17th International Conference on Otolaryngology: ENT Surgery

18th International Conference on Otolaryngology: ENT Surgery

March 22, 2022| Webinar

Expression of biomarkers vimentin and metastasis associated 1(MTA1) protein in different stages of laryngeal cancer and their impacs on survival

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Introduction: Laryngeal cancer is the second most common cancer after the lip and oral cavity cancer of head and neck region (1.).The incidence of cancer larynx is 1.26-8.18 per 100,000 populations in different regions of India (3). The most common adverse factor for laryngeal cancer has been found to be lymph node metastasis. Tumour cells destroy the basement membrane and thereby invade and metastasize.

Vimentin: It is a type III intermediate filament protein is present in all mesenchymal cells. Its main function is to maintain cellular integrity as well as shape and resistance against stress. It's a biomarker of epithelial-to-mesenchymal transition (EMT).

MTA1: MTA1 of the MTA (metastasis-associated) gene family is found mainly in nucleus but also present in extra nuclear compartment. It's an integral part of nucleosome remodelling and histone deacetylation (NuRD) complex (5)

Purpose: Overall survival and disease free survival depends on various factors viz stage of disease, type of treatment, stage of the disease when treatment started, previous history of radiation for other head neck primary, immune status of the patient, types of histology and various types of biomarker that may impact on overall survival .Here we study the expression of biomarkers Vimentin and MTA 1 in laryngeal squamous cell carcinoma and the correlation of VIM & MTA 1 with tumour recurrence and survival in laryngeal cancers at different stages .

Materials and methods: This is a prospective cohort study of 90 laryngeal squamous cell carcinoma patients presenting to outdoor patient department of Otolaryngology & HNS at PGIMER, Chandigarh. Tissue specimens and surgical specimen (in case of surgery as the primary treatment | post RT salvage surgery) from 90 patients with LSCC were sent to pathology department for vim and mta1 immunohistochemistry analysis.

Results: In our study till now we have enrolled 70 patients and results of 34 patients are available at the time of my E poster submission and we are getting an unexpected result of positivity with vimentin: and MTA1 and there is a correlation between overall and disease free survival and biomarkers Vimentin and MTA1.Out of 34 test samples, 11(32%) came positive for Vimentin and 34 (100%) for MTA1.

Conclusion: There is a definite correlation between biomarkers vimentin and MTA1 and different subsites of larynx and stage of the disease. One patient had expired and five patients had recurrence among seventy patients at the interval of one year.

Speaker Biography

Jaimanti Bakshi is working as a consultant and head&neck surgeon in the postgraduate institute of medical education and research. She is the professor and unit head of the department of otolaryngology and head&neck surgery. She has over 80 publications in the national and international journals that have been cited over 200 times and has been serving as a review erexpert of reputed Journals.

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Received: Jan 10, 2022 **Accepted:** Jan 13, 2022 **Published:** March 24, 2022