TAJ June-December 2012; Volume 25
Published on 2016

ISSN 1019-8555
The Journal of
Teachers Association
RMC, Rajshahi

Original Article

Clinical Presentation of Thyroglossal Cyst and its Management Study of Two Hundred Cases

Subrata Ghosh[1], Milon Kumar Chowdhury[2], Ashik Iqbal[3], Monowar Hussain[4], Belayat Hussain Siddique[5]

Abstract

Objectives – To find out clinical presentation, management & Complication of surgery of Thyroglossal cyst.

Methods – It was a cross sectional study done in the Department of Otolaryngology and Head-Neck Surgery, BSMMU, DMCH & RMCH, from January 2009 to June 2015. 200 Patients undergoing Sistrunk's operation for cytologically proven Thyroglossal cyst were included in this study. Patients were reviewed after sugary and any complication that occurred were recorded.

Results – Within 200 patients, most (34%) were in 1st decade, mean age19.17 years, male-female ratio 1.2 : 1, in 92.5% cases cyst in midline, Complication of surgical management in 8.5% cases and recurrence is 1.5% cases after Sistrunk's operation.

Conclusions – Thyroglossal cysts commonly present as midline neck swelling within 2nd decade of life and can be successfully treated with Sistrunk's operation with minimal recurrence.

Key words : Thyroglossal cyst, Sistrunk's operation, recurrence.

TAJ 2012; 25: 26-29

Introduction

Thyroglossal cyst are the most common congenital anomaly of the central portion of the neck[1]. They are remnants of the embryonic thyroglossal duct that may occur anywhere from the base of the tongue to the thyroid gland[2]. Thyroglossal cysts are the cystic dilation of epithelial remnants of the thyroglossal tract, closely

The thyroglossal cyst most often present with a palpable asymptomatic midline neck mass below the level of hyoid bone. Some patients will have neck or throat pain or dysphagia, difficulty in breathing specially if the lump becomes large[6,7]. The sex distribution is equal and the age range is from birth to 70 years with mean age of 5.5 years[8]. Among the published cases 31.5% were under the age of 10, 20.4% were in the second decade, 13.5% in the third decade and 34.6% were older than 30 years[8]. 90% lie in the midline and 10% on one side, of those 95% are on the left and 5% are on the right[10]. The differential diagnosis of thyroglossal cyst include thyroid swelling, dermoid cyst, bronchial cleft cyst, cystic hygroma, lymph node, lipoma, sebaecous cyst, haemengioma[4,9]. Very rarely, the persistent duct can become cancerous, called thyroglossal duct

[1] Assistant Professor, Department of Otolaryngology & Head-Neck Surgery, Rajshai Medical College & Hospital.
[2] Residential Surgeon, ENT, Rajshai Medical College & Hospital
[3] Medical Officer, ENT out patient departments, Rajshai Medical College & Hospital
[4] Professor, National Institute of ENT, Tejgaon, Dhaka
[5] Professor, Head-Neck Surgery, BSMMU

carcinoma[7]. Preoperative investigations of thyroglossal cyst are ultrasound scan, fine needle aspiration cytology :

Radioisotope scan, thyroid function test are requested to avoid inadvertent excision of a mass with clinical features of thyroglossal cyst which is in fact thyroid swelling[4]. Preoperative ultrasound guided fine needle aspiration cytology of thyroglossal duct cyst has been advocated to rule out the possibility of an associated carcinoma[9].

The treatment of thyroglossal cysts is surgical excision – Sis trunk's operation. The classic operation was described in 1920 by Walter Ellis Sistrunk's of the Mayo Clinic and consists of excision of thyroglossal cysts, the central portion of the hyoid bone and a core of tissue around the thyroglossal tract at the foramen caecum[4].

Clinical presentations vary from study to study. I have undertaken the study to get proper information about different clinical presentation, its management and possible complications. This study will help to diagnose thyroglossal cyst with different clinical presentation, evaluate the success of surgical treatment in our country and the per-operative and post-operative complications. This study may give some fresh information about thyroglossal cyst to otolaryngologist of our country.

