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**Laryngeal Squamous Cell Carcinoma successfully Treated with *Rasayana* Therapy -
A Case Report.**

**Yogesh Bendale, Vineeta Bendale, Keta Ladsongikar, Poonam Birari-Gawande, Avinash Kadam
and Pravin Gund**

Rasayu Cancer Clinic, Pune

Abstract:

The present report describes the treatment of a Laryngeal Squamous Cell Carcinoma with Ayurveda *Rasayana* therapy which is known to be beneficial in the management of various malignancies. Different *Rasayana* has been explained in Ayurveda classics which are helpful to preserve health and to get rid of diseases. Several experimental studies also have reported that *Rasayana* have immunomodulatory, and anti tumour functions. Through this report, we present a case of laryngeal carcinoma (T3N0M0)which responded exceptionally well to *Rasayana* therapy along with radiotherapy. There was complete tumor response along with optimization of laryngeal functions like voice, breathing and swallowing. Patients symptoms were significantly reduced in a span of 1 month of starting treatment and total regression of tumour size was seen without any adverse effects of radiotherapy.

Key Words: - Ayurveda, Laryngeal carcinoma, Radiotherapy

Introduction:-

Squamous cell carcinoma of larynx is the most common (45%) among all the cancers of the head and neck. Men over 40 years are commonly affected. ⁽¹⁾ The most common treatment option for this cancer are surgery, chemotherapy and radiotherapy. However, concerns have emerged regarding functional outcomes and decreased survival and quality of life even after treatment. Radiotherapy in laryngeal carcinoma is known to be associated with several severe adverse reactions including skin reactions, voice changes, sore mouth, dry mouth, difficulty in swallowing, Trismus, Osteoradionecrosis, lymphadema etc. ^(3, 4)

In vitro and *In-vivo* studies in the field of *Rasayana* concern with treating cancer have shown very encouraging results such as minimization of radiation hazards or adverse effects of chemotherapy. ^(5,6) Different *Rasayana* has been explained in the classics also which are helpful to preserve health and to get rid of diseases. Many experimental studies reported *Rasayanas* efficacy in treating cancer. *Rasayanas* are known to have immunomodulatory, anti tumourogenesis, anti inflammatory and anti angiogenic properties. ^(7, 8, 9) It has action on cell cycle as it inhibits cell proliferation and induce apoptosis. Moreover Ayurveda classics also advocates *Rasayana* therapy for promoting health, improving quality of life ,increasing longevity and also preventing disease and its recurrence. On this basis,we implemented in the current case, a novel therapy for laryngeal cancer by using anti malignant herbo-mineral *Rasayana* compounds with adjuvant symptomatic treatment.

Case Presentation:-

A 73 years old gentle approached to our Ayurvedic out-patient clinic in Pune India, with one month history of persistent dysphonia, cough, sore throat,odynophagia with lump in the neck. His prior medical history was unremarkable. Baseline PNS and Neck CT scan dated 29/5/13 demonstrated a heterogenous mass 2.4*1.4*2.1 cm in size involving laryngeal ventricle and false vocal cords on left side. The lesion was extending to displace left vocal cord inferiorly. Anteriorly it was crossing midline. The lesion was involving paraglottic space on left side and detected as squamous cell carcinoma with stage T3N0M0. Oncologist advised him to go for radiotherapy.

He started Ayurveda treatment to prevent further progression of disease and to reduce adverse effects of radiotherapy.

Based on Ayurvedic principles following *Rasayana* compounds were prescribed to restore and support the functioning of larynx. It includes Navjeevan *Rasayana* (A compound formulation containing Abhraka Bhasma – Bhasma (Calx) of Mica – Shuddha Gandhaka – Purified and processed Sulphur , Vanga Bhasma – Bhasma of Tin , Shuddha Parada – Purified and processed Mercury , Shuddha Haratala – Purified Orpiment (Arsenic tri sulphide) , Tamra Bhasma – Bhasma (Calx) of Copper, Swarna Bhasma – Bhasma (Calx) of Gold, Hirak bhasma-calcinoid diamond). Other supportive Ayurvedic therapy includes Ayurvedic formulations like Tribhuvankirti (classical Ayurvedic preparation), Shwas Kuthar Rasa (classical Ayurvedic preparation), powder form of Solanum Xanthocarpum, Powder Saussurea lappa, tankan, and Sitopaladichurna .

Patient started treatment with above medications on 11/6/13. After starting treatment his hoarseness of voice gradually reduced . Within 4 weeks of treatment the patient's voice became clear and he retained his physical fitness. He then decided to start radiotherapy.

Considering the extent of laryngeal tissue involved patient was informed by radiologist that there is a high probability for him to lose his voice and also there will be difficulty in swallowing after radiotherapy. Patient continued *Rasayana* therapy throughout his entire course of radiotherapy. Patient completed 36 cycles of radiotherapy without any adverse effects. Patient tolerated radiotherapy very well and he did not experience any adverse reactions. Moreover there was no adverse effect on patient's voice as well as swallowing.

In the post radiotherapy scan there was significantly reduction in size and extent of tumour as compared to scan dated 28/10/13.

By seeing good response of patient, long term treatment was planned with regular follow ups. After radiotherapy patient was exclusively on Ayurvedic *Rasayana* therapy . He visited the clinic for regular follow up and had not any complaints. His appetite was also good. He was living good quality of life till his last follow.

Again after 8 months of treatment CT scan was repeated which showed total clearance of the tumour and he was asymptomatic, healthy with absolutely normal voice.

Discussion:-

Advanced laryngeal carcinoma often lead to bad prognosis. Patients in this stage of disease are at high risk of functional disabilities due to total laryngectomy or conservative chemo-

radiotherapy. Eventhough laryngectomy provides good oncologic control but it is associated with significant functional and psychological sequaleae.^(1,2) Such complications lead to poor quality of life among patients and survivors .The goals of our treatment were to provide best possible oncologic control with enhancement of laryngeal functions.

Rasayana compounds are either purely herbals or are herbomineral in origin. Ayurveda texts are rich with various herbs and multi-ingredient formulations which act as *Rasayana*.^(5,6)

Main ingredients of Navjeevan *Rasayana* (Mentioned above) are known to have anti-cancer, action and it has been proved in many clinical studies. Several experimental studies have proved the beneficial effects of Ayurvedic *Rasayan* therapy in cancer management. These compounds are known to have role in inducing apoptosis, Cyto-protection, cell recovery, anti-tumour activity and vitality of all immune augmentation. *Rasayana* can also be used to prevent second malignancies.^(7,8,9) It can thus be stated that Ayurveda can be helpful in the management of cancer in many ways, as prophylactic, palliative, curative and supportive and helps to improve quality of life. Considering the limitations of a single case study we may need to conduct further randomised control trials to generate high level of evidence for this observation.

Conclusion:-

In the present study it is observed that the patient regained his voice, appetite and weight after starting *Rasayana* in addition to complete regression of tumor without observing any known adverse effects of radiotherapy .It indicates that *Rasayana* therapy can be an effective treatment for laryngeal cancer where available options are limited. Hence further clinical trials are needed which can definitely create new dimensions in the field of cancer treatment.

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