NON-SMOKING NON-DRINKING ORAL SQUAMOUS CELL CARCINOMA PATIENTS: A CLINICALLY SIGNIFICANT GROUP

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Introduction Carcinogenesis of oral squamous cell carcinoma (OSCC) has long been known to be associated with risk factors such as cigarette smoking and alcohol consumption. Some centres have reported that non-smoking non-drinking (NSND) patients may represent a significant and increasing proportion of OSCC cases with reports of poorer outcomes.[1,2]

Objectives To quantify by retrospective analysis the recorded tobacco and alcohol status of a sample of OSCC population presenting within Queen Elizabeth University Hospital between 2015 to 2018.

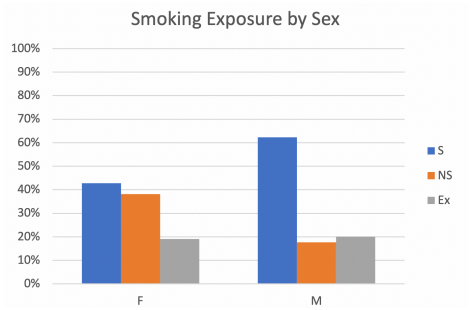

Figure 1. Smoking exposure by sex

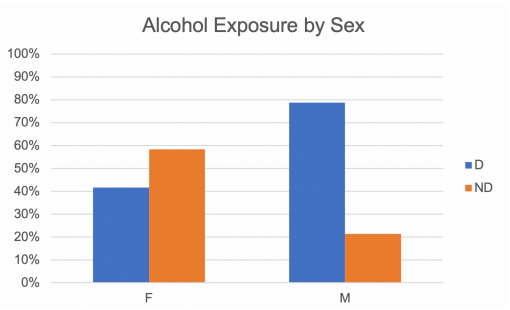

Figure 3. Alcohol exposure by sex

Methods; Our centre treats around 680 new head and neck cancers per annum (all sites). A retrospective analysis of 412 patients with OSCC at the Department of Maxillofacial Surgery treated by the South WoSCAN team between January 2015 to December 2018 was carried out. Electronic clinical notes were accessed and demographic and disease related data recorded. Patients were then categorised according to exposure to smoking and alcohol with non-smoker (NS) status being defined as < 5 cigarettes/week with no previous or regular history of tobacco use greater than this. Non-drinker (ND) status was defined as < 3 standard drinks/week with no previous or regular history of alcohol consumption greater than this.[1] Those patients with a previous history of smoking were recorded as ex-smoker (Ex). TNM8 staging data was recorded along with an International Classification of Disease (ICD-10) subsite, one year survival (1YS) data and age at diagnosis.

Results A total of 85 patients (21%) were identified as lifelong NSND, of which 59 (69%) were female, from a cohort of 412 patients (244 male and 168 female). ND were 98 women (58%) vs 52 men (21%). NS women were 64(38%) compared to 43 men (18%). Mean age at diagnosis was 66.2 years for all patients; 71.6 years for NSND females and 62.5 years for SD females. One year Overall Survival was 64% for NSND compared to 75% for SD female patients.

Demographic	S	NS	Ex	Total
Female	72	64	32	168
D	53	5	12	70
ND	19	59	20	98
Male	152	43	49	244
D	139	17	36	192
ND	13	26	13	52
Total	224	107	81	412

Figure 2. Smoking and drinking status by sex

	Mean age at diagnosis		
Demographics	**S**	**NS**	**Ex**
Female	64.9	71.8	72.7
D	62.5	74.6	66.6
ND	71.7	71.6	76.4
Male	62.9	65.8	66.7
D	62.9	68.1	65.8
ND	62.9	64.3	69.3
Total	**63.5**	**69.4**	**69.1**

Figure 4. Mean age at diagnosis by sex and risk factor status

Conclusions

- These data suggest that NSND patients comprise a significant proportion of our OSCC patients (21%) with a higher rate in women (35%).
- Most women diagnosed with OSCC are ND (58%).
- NSND female patients were observed to be older.
- NSND females have worse OS after one year compared to SD females.

The results of our study show changes in risk factor status in our OSCC population from historic cohorts. This is similar to data reported in Western populations worldwide showing 15-35% NSND status in OSCC.[1,2]

Other as yet unrecognised factors may be responsible for this change.

Conflicts of Interest We have no conflicts of interest.

References

1.K. Koo, R. Barrowman, M. McCullough, T. Iseli, D. Wiesenfeld. Non-smoking non-drinking elderly females: a clinically distinct subgroup of oral squamous cell carcinoma patients Int J Oral Maxillofac Surg, 42 (2013), pp. 929-933.

***2.** A. DeAngelis, et al. Non-smoking, non-drinking elderly females, a 5-year follow-up of a clinically distinct cohort of oral squamous cell carcinoma patients. Oral oncology, 86 (2018): 113-120.*

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