



RECOVERY OF POST THYROIDECTOMY APHONIA BY AYURVEDIC TREATMENT- A CASE STUDY

Ayurveda

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ABSTRACT

Background: Aphonia following Thyroidectomy is known complication. Sometimes the damage remains permanent. **Case study:** Here is one case study, having developed bilateral vocal cord paralysis due to injury to recurrent laryngeal nerve, during subtotal thyroidectomy; that case was referred to Ayurvedic research department on second day of surgery. Ayurvedic treatment was started when patient was in surgical I.C.U. The patient was shifted to Ayurvedic ward later and was successfully treated. The voice was fully restored within 5 weeks of Ayurvedic treatment. **Conclusion:-** This case study highlighted that Ayurveda has strength and ability to treat such iatrogenic complications of modern surgery.

KEYWORDS

Post Thyroidectomy aphonia, Recurrent nerve paralysis, Bilateral vocal cord paralysis, Recovery, Ayurvedic treatment

Introduction:-Thyroidectomy is indicated in all goitres namely multinodular goitre, colloid goitre with symptoms, and malignant goitre.[1] Iatrogenic vocal cord paralysis is a known serious complication of thyroidectomy. Post-thyroidectomy vocal cord paralysis incidence is reported to be 1.5–14%. Most of such patients recover from the condition within 6 months. However in small proportion of cases the aphonia persists permanently.^[2]

Case study:- This 25 year old female reported to Sassoon hospital, Pune for the complaints of Menorrhagia lasting for a period of 6 weeks. She was admitted in Gynaecology ward and was investigated. On clinical examination, there was a midline painless swelling noted on front of neck of size 2 x 2 x 1.5 cm having H/o appearance in one month and slowly increasing. The swelling moved with swallowing. There was no tenderness, no difficulty in deglutition.

Sonography of thyroid revealed Rt lobe-2.4 x 1.4 x 3.3 cm, Lt. lobe - 1.9 x 1.5 x 3.5 cm, Isthmus- 0.48 cm. Multiple heterogenous echo lesions noted in bilateral lobes; giving impression of Inflammatory / Infective aetiology with colloid nodules involving B/L lobes of thyroid gland.

Physical parameters-Pulse-86/min, B.P. 110/70 mm of Hg.

Investigations:-Thyroid function tests: T3-133, T4-11.24, TSH-4.98. Anti Thyroid-Peroxidase (Anti TOP) value->1000, Anti Thyroglobulin -44. Ca-9.2 mg/dl Hb-10.4 gm%, Platelets-2,84000/microlitre, Serum Creatinine -0.6 mg/dl, Bilirubin-0.7 mg/dl, Serum Proteins-7.7 g/dl; Albumin-4 g, Globulin-3.7 g USG abdomen revealed Polycystic ovarian changes.

Subtotal/ nearly total Thyroidectomy was performed on 19.4.2018. The case was admitted in surgical I.C.U. Aphonia was noted on the next day i.e. 20.4.2018. Patient had dyspnoea at rest. The case was referred to ENT surgeon for Video Direct Laryngoscopy; that revealed vocal cords fixed in paramedian position denoting Bilateral vocal cord paralysis. Ryle's tube was placed for feeding. The case was referred to Ayurved research ward for opinion and further management. Patient was started with *Basti chikitsa* course in surgical ICU- *Niruh* followed by *Anuvasan* on alternate day. Patient showed some improvement in ICU itself as whispering sound could be heard and in view of that she was shifted to Ayurvedic research ward on 24.4.2018 with Ryle's tube in place. Ryle's tube was removed on 29th April i.e after 10 days of surgery. Patient was referred to ENT department to seek follow up opinion on 16.5.2018. Video Direct Laryngoscopy revealed Bilateral Arytenoids were immobile. Vocal cords were seen in paramedian position, forced adduction was present but abduction was found to be totally absent. ENT surgeon confirmed the diagnosis of Bilateral vocal cord palsy. ENT surgeon opined to continue the present line of Ayurvedic treatment. The case was referred to Endocrinologist on 16.5.2018 to review the functioning of Thyroid/ parathyroid glands. TSH value was 1.6 units; he adjusted dose of Tab Thyronorm (L-Thyroxin) to 50 mcg per day. The patient was very much worried and depressed due to her anxiety if she ever able to speak. The Ayurvedic line of treatment was continued as mentioned in Table No.1. Patient completely recovered and her voice was fully restored within 5 weeks of Ayurvedic treatment.