Objectives

1. To see the Clinical Presentation
2. To Observe the Management Offered.
3. To find out the Complications.

Material and Methods

It was a cross sectional Study consented in Department of Otolaryngology & Head-Neck Surgery, BSMMU, DMCH and RMCH FROM January, 2009 to June, 2015. Cases were Selected Collected directly from the patents.

Inclusion Criteria–

i. Clinically diagnosed thygoylossal cysts

Exclusion criteria-

i. Midline Neck selling other than thygoylossal cyst. (Cytologicaly proven)

Discussion

A total number of 200 cases of thyrogloral cyst were studied during period of 6 years. The patients were admitted in the department of Otolaryngology & Head-Neck Surgery, BSMMU & DMCH (From January 2009 to June, 2010) & RMCH (July 2010 to June 2015)

Table 1: Age incidence (n = 200)

Age group (in year)	No of Patient	Percentage
0–10	68	34%
11–20	62	31%
21-30	35	17.5%
31-40	23	11.5%
41-50	8	4%
51-60	4	2%

Table 2: Age incidence (n = 200)

Sex	Total no of Pt.	Percentage
Male	109	54.5%
Female	91	45.5%

Table 3: Site of Thyroglossal cyst in relation with hyoid box (n = 200)

Site	No of Patient	Percentage
Infrahyoid (in front of thyroid Cartilage)	153	76.5%
Infrahyoid (Below the thyroid Cartilage)	14	7%
Pre-hyoid	17	8.5%
Supra-hyoid	16	8%

Table 4: Site of Thyroglossal cyst in relation to midline (n = 200)

Site	No of Patient	Percentage
In midline	185	92.5%
One side of Midline Left	13	6.5%
Right	2	1%

In this study, age ranged from 2–58 years, majority patients (34%) belongs to age group 0-10 years, and then 31% patients were older than 30 years. Among the published. Cases [8,11,] 31.5% were under the age of 10, 20.4% were in 2nd decade & 34.6% were older than 30 years.

equal [8,10,11,] but in one series, the ratio is 1:1.37 [17,] in other studies ratio was 1.2 : 1 [15] 1 : 0.22 [20]

Table 5: Presentation of Thyroglossal Cyst (n= 200)

Presentation	No of Patient	Percentage
Midline Neck Swelling	185	92.5%
Lateral Neck Swelling	15	7.5%
Painful Neck Swelling	17	8.5%
Infected Cyst	29	14.5%
Previously operated (Recurred)	17	8.5%

Table 6 : Post operative Complication Cyst (n = 200)

Hemorrhage / Haematoma	4	2%
Pain in throat	5	2.5%
Difficulty in deglutition	5	2.5%
Recurrence	3	1.5%
Hemorrhage / Haematoma	4	2%

In this study, Thyroglossal cyst were situated in infrahyoid (In front of thyroid cartilage) position in 153 pt (76.5%), infrahyoid (Below the thyroid Cartilage) in 14 Patient (7%) , Pre hyoid in 17 patient (8.5%) and suprahyoid position in 16 patients (8%). In published series in 74%. Patient Thyroglossal cyst were below, the hyoid bone, 22% suprahyoid & 3.7% over the hyoid bone[16].

In our study, in 92.5% patients Thyroglossal cysts situated in midline and in 6.5% pt. cyst in left sid of midline and in 1% in rt. side of midline.

Complication of thyroglossel cyst are infection, carcinoma, thyroid ectopia, recurrence. In this compilation arises in 8.5% patients. In our study in 1.5% (3) patient's recurrence developed after Sistrunk's operation, 1 in DMCH & 2 in RMCH. According to standard book[8], reported recurrence after Sistrunk's operation varies from 2% to 8%.

Conclusions

The Present study is a hospital based study with a total 200 cases. From this study it is seen that age of presentation of Thyroglossal cyst, male female ratio, site and position of the cyst, postoperative complication along with recurrence of cyst are close to the result of other studies in different countries. Regarding management Sistrunk's operation, even after a century of introduction remains the gold standard treatment till today.

