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Head And Neck Cancer: An Epidemiological and Clinicopathological Profile in The Kumaon Region

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ABSTRACT
Head and neck cancer encompasses various cancer types affecting areas such as the oral cavity, oropharynx, nasopharynx, larynx, and others. In India, it poses a significant public health challenge, with notably higher incidence rates compared to several other countries. According to data from the National Cancer Registry Programme, Bengaluru, and Tata Memorial Centre, Mumbai, the age-adjusted incidence rates for head and neck cancer in India are 25.9 and 8.0 per 1 lakh for males and females, respectively, accounting for a substantial portion of all cancer cases, especially in males. Oral cavity carcinomas rank among the top three types of cancers in India. The aim here is to study the epidemiology and clinicopathological profile of head and neck cancers in the Kumaon region with the objectives to study epidemiology and identify the risk factors of head and neck cancer patients in the kumaon region and to study its clinicopathological profile therefore highlight the challenges faced by people in the kumaon region. A total of 103 patients with histopathologically proven head and neck cancer were analysed for demographic pattern, clinical presentation, their addiction history and the region of head and neck involved. The study found that majority of patients (59.22%) were aged 51-70 years, with a mean age of 59.78 years with males constituting 81.55% of the patients. Smoking (37.86%) and tobacco chewing (30.10%) were prevalent habits, with 32.04% engaging in both the genders. Difficulty in swallowing was the most common presenting complaint, affecting 56.31% of patients. Moderately differentiated SCC was the most common histopathological diagnosis across all age groups and both genders.

Key words: Head and neck cancer, histopathological type of lesion, region involved, addiction history, Kumaon region.

INTRODUCTION
Head and neck cancer encompasses various cancer types affecting areas such as the oral cavity, oropharynx, nasopharynx, larynx, and others. In India, it poses a significant public health challenge, with notably higher incidence rates compared to several other countries. According to data from the National Cancer Registry Programme, Bengaluru, and Tata Memorial Centre, Mumbai, the age-adjusted incidence rates for head and neck cancer in India are 25.9 and 8.0 per 1 lakh for males and females, respectively, accounting for a substantial portion of all cancer cases, especially in males.

Of particular concern in India are oral cavity carcinomas, which can develop anywhere in the oral cavity, including the soft tissues and jaw bones. These carcinomas rank among the top three types of cancers in India, with an age-adjusted rate of 20 per 1 lakh population, constituting over 30% of all cancer cases. Notably, oral cavity carcinomas are more prevalent in the lower socioeconomic strata of society in India.

In contrast, oral cavity carcinomas are relatively rare in the United States. However, it's essential to consider metastatic neoplasms in the oral cavity, especially in patients with a history of cancer.

Oral Squamous Cell Carcinoma (OSCC) poses a significant global public health challenge, particularly in India where it stands as one of the most prevalent cancers affecting both men and women, as highlighted in data from the National Cancer Registry Programme. The primary culprit behind this concerning trend is tobacco use, a major risk factor associated with oral cancers. Various forms of tobacco, including cigarettes, cigars, pipe tobacco, chewing tobacco (available in leaf or plug form), and snuff (powdered tobacco), when consumed over extended periods, greatly increase the likelihood of developing oral cancers. Additionally, cigarette smoking and alcohol consumption are identified as further contributing factors to the incidence of oral cancer. On a global scale, oral cancer ranks as the fourth most frequent type of neoplasm.

Even today, the reasons behind mouth cancer in young individuals remain unclear. Studies by Iype et al. (2001) and Schantz and Yu (2002) have found that a considerable number of cases of oral squamous cell carcinoma (OSCC) among young adults aren't linked to regular habits.

As Gupta and Ray (2003) have noted, the increasing use of smokeless tobacco and related products is a significant concern in our country. Their research revealed that male betel quid chewers in India had a risk of oral cancer between 1.8 to 5.8 times higher than the general population. They also observed a rise in oral submucous fibrosis due to processed areca nut products. Additionally, alcohol consumption, especially when paired with tobacco use, is recognized as a risk factor for oral cancer and addiction.

Research by Chiang et al. (2004) has indicated a strong link between chewing betel quid (BQ) and the development of oral cancer, oral submucous fibrosis, and oral leukoplakia.

An estimated 200 to 600 million people globally are known to chew betel quid (BQ). Studies have shown that moderate drinkers who smoke tobacco face a heightened risk of mouth cancer. Furthermore, heavy use of both tobacco and alcohol has been linked to a nearly forty-eightfold increase in oral cancer risk among young individuals. Research conducted by Rodriguez and colleagues in 2004 revealed that dietary factors, such as consuming green vegetables, fresh fruits, and beta-carotene, have a beneficial impact on the upper digestive tract in cancer patients. They found that approximately 52% of their study group had a low intake of vegetables, 12% had a low intake of fruits, and 26% had a low intake of beta-carotene, contributing to the estimated population attributable risks.

Oral cancer is a critical area of research due to its increasing prevalence and the necessity for effective treatments. Studies indicate that Epidermal Growth Factor Receptors (EGFR) and ErbB2 (HER2/neu) significantly contribute to the progression of oral cancer (Sun et al., 2008). These receptors are key players in cell signaling pathways that control cell growth, survival, and differentiation. Their overexpression or mutation can lead to unchecked cell proliferation, aiding in cancer development.

Research by Sherin et al. (2008) discovered that young adults in Calicut, India, experience a notably higher incidence of oral cancer than the general population. This concerning trend emphasizes the need for focused public health initiatives in this area. The study also found that the epidermis is the most frequently affected site in oral cancer patients. Notably, many cases lacked any known risk factors, suggesting the presence of other, yet unidentified, contributing factors.

These insights highlight the complex nature of oral cancer's causes and the need for more research to uncover additional risk factors and mechanisms. Understanding the involvement of EGFR and ErbB2 in oral cancer could lead to new targeted treatments that inhibit these receptors, potentially enhancing patient outcomes. Furthermore, public health strategies should prioritize early detection and prevention, especially in high-risk groups such as young adults in Calicut.

Blood group antigens are another important factor in the development of oral cancer. A 1967 article by Hakomori et al. reported that the outer parts of cell-surface glycoproteins and glycolipids commonly contain carbohydrate structures associated with the ABO and Lewis blood group antigens. Initially, these antigens were thought to be found exclusively on erythrocytes.

However, it has now been found that these antigens are also present on other cells, mainly epithelial and endothelial cells (Hartmann, 1941; Szulman, 1960). Many of the changes associated with tumors are linked to these antigens and their structural precursors. These antigens were first described in 1930 by Thomson and his colleagues, and later, Hakomori conducted extensive research and reviewed numerous studies on this topic in 1985 and 1999.

