ORAL CANCER: PUBLIC ATTITUDES AND AWARENESS IN BARROW-IN-FURNESS

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KEY MESSAGES FOR ORAL CANCER PREVENTION

Do not smoke
Keep within recommended guidelines for alcohol consumption
Avoid betel and tobacco use
Avoid excessive exposure to sunlight to prevent lip cancer
Investigate white and red patches of oral mucosa
Have regular mouth check ups with your dentist
Seek immediate professional advice on discovering any lumps or ulcers persisting over two weeks.

Possible carcinogens

tobacco
alcohol
areca
nut (betel)

Sunlight (lip only)

Infections

syphilis
candidosis
viruses

Mucosal diseases

dysplastic lesions
lichen planus
oral submucous fibrosis

Genetic disorders (rare)

dyskeratosis congenita
Fanconi's anaemia

Table 2 Possible aetiological factors for oral cancer Cawson & Odell 1998

squamous cell carcinomas. For these cancers the major aetiological factors are tobacco and excess alcohol use⁽³⁾.

The effects of tobacco on the mouth depend on the way it is used⁽⁴⁾, and this varies in different countries. In westernised countries, cigarette smoking predominates and pipe smoking has declined. In some countries, notably in India, the southern states of the USA and Sweden, tobacco chewing or snuff dipping (unsmoked tobacco held in the mouth for prolonged periods) is a popular habit.

Alcohol consumption has risen steadily in Britain⁽⁵⁾, particularly in the past half-century when oral cancer was declining. There is, however, good epidemiological evidence to link alcohol intake with oral carcinoma, and in the Bhas Rhin region of France, alcohol is held to be responsible for the highest oropharyngeal cancer incidence in Europe.

It is generally considered that the combination of smoking and drinking is the most important aetiological factor for mouth cancer⁽⁵⁾. The low incidence of oral cancer among Mormons and Seventh Day Adventists, who neither drink nor smoke, supports this idea.

The disease is largely preventable⁽⁵⁾. Earlier diagnosis increases the patient's chance of survival because the mouth is very accessible for examination by oneself or others. But there is poor public awareness of the signs and symptoms of oral malignant and premalignant lesions.

MATERIALS AND METHODS

This study was designed to assess the awareness of adults over the age of 16 in the town of Barrow-in-Furness in Cumbria. Since the decline of ship-building in the area, Barrow has seen one of the highest unemployment rates in the country, reflected in the socio-economic status of the population.

The research questionnaire was piloted on a number of individuals prior to full distribution. The interviews consisted of ten questions and all respondents were informed of the confidentiality of the questionnaire and names were not

INTRODUCTION

The British Dental Association has adopted a definition of oral cancer as cancer of the lip, tongue, gingivae, all the oral mucosa, oropharynx and hypopharynx, but not cancers of the major salivary glands and nasopharynx.

There are currently 2800 new oral cancer cases a year in the United Kingdom and about 1600 deaths. More than 80% of cancers in these sites occur in people over forty-five years of age⁽¹⁾. There is, however, an increasing incidence of, and mortality from, tongue cancer in younger age groups in a number of western European countries including the United Kingdom⁽²⁾. Oral cancer occurs more commonly in men, possibly because of the differences in risk habits. The problem is not that the number of new oral cancer cases is static or rising as people continue to put themselves at risk through smoking and excessive drinking. A greater challenge is that oral cancers are not being found early enough for successful treatment. In England and Wales there were 2766 new cancer cases in 1990, and 1307 oral cancer deaths five years later in 1995, giving a 1990-1995 ratio of deaths to cases of 0.47.

Treatment of many cancers is showing impressive improvement in survival but oral cancer continues to have stubbornly high death rates.

Significant or speculative risk factors for oral squamous cell carcinoma are summarised in Table 2.