Line of treatment

Type of treatment	From-to	Intervention
In ICU- Basti	20.4.2018-23.4.2018	Sa-Sneh Niruh basti by Dashmool + Erandmool quath-400 ml containing Saindhav (Rock salt) 2 g and Narayan tail/ oil 20 ml. Anuvasan by Sahachar tail 30 ml / Narayan tail 30 ml. on alternate days
Basti in Ayurvedic ward	24.4.2018 - 13.5.2018	As above but withheld during menstrual period from 2.5.2018 to 6.5.2018
Systemic treatment (In ICU) Deepan-Pachan	20.4.2018-23.4.2018	Sitopaladi + Avipatikar choorna 1/2TSF BD with warm water through Ryle's tube
Systemic treatment (In Ayurvedic ward)	24.4.2018 to 1.6.2018	Sitopaladi + Avipatikar choorna 1/2TSF BD with warm water (Ayurved Rasa-shala)
	24.4.2018 to 1.6.2018	Shatavari (Asparagus racemosus)+ Garlic +Soonthi + Haridra siddha milk Steam inhalation
		Shatavari compound 2 BD (Sharangdhar) Yashtimadhu/Glycyrrhiza Glabra (Cultivated Licorice)+ Triphala (Ayurved Rasa-shala) quath Gandush Til/Sesame bitten in mouth followed by gandush with warm water Kanth sudharak vati for chewing
	4.5.2018 to 1.6.2018	Varunadi quath 3 TSF BD
	7.5.2018 to 21.5.2018	3 Black pepper seeds + 2 TSF Cow Ghee (Dadimadi) as Achhasnehapan
	7.5.2018 to 31.5.2018	Sookshma Triphala 1 BD along with Sudhajal
Panchkarma-Snehan Swedan, Nasya	3.5.2018 to 1.6.2018	Nasya-karma by Panchendriya vardhan tail daily 2-----2 drops each
Pranayam Omkar pronunciation Laghu-supachya diet	3.5.2018 to 1.6.2018	Anulom- Vilom and Bhramari 15 min each twice daily Deergha (Longer) Omkar pronunciation 15 min twice daily Twak siddha jal panarth

Discussion:-

Thyroid surgery is noted to be common surgical procedure in modern surgical practice. Post operative bleeding, Respiratory obstruction, Hypothyroidism, Thyrotoxic crisis, Unilateral/ Bilateral Recurrent nerve paralysis leading to aphonia are known common complications of Thyroidectomy.^[1] The incidence of injury to recurrent nerve is 1-2% with experienced surgeons but it may occur in the range of 1.5-14% as

reported in many studies.^[2,3] The incidence is more in case of total thyroidectomy. The disability though seems minor, it is very frustrating for the patient and affects quality of life. Most of the patients (93-100%) recover within 6 months of surgery,^[2,3] but in few patients the damage remains permanent. Khairunnisak Mison et al reported complete recovery within 3 months of a case who developed bilateral vocal cord paralysis.^[4] Zakaria et al observed that thyroid carcinoma, re-operation of recurrent goitre, Non identification of Recurrent Laryngeal Nerve (RLN) and total thyroidectomy were found to be significant risk factors of injury to RLN.^[2] Lo CY reported that there was increased risk of permanent recurrent nerve damage following thyroid surgery for malignant neoplasms and recurrent substernal goiter.^[3] Varaldo E et al reported that the nerve can be injured by traction, diathermy, loss of blood supply, transection, ligation, contusion etc. Anatomical variation of course of RLN may pose difficulty in its identification.^[5] Khan et al reported incidence of 4% in both groups where RLN was identified and in other group where it was unidentified.^[6]

Interventions:-Methyl cobalamine has been tried with encouraging results.^[4] Battista Borghi reported perineural injection of 7.5 mg of Meloxicam very effective in treating Aphonia.^[7] H. Dralle et al reported that Recurrent laryngeal nerve palsy rates tended to be lower with IONM (Intra Operative Neuro-physiologic Monitoring) than without it, but this difference was not statistically significant.^[8] Malik R and Linos D also substantiated it saying that IONM cannot be recommended as standard of care for thyroidectomies.^[9]

In the present case, there was bilateral vocal cord paralysis due to injury to RLN during thyroidectomy; with difficulty in breathing initially and aphonia. In Ayurvedic terms the gati of Udan and Pran was disturbed i.e. *Pranavruttau*.

