Editorial
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Head and Neck Squamous Cell Carcinoma in Pediatric Population

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Editorial

Head and neck Squamous cell carcinoma (HNSCC) is a disease of the elderly associated with tobacco, alcohol consumption. Of late there is increased incidence in the younger age group with Human Papilloma virus being the most common causative agent [1]. HNSCC is rarity in the population cohort of less than 20 years. The probable risk factors are distinctly unique from the adult counterparts in that DNA repair defects and Fanconis anemia are the commonly attributable factors [2]. Since pediatric HNSCC (PHNSCC) is a rare entity, there is very little consensus on the optimal treatment options. Treatment protocols have to maintain an optimal balance between cure of the tumor and acceptable side effect profile, since young patients may suffer side effects for decades together and chances of deformities due to alteration in bone growth. Survillance Epidemiology and End Results (SEER) database analysis reported better outcomes in children in comparison to the adult counterparts [3]. However, most of the reports have been case series or case reports with heterogeneity in the treatment options that have been explored.

The analysisof patient related factors and treatment related factors that affect response to therapy will give insights into how this group of patients fare. A comphrensive individual patient data analysis reported just 217 cases in the reported literature space emphasizing the rarity of this disease [4]. SEER database analysis reported the preponderance in females (37.0% vs. 31.7%, p value 0.04) whereas the systematic review reported that 63.46% patients were male. In the pediatric cohort most common risk factors happens to be DNA repair defects. Early initiation of tobacco chewing has also been reported a possible etiological agent for oral cavity cancer in the age group less than 20 years of age especially seen in the developing world. Oral cavity cancers are commonly seen upto 70% of PHNSCC with tongue leading the group followed by gingiva. The rapid rate of cell turnover, high concentration of undifferentiated stem cells and exposure to carcinogens may be the possible reasons for tongue and gingiva to be the most common subsites [5]. The tendency to consider benign pathologies and the advanced stage of presentation may be a deterent to early diagnosis. The therapeutic modality most commonly employed happens to be surgery in 40% of cases. Oral cavity cancers are the highest in this age group and surgery is an essential component of the therapeutic armamentarium. Patients treated with surgery have excellent disease free survival and overall survival rates compared to other modalities like radiation alone or concurrent chemoradiation [6]. A possible selection bias might be that patients treated with surgery alone might have early stage tumors. A large SEER analysis concurs with the above reported outcomes. Brachytherapy as monotherapy or combined with external beam radiotherapy has been very rarely tried with no sufficient footprint to advocate in the PHNSCC. The 5 year disease free survival (DFS) rates for stage 1,2,3 were 86.6%, 78.5% and 40.8% respectively [4]. The treatment outcomes closely mimic that of adult counterparts. The cohort with Fanconis anemia had inferior OS that might be attributed to the Fanconi spectrum rather than due to the squamous head and neck tumors. Age less than 10 years, higher stage of disease, coexisting disease and the therapeutic modality used had a significant impact on OS on univariate analysis. Though there are inherent limitations to compilation of case reports and case series reported over varied period of time, it gives new directions for research and data compilation. Alterations in staging over a period of time results in stage migration that limits the practicality of application. Individual patient data analysis may provide like rare disease network may help in universal standardized reporting of rare diseases which may provide future directions for optimal treatment decisions and research [7].

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