Human papillomavirus (HPV) is another major risk factor linked to oral cancer. Research by Li et al. (1992) and Zhang et al. (1999) suggests that investigating the role of HPV in oral cancer is crucial in the study of oral malignancies. Fregonesi et al. (2003) found that high-risk strains like HPV 16/18 are associated with a high likelihood of malignant development. However, the role of this strain needs further understanding before definitive conclusions can be made.

HPV infection is a significant risk factor for some head and neck squamous cell carcinomas (HNSCC), but the connection between HPV and oral cavity squamous cell carcinomas (OCSCC) remains controversial. Most studies have not found a significant association between HPV and OCSCC, despite an overall prevalence of 6% for HPV-positive OCSCC.

According to research by Depue (1986) and Franchesci et al. (1994), the incidence of head and neck cancer, especially tongue cancer, is rising among young adults in North America. Retrospective studies from the late 1980s helped bring awareness of this trend to the international community.

The incidence of head and neck cancers varies across different races and geographic areas. Excessive tobacco and alcohol consumption are the primary known risk factors. The connection between these factors and head and neck cancers highlights the potential for prevention and control through early detection. Squamous cell carcinoma constitutes the majority of epithelial-origin head and neck cancers.

Managing head and neck cancer requires a multidisciplinary approach involving medical oncologists, radiation oncologists, head and neck surgeons, radiologists, speech therapists, social workers, psychologists, and plastic or reconstructive surgeons. However, challenges such as socioeconomic constraints, a large patient population, a shortage of trained healthcare workers, and inadequate infrastructure are significant hurdles in cancer management.

METHOD

An observational cross-sectional study was conducted over 18 months following IEC approval at the Department of ENT and Head & Neck Surgery, Dr. Susheela Tiwari Government Hospital and Government Medical College, Haldwani. Using purposive sampling the present study was conducted on 103 patients presenting with histopathologically proven head and neck cancer in the ENT-head and neck surgery department. It was conducted to study the epidemiology and clinicopathological profile of head and neck cancers in the Kumaon region. Patients' histories were collected using a pre-structured proforma, and informed consent was obtained. These patients were seen in the outpatient and emergency units of the hospital. Detailed clinical examinations, along with relevant radiological investigations were performed.

FINDINGS

Table 1: Age wise distribution of patients

Age group (Years)	Frequency (n)	Percentage (%)
≤30	0	0.00
31 – 50	23	22.33
51 – 70	61	59.22
71 – 90	19	18.45
Mean ± SD	59.78 ± 12.12	
Range	34 – 85	

Maximum number of patients were in the age group of 51 – 70 years (59.22%). The mean age of the patients was 59.78 ± 12.12 years and patients' age ranged from 34 – 85 years.

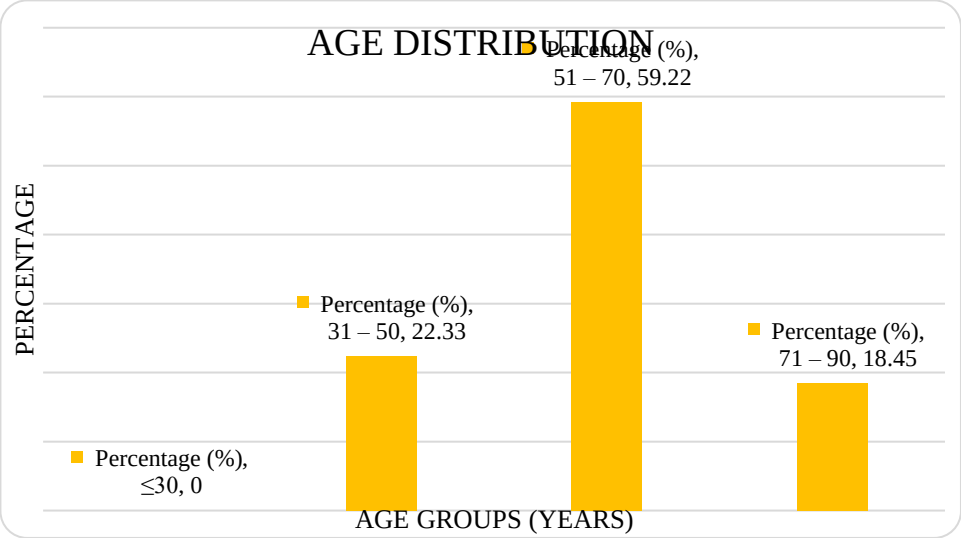


Table 2: Gender distribution of patients

Gender	Frequency (n)	Percentage (%)
Male	84	81.55
Female	19	18.45
Total	103	100

Males were more in number (81.55%) as compared to females (18.45%) among the studied patients with head and neck cancer.

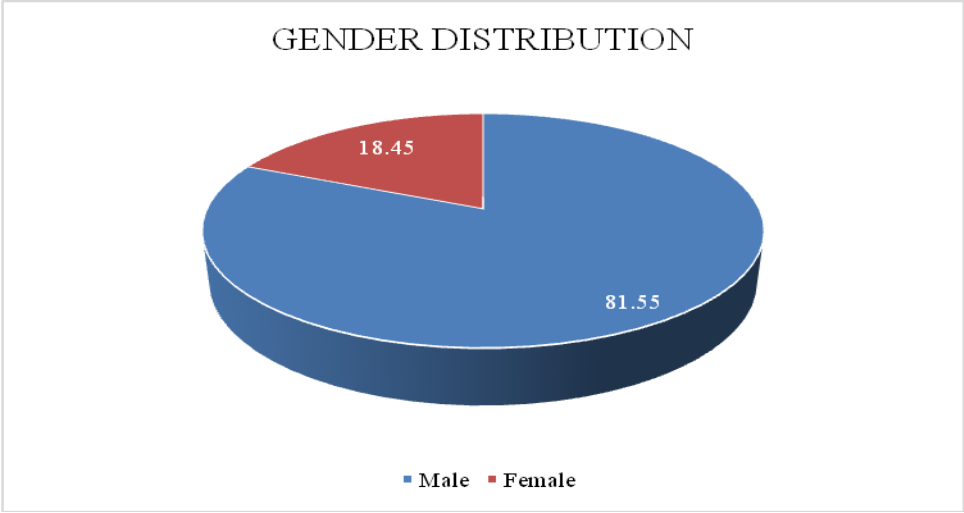


Table 3: Presenting complaints of the patients

Presenting complaints	Frequency (n) *	Percentage (%)
Difficulty in swallowing	58	56.31
Difficulty in swallowing and chewing	26	25.24
Change in voice	45	43.69
Restricted mouth opening and tongue movement	31	30.10
Difficulty in breathing	22	21.36
Neck swelling	24	23.30
Lesion in the oral cavity	4	3.88
Ulcer in the oral cavity	14	13.59
Foreign body sensation	6	5.82
Nasal obstruction with nasal bleed	1	0.97

* Multiple response

The most common presenting complaint among the patients was difficulty in swallowing (56.31%) followed by change in voice (43.69%) and restricted mouth opening and tongue movement (30.10%). 1 patient presented with nasal obstruction and nasal bleed.