The vast majority of malignant neoplasms in the mouth are

Site	Registrations 1992	Deaths 1997	D:R ratio
Oral	2988	1386	0.46
Skin	4151	1378	0.33
Breast	31843	11980	0.38
Cervix uteri	3400	1225	0.36

Table 1 Registrations and deaths for various cancer sites, England and Wales BDA April 2000

asked. The questions were asked in a specific order so as not to influence the subsequent answers. Gender, age, smoking and drinking habits were noted to assess any variations in attitudes and awareness. The respondents were patients and their escorts, mainly at Abbey Road clinic in Barrow. This is a large clinic in the centre of the town containing a community dental clinic, physiotherapy clinic and chiropody clinic.

The first question was used to assess knowledge of the existence of various cancers in skin, prostate, oral, cervical, colon and lung tissue. A fictitious 'pelvic cancer' was added.

The next question concerned oral cancer only. Respondents were asked to tick items they thought might be linked to oral cancer. The list included smoking, exhaust fumes, sunlight, dental fillings, sexual intercourse, alcohol, a high fat diet or none of the above.

The third question was used to assess respondents' knowledge of people who would have a greater risk of developing oral cancer. This list included older people, heavy drinkers, heavy smokers, people who ate a lot of meat, people who take many holidays abroad, office workers or none of the above.

The last three questions were used to assess patients' knowledge of the development of cancer, timing of treatment and predilection.

The smoking and drinking habits of the respondents were assessed to see if a correlation could be found between knowledge and awareness of cancer, and smoking and drinking habits.

RESULTS

A total of 211 people participated in the survey during a five-week period. They comprised 95 men (45%) and 116 women (55%).

The first question asked which types of cancer were known to the respondents.

Cancer site	Awareness (Barrow)	Awareness (national average)
lung cancer	96%	97%
skin cancer	92%	96%
cervical cancer	80%	86%
cancer of the colon	64%	62%
prostate cancer	62%	78%
oral cancer	49%	56%
cancer of the pelvis	38%	38%

National average data from Office of National Statistics⁽¹⁾

Table 3 Percentage of respondents aware of cancer in different sites of the body

There was little difference between the sexes in awareness of oral cancer. Overall knowledge of oral cancer was poor with just less than half of respondents in Barrow aware of its existence. The results were also disappointing in relation to the national average and in comparison with other malignancies.

The groups with the greatest awareness of oral cancer were among the adults in the age groups of 35-44 and 45-54, with the poorest awareness among 16-24 year olds and the elderly, 65+.

Factor	Aware (no)	Aware (%)
smoking	152	72
exhaust fumes	53	25
alcohol	36	17
dental fillings	21	10
sunlight	21	10
sexual intercourse	17	8
high fat diet	4	2
none of the above	12	6

Table 4 Respondents' awareness of possible associations with oral cancer

There was a high awareness of the link between smoking and oral cancer (72%), but a low awareness of the link with alcohol (17%). Surprisingly, respondents assumed a 25% association with exhaust fumes and even an 8% association with sexual intercourse. When cross-tabulated with age the group between 35-44 was the most aware of the dual causative nature of smoking and alcohol with 80% and 23% respectively.

Group	Awareness (no)	Awareness (%)
heavy smokers	146	69
heavy drinkers	32	15
older people (50+)	8	4
people who eat a lot of meat	4	2
people who holiday abroad a lot	2	1
none of the above	8	4

Table 5 Awareness of high risk groups for oral cancer

A high level of respondents (69%) identified heavy smokers as people prone to oral cancer, but only 15% identified oral cancer with heavy drinkers, and only 4% identified the elderly as being more likely to develop the disease. Again the age group between 35-44 was the most aware. Respondents were asked if they agreed or disagreed with the statement "early detection of some cancers can improve the chances of successfully treating them". Almost 42% of respondents agreed strongly or agreed slightly. There were significant differences between age groups with the older groups (55-64 and 65+) more in agreement with the statement than the younger age groups. To the statement "who develops cancer and who doesn't is a matter of chance, so there is nothing anyone can do to avoid it", a large proportion of respondents (52%) agreed strongly or agreed slightly, while 36% disagreed strongly or slightly.

