

A PROGRAM FOR THE REDUCTION OF ORAL CANCER IN JIZAN PROVINCE, SAUDI ARABIA

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From June 1988 through April 1998, I was a Consultant at the King Faisal Specialist Hospital and Research Centre (KFSH&RC) in Riyadh. My duties were primarily associated with the dental treatment needed for cancer patients. I worked closely with those patients who had oral cancer. I was very concerned with the number of Saudi citizens presenting to the hospital with this disease. The patients received the highest quality of care and treatment available, but despite all these efforts and all the money spent, this cancer still took the lives of many Saudis. For those who survived their oral cancer, the treatment they had to receive changed their lives. For in the process of treating an oral cancer, the surrounding normal and healthy oral tissues may incur complications. This would be the case whether in the Kingdom of Saudi Arabia (KSA), Europe or the United States (US). This underscores why prevention of disease is always preferable to treatment.

During my years in Saudi Arabia, it became clear to me that there was more oral cancer referred from Jizan Province than from any other region, and that these patients presented "late" in the course of their disease. In time, I would initiate research into this problem.

After 10 years of service, I left Saudi Arabia to return to my home in the US. However, my efforts to solve the problem of oral cancer in Jizan did not end. I and my co-authors submitted the research findings to an international journal for publication. The research was published in December 1999,¹ and established a link between *shamma* and oral cancer and Jizan Province. We found that one out of 33 Saudi citizens referred with a malignancy to KFSH&RC from all provinces of the KSA had a habit-proximity oral cancer site, a ratio of 1:33. However, 6.6 out of every 33 Saudi citizens referred from Jizan had a habit-proximity oral cancer site, a ratio of 1:5 (see also Table 1).

What can be done about the epidemic of oral cancer in Jizan Province? I offer the following program to help the countless number of those in Jizan who at this moment are unknowingly developing a cancer in their mouth. I seek to reduce the level of a terrible disease that affects the citizens of this province. I offer the possibility:

1. To reduce the epidemic level of oral cancer in Jizan Province.
2. To reduce the suffering of its citizens.

3. To reduce the death from oral cancer in Jizan Province.
4. To reduce the medical expenses paid by Saudi Arabia for the citizens of the province.

TABLE 1. *Habit-proximity oral cancer sites referred to King Faisal Specialist Hospital and Research Centre from 1976-1995.*

64.6% were referred from 12 of the 13 provinces of KSA		
Asir	Al Jouf	Northern Province
Al Baha	Madina	Qassim
Eastern Province	Makkah	Riyadh
Hail	Najran	Tabuk
35.4% were referred from one province:		
Jizan		

With dedicated and inexpensive action, the Saudi government could prevent untold cases of death, disfigurement and suffering in Jizan Province. This would be accomplished using basic methods of education and examination for oral cancer. The expense would be a small fraction of what it takes to treat only a few patients with advanced oral cancer.

By prevention or by early detection of oral cancer, quality of life will far exceed that which exists after treatment for the advanced disease. Prevention of oral cancer is simpler, easier, costs less, and has better results than just treatment alone.

This program will focus on the children who will be taught in school never to use *shamma*; those adults who will hear and see the advertisements and then stop using *shamma*; and those adults whose examination for oral cancer will enable early detection and help them survive it.

The research has been critically reviewed, accepted and published.¹ The preventive program is basic and simple. The goals are to eliminate the use of *shamma* and reduce the level of oral cancer in Jizan Province. The choice is clear. Jizan can continue as it always has, with *shamma*, cancer, suffering and death. Or there can be change now, beginning with education and prevention.