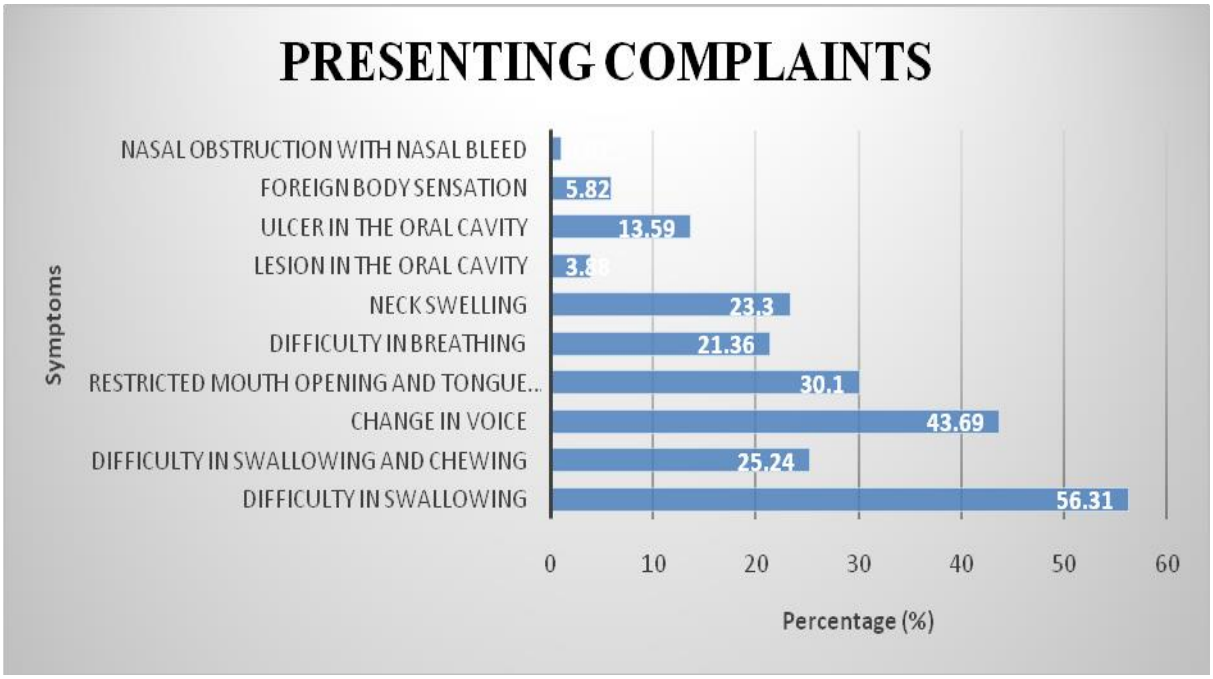


Table 4: Addictions among the patients

Addictions	Frequency (n)	Percentage (%)
Smoking	39	37.86
Tobacco chewing	31	30.10
Both	33	32.04
Type of tobacco (n = 64)		
Paan	15	23.44
Surti	49	76.56
Total	103	100

37.86% of the studied patients were smokers, 30.1% were tobacco chewer and 32.04% patients had habit of both smoking and tobacco chewing.

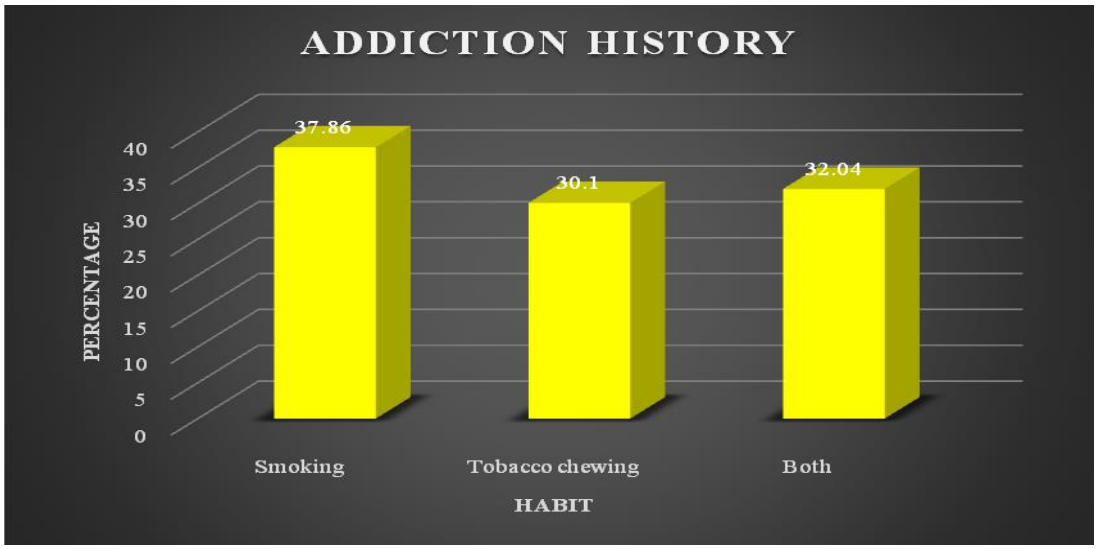


Table 5: Findings on examination of oral cavity and neckof patients

Examination findings	Frequency (n) *	Percentage (%)
Proliferative growth	47	45.63
Infiltrative growth	11	10.68
Ulcerative growth	17	16.50
Ulceroproliferative growth	27	26.21
Nasopharyngeal mass	1	0.97
Neck nodes	26	25.24

* Multiple response

The most frequent finding was proliferative growth (45.63%) followed by the findings of ulceroproliferative growth (26.21%) and ulcerative growth (16.50%). 1 patient had nasopharyngeal mass. 25.24% patients had neck nodes.