The final statement was "some people can make changes in the way they live to reduce the risk of developing cancer". A large proportion of respondents (64%) agreed with the statement strongly or slightly with 28% of respondents disagreeing strongly or slightly.

The smoking and drinking habits of the respondents were noted, so that knowledge of oral cancer and its risk factors could be cross-tabulated.

Smoking status (cigarettes/day)	0	1-10	11-20	21-30	31+
Reported %	62	9	12	10	7
Awareness of oral cancer (%)	47	50	50	56	54
Awareness of smoking as a risk factor (%)	71	72	70	74	76
Awareness of alcohol as a risk factor (%)	20	14	13	15	14

Table 6 Awareness of oral cancer and risk factors categorised by smoking status

Alcohol use (units/week))	0	1-10	11-20	21-30	31+
Reported %	9	34	21	6	10
Awareness of oral cancer (%)	40	47	49	56	53
Awareness of smoking as a risk factor (%)	60	73	74	79	74
Awareness of alcohol as a risk factor (%)	17	14	16	20	18

Table 7 Awareness of oral cancer and risk factors categorised by drinking status

Table 6 clearly shows a higher level of awareness of oral cancer among smokers than non-smokers, 54% and 47% respectively. There is also a greater knowledge of smoking being a risk factor for oral cancer among smokers than non-smokers, 73% and 71% respectively. Conversely, awareness of alcohol as a risk factor is higher in non-smokers than smokers. Interestingly, the highest levels of awareness of oral cancer and its risk factors appear in those groups that smoke the most heavily i.e. 21+ cigarettes a day.

Table 7 is concerned with reported alcohol use and awareness of oral cancer and its risk factors. Respondents reported a high level of alcohol consumption with 26% of people regularly drinking more than the accepted safe threshold for an adult male of 21 units per week. Non-drinkers were not as aware of oral cancer as were regular drinkers, while those that can be described as heavy drinkers (21 units +) have the greatest awareness at 54.5%. Awareness of smoking as a risk factor was also higher in drinkers than non-drinkers, with heavy drinkers (21 units +) again reporting the greatest awareness (76.5%). Alcohol contribution to oral cancer was poorly recognised overall (17%), although the heaviest drinkers did have a marginally better knowledge of alcohol in relation to oral cancer.

DISCUSSION

The study showed a clear correlation with the results of the NOP survey for the Office for National Statistics in 1999⁽⁷⁾. This survey highlights the general lack of awareness about oral cancer and its causation. In Barrow less than half of the respondents surveyed were aware of the existence of oral cancer, which compared very poorly to awareness of other cancers which are much more in the media spotlight such as breast and lung cancer.

A high level of respondents identified smoking as a possible risk factor for oral cancer, but the other major risk factor, alcohol, was identified by only 17% of respondents. Even fewer identified sunlight as a risk factor.

The smoking and drinking cross-tabulations illustrated that the heavy smokers and drinkers were more aware of the disease and risk factors than those who do not drink or smoke

significantly. This shows that those most at risk were not sufficiently worried to change their habits. Even so, awareness of the risk of excessive alcohol was poor among all the respondents.

CONCLUSION

This survey highlights a general lack of awareness among the public of Barrow about oral cancer and a lack of knowledge about its causation. Oral cancer was known to 49% of the respondents with more than 95% having some knowledge of lung and skin cancer. Knowledge of risk factors was also poor: 72% were aware of the contribution of smoking but only 17% associated alcohol with the disease. With such well-known risk factors as alcohol and tobacco it is possible to prevent a large number of oral cancers. Raising public awareness could contribute to a significant reduction in its incidence.

The keys to dealing with the oral cancer threat are

- prevention through education
- early detection
- early treatment.

This study showed several aspects of public uncertainty and ignorance with regard to oral cancer which need to be emphasised in future public education programmes, particularly using mass media.

"The raison d'être of dentistry is no longer just relief of pain but the saving of a life. Detecting oral cancer early saves lives. The profession has an obligation to save those lives."
Anglo-Asian Odontological Group

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