminorroya A, Rezvanian H, Kachooi A Et al. Assessment of the early and late complication after thyroidectomy. Published on line 2019 Feb 27, doi: 10.4103/abr 3 19
- Alqahtani S M, Almussallam B, Alatawi A S, Alshahimi N A, Albalawi A, Albalawi N S Et al. Thyroidectomy Complications and Risk factors in Tabuk, Saudi Arabia: A Retrospective Cohort Study. 08 2020 *Cures* 12 (10): e10852.do:10.7759/cures.10852.
- Samue S A, Rebecca S H. Complication of Thyroidectomy at a Tertiary Health institution in Nigeria.:2019 volume 6 Issue 1page 1-9
- Khandwa TA, Samad A, Memon W, Kumar B. Post Thyroidectomy Complications: The Hyderabad Experience. *J Ayub Med coll Abbottabad* 2010 vol 22, No1.