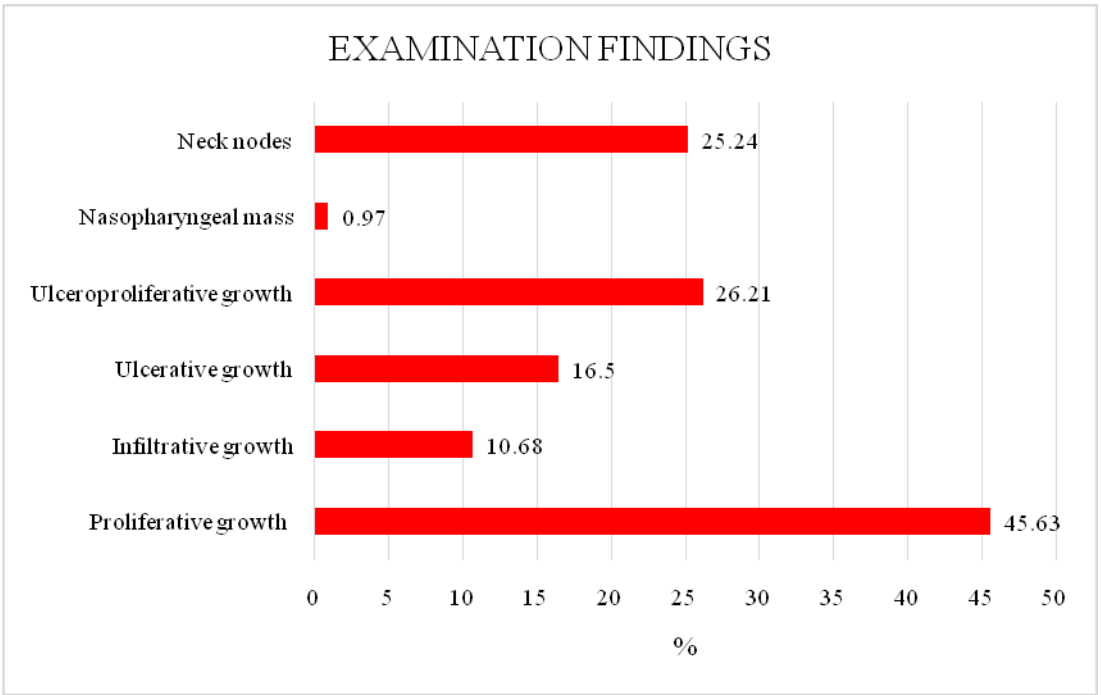


Table 6: Regions involved in patients

Region	Frequency	Percentage (%)
Glottic	2	1.94
Hypopharynx	17	16.50
Nasopharynx	1	0.97
Oral cavity	47	45.63
Oropharynx	10	9.71
Supraglottis	26	25.24
TOTAL	**103**	**100**

Among the studies patients, the most common site of lesion was oral cavity (in 45.63% cases). 25.24% cases had lesion in the supraglottis, 16.50% had lesion in hypopharynx and 9.71% had lesion in oropharynx.

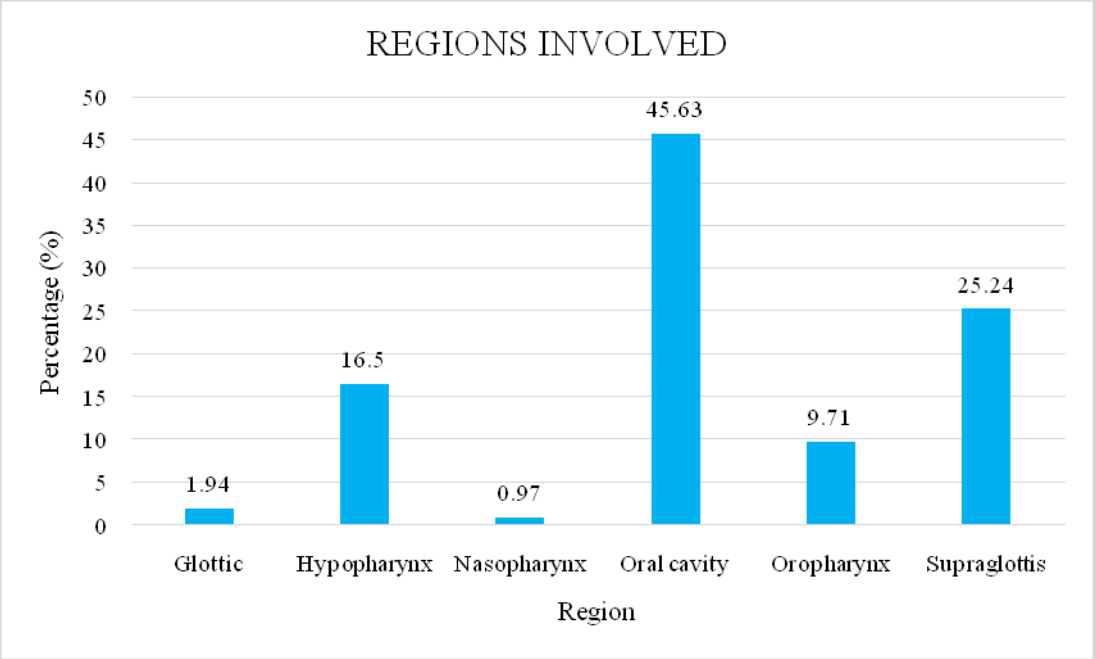


Table 7: Age wise distribution of region involved

Age group (years)	Site					
	Glottic n (%)	**Hypopharynx n (%)**	**Nasopharynx n (%)**	**Oral cavity n (%)**	**Oropharynx n (%)**	**Supraglottis n (%)**
31 – 50	0 (0.00)	2 (8.70)	0 (0.00)	19 (82.60)	0 (0.00)	2 (8.70)
51 – 70	1 (1.64)	10 (16.39)	1 (1.64)	23 (37.70)	7 (11.48)	19 (31.15)
71 – 90	1 (5.26)	5 (26.32)	0 (0.00)	5 (26.32)	3 (15.79)	5 (26.32)

The most common region involved in the age group of 31 – 50 and 51 – 70 years was oral cavity while in the age group of71 – 90 years, no involvement of nasopharyngeal region was observed.