.....Dwabhyam bhash te cha, dwabhyam ghosham karoti..... II Su. Sha.9/5 Sushrutacharya mentioned that there were 10 *Urdhwag Dhamanias*, having control on *Shabda/ Voice, Rupa, Rasa, Gandha. Shwas- Prashwas* (Inspiration / expiration).^[10] The patient had *Aghatjanya Vat prakop* due to injury to two each of these *Dhamani/nerve* controlling *Shabd & Shwas-prashwas*, that resulted in loss of voice/ aphonia and difficulty in breathing.

As per Ayurvedic classification, the patient was having *Kapha prakruti*. She c/o menorrhagia. As per Ayurveda, *Upadhatu* of Rasa is *Stanya* and Raja. Further the thyroid swelling is situated in *Urobhag* and that is seat/ *Shan of Kapha* and Thyroid swelling occurs due to vitiation of Kapha. Mala of *Rasa dhatu* is *Kapha. Vaman* is supposed to be the best remedy for treating Kapha. But in view of her recent surgery over thyroid, there was risk of bleeding at the operated site. Therefore Vaman could not be administered. Consequently to treat *Kaphavruttau* vata and *Pranavruttau* Udan, firstly we carried out *Anuloman* of *Apaan* by *Basti chikitsa*. When we treated *Apaan*, all other 4 *Vayus* became *prakrut/ normal* state; *Basti* is stated to be half *chikitsa* consisting of *Sasneha-Niruh*, followed by *Anuvasan basti* on alternate days.

We decided to start *Sitopaladi + Avipatikar* which is very much suited to *Rasa Rakta gata pachan*, hence it was started from the first day of treatment. When the patient was shifted to Ayurvedic ward, for treating *Kaphavruttau* vata, we administered *Yastimadhu + Triphala* in the form of *Kaval /gandush. Tila Kalk + Koshna jala* (warm water) caused shaman of *Vata* due to its *Snigdha* and *Ushna guna* as Charakacharya had mentioned," *Sneho anilam hanti mrudu karoti deham....II Cha. Siddhi. 1/7*^[11]

We also administered *Lasun siddha kshirpak* that is considered to be best treatment of *Kapha-vruttau* vata, owing to its *Rasayan, Buddhi - Medha vardhak* properties and reducing depression. In this case there were mixed *lakshana of Kaphaj swara bheda, Paitik swar bheda* and *Vataj swar bheda*. For treating i) *Kaphaj swar-bheda* - Black pepper /Piper nigrum (Part of *Trikatu*) and *Ghritha* (medicated ghee) were used ii) *Paitik swar bheda*-Shatavari (Asparagus racemosus Willd.) and Shatavari compound was used as it is a *Rasayan* that is rejuvenating, carries out *Bruhan* and is known for its beneficial properties of alleviating obstruction in *Pran* and *Udan*^[12] iii) *Vataj swar bheda*-Gud/jagerry+Rice+ Ghrith as aahar. *Twak siddha koshnajala* was used as *Jalapan* for pacifying *Vata* and *Kapha*. As per Ayurveda, *Nasa hi shirso dwaram* and for stimulation of *Shabda dnyanendriya* we started *Nasya* along with *Panchendriya vardhan* tail.

There is a definite role of Speech therapy in such cases of bilateral vocal cord palsy. We asked the patient to start *Pranayam* in the form of *Anulom-Vilom* and *Bhramari. Pranayam* is a technique of deep breathing; the lungs are fully inflated, and oxygen reaches to each and every cell. *Bhramari* has specific beneficiary effect on brain, paranasal sinuses, eyes, ears, pharynx, glottis, larynx (Vocal cords) and lungs. This therapy had a leading role in improving her quality of voice and pitch of voice. The Western world is not yet fully aware of the benefits of *Pranayam*, though they have developed some awareness on celebrating World Yoga day every year on 21st June. Modern medicine has tried drugs like Methyl cobalamine, Meloxicam, steroids with variable success and off-course with its side effects but *Pranayam* is having the best results, in terms of soothing effect on mind and body. *Omkar deergha* pronunciation is a sort of *Pranayam* that has beneficial effect on each and every cell. As per literature recovery from bilateral palsy of Vocal cords takes place within 6 months and if it is not recovered in that period, the damage remains permanent. The combined therapy of Ayurvedic treatment along with *Pranayam-Anulom-vilom, Bhramari* and *Omkar* pronunciation made the recovery from Aphonia much faster. It was probably for the first time that such post Thyroidectomy Aphonia was treated by Ayurvedic line of treatment from second day of surgery.

Conclusion:-

This case study established that Ayurved has strength and ability to treat such iatrogenic complications of modern surgery.

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