Reference

1. Schwestchenau Eric, Kelly Daniel J. "The adult neck mass" 2002, 66 (5): 831-838.
2. Ghorayeb Bechara Y, Pictures of thyroglossal duct cyst- Otolaryngoly Houston, February, 2009: 1-3
3. Willingham Beth, Thyroglossal duct cyst "BCM, 2002; 1-6.
4. Brewis C, Mahadevan M, Baily C M, Drake D P.Investigation and treatment of thyroglossal cyst in children, J.R Soc Med 2000, 93 : 18-21
5. Simon Lawrence M. `` Thyroglossal duct cyst" 2004, 1-18
6. Nation Master- Encyclopedia, Thyroglossal cyst, 2009:1-5
7. file. Thyroglossal cyst- Wikipedia, the freee encyclopedia, 2009: 1-2
8. Kerr Alan G, Hibbert Jhon, Scott- Brown`s Otolaryngology, laryngology and Head and neck Surgery, 6th edition, 5/16/1-5/16/4
9. Tien- Jyun Chang, Tien-chang, Young-Lien Hsiao; Fine- Needle Aspiration Cytology of Thyroglossal duct cyst, 2009:1
10. Watkinson Jhon C, Gaze Mark N, Wilson Janet A, Stell and Maran`s Head and Neck Surgery, 4th edition, 182-3.
11. Glesson Michel Browning George G, Burton Martin J, Clark Ray, Hibbert John, Jones Nicholas S, Lund Valerie J. Luxon Linda M, Watkinson John C, Scott-Brown`s Otoghinolaryngology, Head and Neck Surgery, 7th edition, 1777-9,
12. Ellis PDM, Von Nostrand AWP, The applied antomy of thyroglossal tract remnants, Laryngoscope 1977; 87; 765-70
13. Williams Norman S, Bulstrode Christopher J.K, O' connel P. Ronan, Bailey and Love`s Short Practice of Surgery, 25th edition- 729-30.
14. Lin Shih-Tsang, Tseng Fen-Yu, Hsu Chuan-Jan, Te- Huei, Chen Yoh Shyang; Thyroglossal duct cyst: a comparison between children and asults; American Journal of OTOLARYNGOLOGY- Head and Neck Medicine and Surgery- 29(2008) 83-87.

15. Kaselas Ch, tsikopoulos G, chortis Ch, Kaselas B, thyroglossal duct cyst`s inflammation. When do we Operate? Pediatr Surg Int (2005) 21: 991-993.

16. A.HAL-SALE, S. Qaisaruddin, M Ahmed: Thyroglossal cyst: a clinico-pathological study. Saudi Medical Journal 1996. vol. 17, no 5, pp. 620-625

17. Shigehito Wada, Ken Ouura : A clinico-pathological study on thyroglossal duct cysts. Evaluation ofremoval of the cyst in combinatio with resection of the hyoid bone. Jouranl of the Japanese Stomatological Society. Vol. 49, no.2,pp. 102-107

18. Brousseau ValerieJ. solares C Arturo, Xu Meng.Krakovits paul Koltai peter J, Thyroglossal duct cyst: presentation and management in children versus adults, International Journal of paediatric Otorhinolaryngology, vol. 67. issue 12, pp. 1285-1290 (December 2003)

19. Tarcoveanu E, Niculescu D. Cotea Elena Vasilescu A. Crumpei Felicia; Thyroglossal suct cyst, Journal of Chirurgie, Iasi, 2009, vol. 5, 1 [ISSN 1584-9341]

20. NU Ramaive, GP Shorff; Thyroglossal cyst (A clinico- pathological evaluation with special reference to its malignant potential), Journal of posgraduat Medicine (JPGM), Year, 1984, vol. 30. issue 3, pp. 175-8

All Correspondence to:
Subrata Ghosh
Assistant Professor
Department of Otolaryngology & Head-Neck Surgery
Rajshahi Medical College & Hospital.