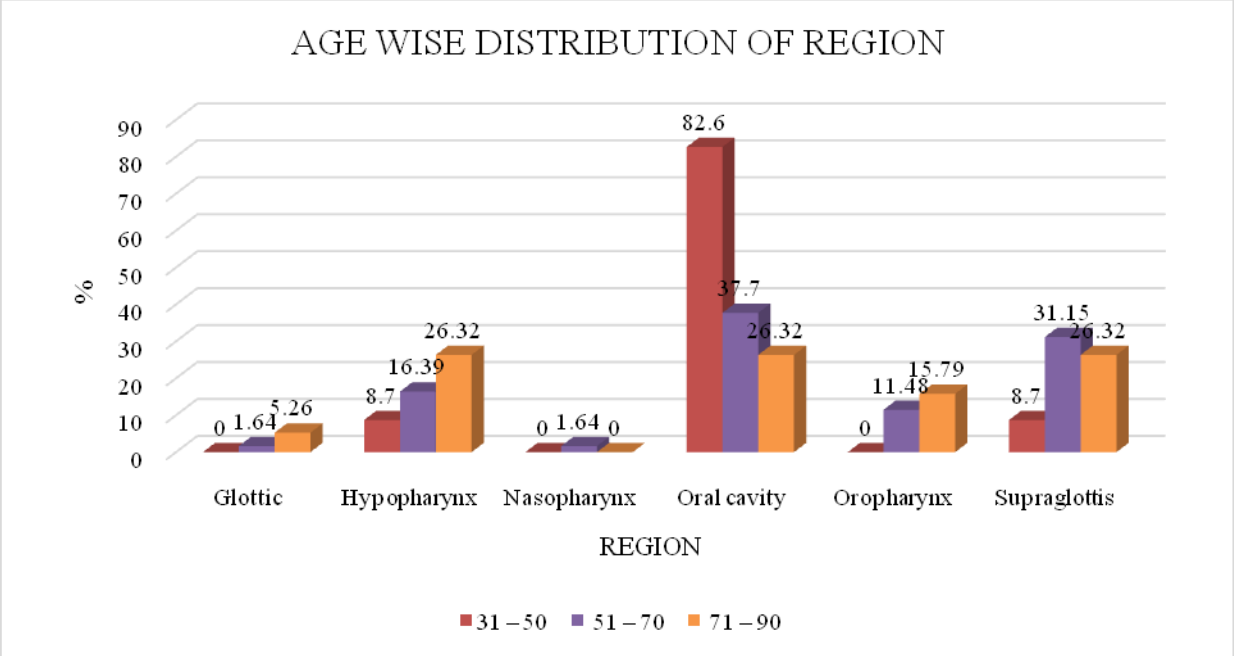


Table 8: Gender wise distribution of region involved

Gender	Site					
	Glottic n (%)	**Hypopharynx n (%)**	**Nasopharynx n (%)**	**Oral cavity n (%)**	**Oropharynx n (%)**	**Supraglottis n (%)**
Male	2 (2.38)	17 (20.24)	1 (1.19)	35 (41.67)	9 (10.71)	20 (23.81)
Female	0 (0.00)	0 (0.00)	0 (0.00)	12 (63.16)	1 (5.26)	6 (31.58)

Both among the males and females, the most common region involved was oral cavity.

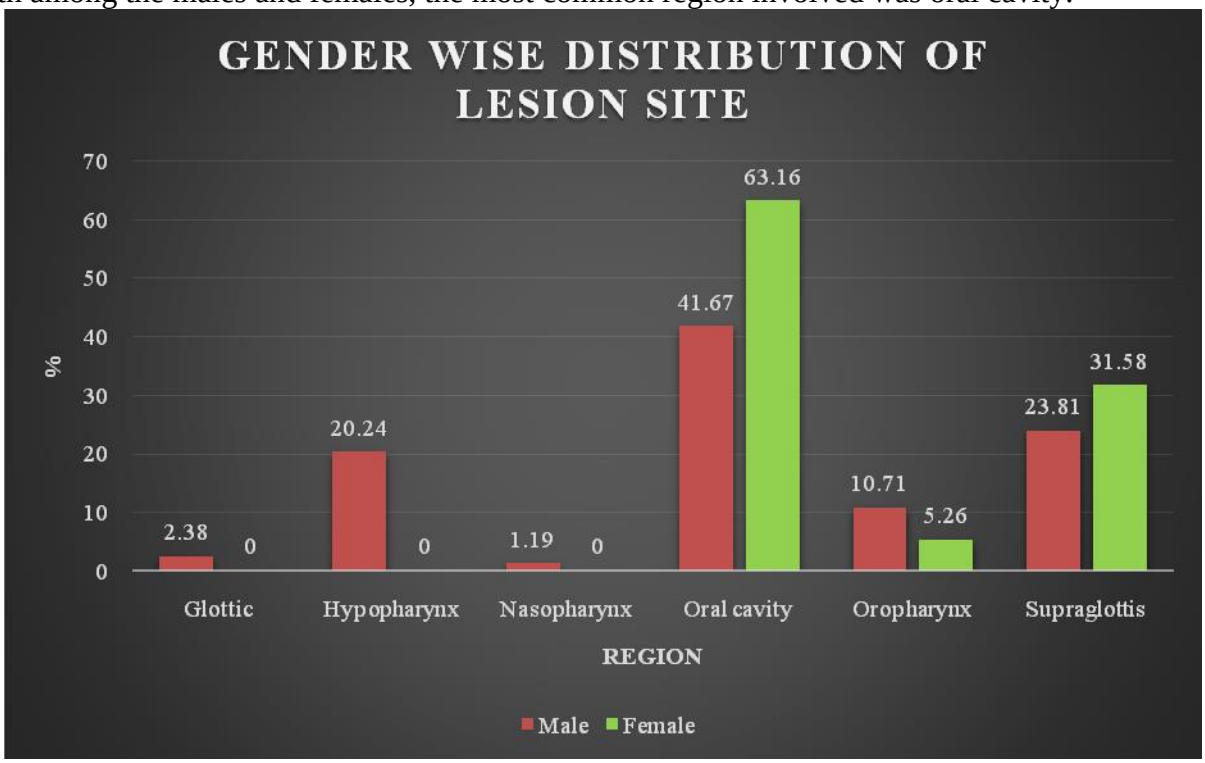


Table 9: Histopathological diagnosis of lesions

Histopathological diagnosis	Frequency (n)	Percentage (%)
Well differentiated SCC	1	0.97
Moderately differentiated SCC	87	84.47
Poorly differentiated SCC	15	14.56
Total	103	100

100% of the studied patients had Squamous cell carcinoma. On histopathological examination of lesions, 84.47% patients were found to have moderately differentiated SCC while 14.56% patients had poorly differentiated SCC.

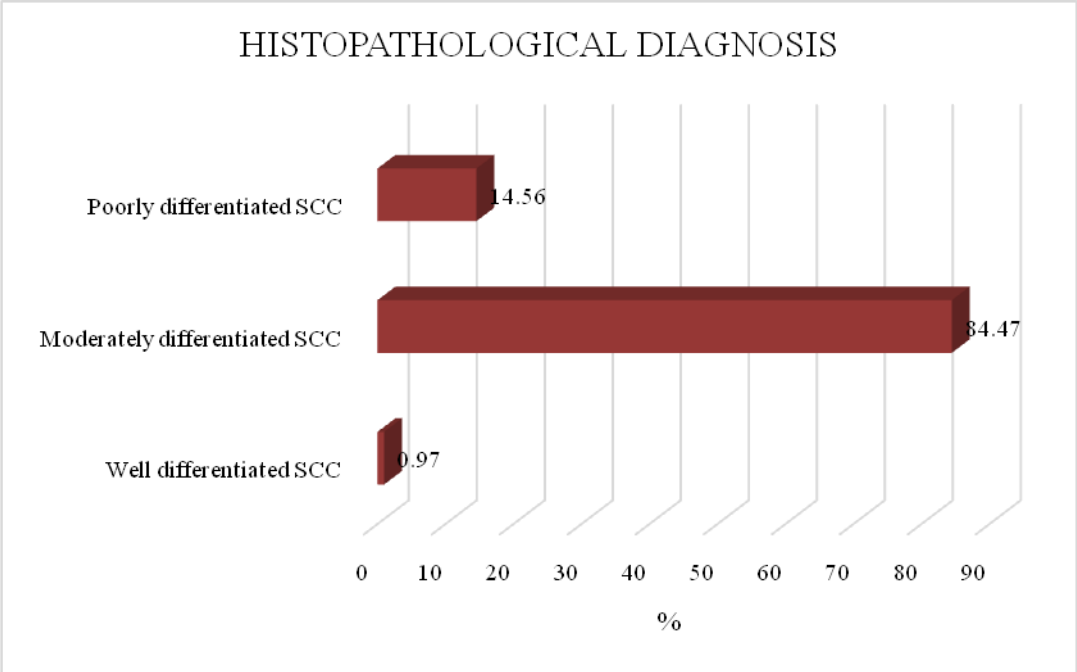


Table 10: Age wise distribution of Histopathological diagnosis

Age group (years)	Histopathological diagnosis		
	Well differentiated SCC n (%)	Moderately differentiated SCC n (%)	Poorly differentiated SCC n (%)
31 – 50	1 (4.35)	22 (95.65)	0 (0.00)
51 – 70	0 (0.00)	54 (88.52)	7 (11.48)
71 – 90	0 (0.00)	11 (57.89)	8 (42.11)

In all the age groups, moderately differentiated SCC was more common.

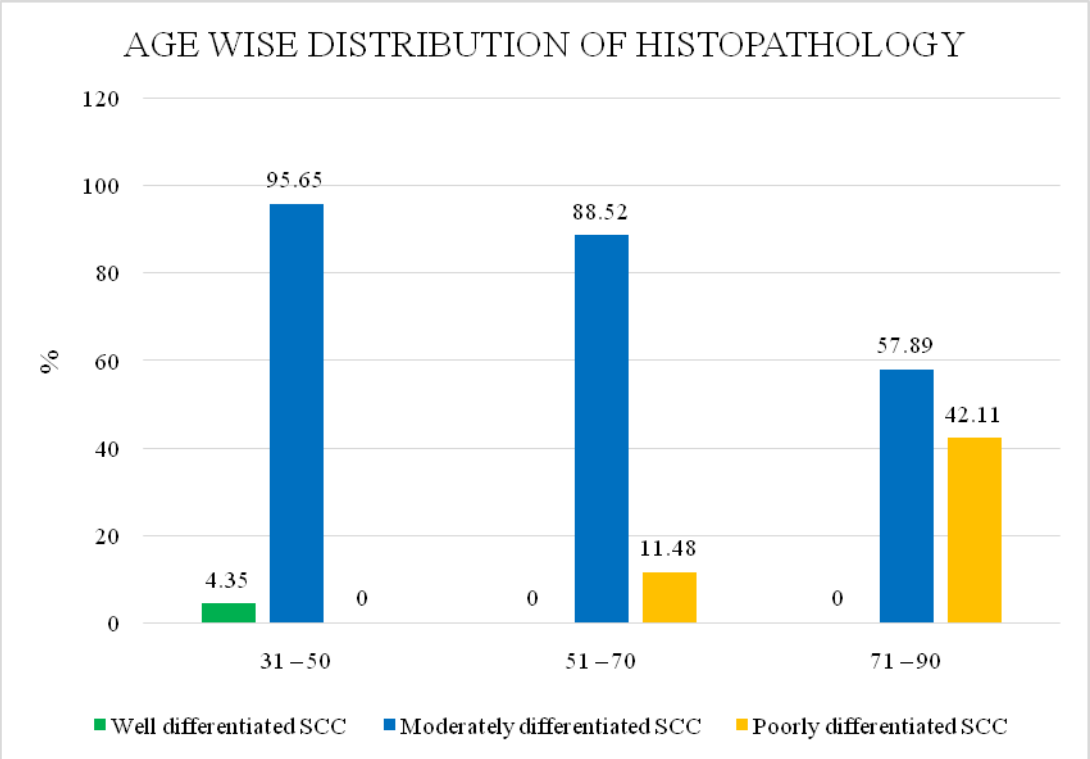
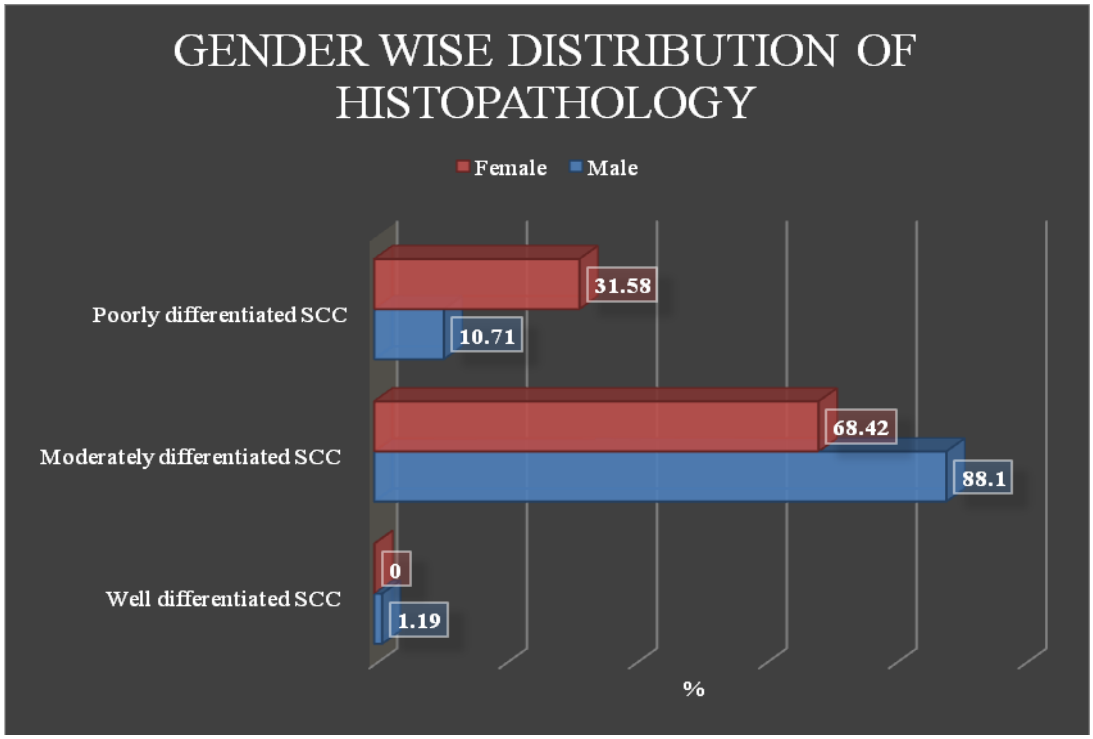


Table 11: Gender wise distribution of Histopathological diagnosis

Gender	Histopathological diagnosis		
	Well differentiated SCC n (%)	**Moderately differentiated SCC n (%)**	**Poorly differentiated SCC n (%)**
Male	1 (1.19)	74 (88.10)	9 (10.71)
Female	0 (0.00)	13 (68.42)	6 (31.58)

Both among males and females, moderately differentiated carcinoma was most frequent.



DISCUSSION

In our study, age is a significant factor in the incidence, progression, and prognosis of head and neck cancers. Maximum number of patients were in the age group of 51 – 70 years (59.22%) followed by the 31-50 years and 71-90 years. The mean age of the patients was 59.78 ± 12.12 years and patients' age ranged from 34 – 85 years. Similar findings were seen in a study by **Kukreja et al.(20)** Where maximum no. Of patients were from the age group of 51-70 years (61.7%) followed by 31-50 age group (28.7%). a study by **Chauhan et al (21)** also had same finding with maximum no. (75.1%) of participants of the study were from the > 50 years.(21)

Several studies have explored the gender disparity in HNC incidence, attributing it to a combination of behavioral, biological, and socio-environmental factors. The current finding that males were more prevalent (81.55%) compared to females (18.45%) among patients with head and neck cancer (HNC) is consistent with existing literature.

Study done by **Kukreja et al (20)** had 89% males and 11% females with a Male:Female ratio—8.4:1.0. These findings were similar to our study. An another study by **Ganesh R et al**.**(22)**Also showed similar trend with higher incidence rate among males(68%) as compared to female (32%).(22)

Our study highlights the diverse symptomatology of head and neck cancer, emphasizing the need for thorough clinical evaluation. The analysis of presenting symptoms among head and neck cancer patients reveals that difficulty in swallowing (56.31%) and changes in voice (43.69%) are the most common complaints, underscoring the prominence of lymph node involvement and mechanical obstruction in these cancers. Significant portions of patients also reported restricted mouth opening and tongue movement (30.10%), which are often associated with laryngeal and oral cavity tumors, respectively. Other notable symptoms include difficulty in swallowing and chewing (25.24%), swelling in the neck(23.3%), difficulty in breathing (21.36%), and oral cavity ulcers (13.59%). Less frequent but clinically relevant symptoms include foreign body sensation (5.82%) and nasal obstruction with nasal bleed (0.97%). study by **Kukreja et al(20)** showed similar results with the most common presenting complaint was difficulty in swallowing (53 cases; 56.3%) followed by change in voice (22 cases; 23.4%). **Bhagat S. et al (23)** showed that difficulty in swallowing, neck swelling and throat pain were commonest symptoms among patients suffering from tumors of hypopharynx.

The findings in our study underscore the critical role of tobacco and smoking habits in the etiology of head and neck cancers. The analysis of addictions among head and neck cancer in our study indicates a high prevalence of substance use linked to the disease. Smoking was reported by 37.86% of patients, while 30.10% engaged in tobacco chewing. Notably, 32.04% of patients used both smoking and chewing tobacco, reflecting combined exposure to these risk factors. Among those who used tobacco (n = 64), 23.44% consumed paan, and a significant majority (76.56%) used surti. Findings in the study by **kukreja et al(20)** showed 88.2% patients having the history of smoking and 42.5% patients with smoking and alcohol. A study by **chauhan R et al (24)** observed the similar pattern of tobacco use. It showed that 52.20% of the patients used smokeless tobacco, 12.80% smoked, and 19.40% used both smokeless and smoking tobacco.

The examination findings among head and neck cancer patients highlight various types of tumor growth and the involvement of neck nodes. Proliferative growth was the most common finding, observed in 45.63% of patients, followed by ulceroproliferative growth in 26.21% of cases. Ulcerative growth was noted in 16.50% of patients, while infiltrative growth was seen in 10.68%. A small proportion (0.97%) had a nasopharyngeal mass. Additionally, neck node involvement was present in 25.24% of patients, indicating regional metastasis. Study done by **Phookan et al (25)** shows majority of cases having ulcerative growth followed by ulcero-proliferative growth followed by proliferative

growth. And another study conducted by **puthukudy PA et al. (26)** observed majority of cases with ulceroproliferative growth (34.6%) followed by proliferative growth (30.8%).

The oral cavity has the highest frequency with 47 cases, representing 45.63% of the total. This is followed by the supraglottis with 26 cases (25.24%), and the hypopharynx with 17 cases (16.50%). The oropharynx has 10 cases (9.71%), the glottic region has 2 cases (1.94%), and the nasopharynx has the lowest frequency with 1 case (0.97%). on contrary, in a study by **kukreja et al (20)** maximum no. Of case were from oropharynx(51%) followed by hypopharynx (45.7%). A study by **Kim et al (27)** also observed that apart from larynx ; maximum cases were from oral cavity(16.5%) followed by oropharynx (10%) and hypopharynx (9%)respectively.
The age-wise distribution of regions involved shows varying patterns across different age groups. For the 31-50 age group, the oral cavity is the most affected site, with 19 cases (82.60%), while hypopharynx and supraglottis each have 2 cases (8.70%), and no cases are reported for glottic, nasopharynx, or oropharynx. In the 51-70 age group, the oral cavity remains the most common site with 23 cases (37.70%), followed by the supraglottis with 19 cases (31.15%), hypopharynx with 10 cases (16.39%), oropharynx with 7 cases (11.48%), and glottic and nasopharynx each with 1 case (1.64%). For the 71-90 age group, the distribution is more even, with the hypopharynx, oral cavity, and supraglottis each having 5 cases (26.32%), the oropharynx with 3 cases (15.79%), and the glottic region with 1 case (5.26%), while no cases are reported for the nasopharynx.. A Study by **Bhurgri et al (28)** observed in his study that approximately 30% of oral cancer cases, 28.6% of nasopharyngeal cancer cases, 6.3% of oropharyngeal cancer cases, and 2.6% of laryngeal cancer cases occurred in patients aged 40 years and younger. In contrast, 23% of oral cancer cases, 1% of nasopharyngeal cancer cases, 43.5% of oropharyngeal cancer cases, 35.9% of hypopharyngeal cancer cases, and 22.3% of laryngeal cancer cases occurred in patients aged 65 years and older. Another Study by **Bhattacharjee et al (29)** observed that oral cavity, oropharynx, Hypopharynx were maximum among 50-59 years of age group.

The gender-wise distribution of sites involved reveals significant differences between males and females. Among males, the most commonly affected site is the oral cavity with 35 cases (41.67%), followed by the supraglottis with 20 cases (23.81%) and the hypopharynx with 17 cases (20.24%). The oropharynx and glottic regions have 9 cases (10.71%) and 2 cases (2.38%) respectively, while the nasopharynx has the least with 1 case (1.19%). In contrast, among females, the oral cavity is also the most affected site with 12 cases (63.16%), followed by the supraglottis with 6 cases (31.58%) and the oropharynx with 1 case (5.26%). No cases are reported for the glottic, hypopharynx, and nasopharynx regions in females. Study by **Chauhan et al (21)** showed the maximum cases among males (60.85%) and females (37.74 %) having the oral cavity as a common site for head & neck cancer. Study by **Srivastava et al**(30) also showed somewhat similar results with oral cavity as a most common site among females and larynx followed by oral cavity in males.

The histopathological diagnosis data shows that the majority of cases are moderately differentiated squamous cell carcinoma (SCC), with 87 cases making up 84.47% of the total. Poorly differentiated SCC accounts for 15 cases (14.56%), while well-differentiated SCC is less only 1 case (0.97%). Overall, 103 cases were analyzed, with moderately differentiated SCC being the predominant type. A study by **Bakyalakshmi et al** (31)observed results contrary to our study, showing maximum cases (44.8%) with well differentiated SCC. Similar results were seen in the study by**Rahman et al. (32)** with 70.73 % cases belonging to well differentiated grade, followed by poorly differentiated & undifeerentiated respectively.

The age group distribution for histopathological diagnoses of squamous cell carcinoma (SCC) reveals distinct patterns. Among individuals aged 31-50, the majority have moderately differentiated SCC, with 22 cases (95.65%), and only 1 case (4.35%) of well-differentiated SCC, while no cases of poorly

differentiated SCC are reported. For the 51-70 age group, moderately differentiated SCC remains prevalent with 54 cases (88.52%), and there are 7 cases (11.48%) of poorly differentiated SCC, with no cases of well-differentiated SCC. In the 71-90 age group, moderately differentiated SCC is still the most common but at a lower percentage, with 11 cases (57.89%), and poorly differentiated SCC is more frequent in this group with 8 cases (42.11%), while no well-differentiated SCC cases are observed. In the study done by **Mehrotra et al** (33), age group of 40-49 years majority were well differentiated . whereas among age group of 50-59 years & 60-69 years, well differentiated and moderately well differentiated cases were in equal proportion.

The gender-wise distribution for histopathological diagnoses of squamous cell carcinoma (SCC) indicates differences between males and females. Among males, the majority of cases are moderately differentiated SCC, with 74 cases (88.10%), followed by poorly differentiated SCC with 9 cases (10.71%), and a single case (1.19%) of well-differentiated SCC. In contrast, among females, moderately differentiated SCC is still the most common but less prevalent than in males, with 13 cases (68.42%). Poorly differentiated SCC is relatively higher in females, with 6 cases (31.58%), and there are no cases of well-differentiated SCC reported in females. A study by **Tavares et al (34)** in males majority of cases were anaplastic (23.46 %) followed by poorly differentiated (12.55%) and well differentiated SCC (8.23%) respectively which was different from our result. A study by **Mehrotra et al (33)** observed that majority of cases among males were moderately differentiated followed by well differentiated SCC cases. Similar trend was seen among female patients. Which is in line with findings of our study.

CONCLUSION

This observational cross-sectional study was conducted over 18 months following IEC approval at the ENT department of Dr. Susheela Tiwari Government Hospital and GMC Haldwani. Using purposive sampling the present study was conducted on 103 patients presenting with histopathologically proven head and neck cancer in the ENT-head and neck department.It was conducted to study the epidemiology and clinicopathological profile of head and neck cancers in the Kumaon region. Patients' histories were collected using a pre-structured proforma, and informed consent was obtained. These patients were seen in the outpatient and emergency units of the hospital. Detailed clinical examinations, along with relevant radiological investigations were performed.

The following conclusions were drawn from the study:

1. This study analysed 103 head and neck cancer patients, focusing on their age, gender, presenting complaints, addictions, examination findings, affected regions, and histopathological diagnoses.
2. The majority of patients (59.22%) were aged 51-70 years, with a mean age of 59.78 years.
3. Males constituted 81.55% of the patients, indicating a significant gender disparity.
4. Difficulty in swallowing was the most common presenting complaint, affecting 56.31% of patients.
5. Smoking (37.86%) and tobacco chewing (30.10%) were prevalent habits, with 32.04% engaging in both.
6. Proliferative growth was the most frequent finding on examination, observed in 45.63% of patients.
7. The oral cavity was the most common site of lesions, involved in 45.63% of cases.
8. The oral cavity was the most frequently affected region in patients aged 31-50 and 51-70 years.
9. Both males and females had the highest lesion involvement in the oral cavity.
10. All patients were diagnosed with squamous cell carcinoma, with 84.47% having moderately differentiated SCC.
11. Moderately differentiated SCC was the most common histopathological diagnosis across all age groups and both genders.

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