Education of Saudi Citizens in Jizan Province by the Ministry of Health (MOH)

The risk of oral cancer in Jizan Province can be reduced by education. There is a need to educate every Saudi citizen regarding the dangers of *shamma*. I recommend the following basic statements:

“Shamma Causes Oral Cancer” and *“If you are age 30 or older, then go to your physician or dentist’s office, and ask them to do an examination of your mouth to look for oral cancer.”*

These would be aired on television and radio, at least each morning and each evening. These would also be in the form of an advertisement or notice in the newspapers in Jizan, on a daily basis and sponsored by the MOH. The following materials from the US National Institutes of Health (NIH) could serve as a resource to the MOH in developing these advertisements:

Spit Tobacco: Know the Score (NIH April 1999 OP-39)
Oral Cancer (NIH May 1999 OP-37)

Searches-On-File, Materials on Smokeless Tobacco (NIH, OS-09).

The following continuing education materials would be provided to all physicians, dentists, pharmacists, nurses, dental hygienists and dental assistants in Jizan Province:

How to Help Your Patients Stop Using Tobacco (NIH Publication No. 98-3191, August 1998)

Tobacco Effects in the Mouth (includes the recommended steps for performing an examination for oral cancer), (NIH Publication No. 96-3330, reprinted June 1996)

Detecting Oral Cancer: A Guide for Health Care Professionals (NIH, Reprinted May 1999).

Services Provided in Jizan Province by the MOH

An examination for oral cancer would be provided by every physician’s office and dentist’s clinic in Jizan Province. The examination would be offered annually, at no charge, to every Saudi citizen in Jizan Province who was 30 years and over. The average age of a patient from Jizan with oral cancer was 60 years.¹ It was my clinical experience that patients who used *shamma* did so for 20 or 30 years, or even longer. Therefore, subtracting 30 years of usage from the average age when patients presented with oral cancer (60) yielded the age of 30, the best time to begin the examination for oral cancer.

The examination for oral cancer would be based on the technique described in NIH Publication No. 96-3330, *Tobacco Effects in the Mouth*. While physicians and dentists usually perform this procedure, auxiliary staff (nurses and dental hygienists) would be trained to complete the examination. This would utilize auxiliary staff time, rather than burdening the physician and dentist schedules with examinations. The physician and dentist would be scheduled with those procedures that auxiliary staff could not do. If an oral mucosal lesion were detected, then the physician or dentist would be advised and would also evaluate the patient, and if indicated, provide any treatment or referral.

The examination for oral cancer should include some data collection. I recommend the following: 1) the name, age, sex and address of the patient; 2) the name and address of the hospital or clinic where the examination for oral cancer was completed; and 3) the location of the lesion and results of any biopsy that was performed. The purpose of

the examination for oral cancer is to detect early cancer, not to accumulate volumes of data. Also, such data should not include any written record of *shamma* usage. As *shamma* is illegal in the KSA, patients may be reluctant to discuss it and may conclude that the real reason for the examination for oral cancer is to arrest them.

Education of Saudi Students in School in Jizan Province by the Ministry of Education (MOEd)

The MOEd would instruct all Saudi students in Jizan regarding the dangers associated with the use of *shamma*. Again, the following statement should be the cornerstone:

“Shamma Causes Oral Cancer.”

All Saudi students in Jizan, including elementary, middle school, high school, university and technical schools, would receive this educational message. Health classes would provide a forum for teachers to discuss this topic with their students on a monthly basis.

The following educational materials would be given to each teacher in Jizan Province:

How to Help Your Patients Stop Using Tobacco (NIH Publication No. 98-3191, August 1998).

Tobacco Effects in the Mouth (NIH Publication No. 96-3330, reprinted June 1996).

Additional materials are available from the U.S. National Institutes of Health, and could serve as a resource to the MOEd in developing a curriculum for Saudi students in Jizan Province:

Chew or Snuff Is Real Bad Stuff (NIH Publication No. 94-2976, reprinted April 1994)

Dangerous Game: The Truth About Spit Tobacco (NIH Publication No. 95-3880, August 1995)

Dangerous Game: A Teachers’ Guide (NIH Publication No. 95-3880TG, August 1995)

Dangerous Game: The Videocassette Kit (NIH Code K371)

Spitting Into the Wind: The Facts About Dip and Chew (NIH July 1998)

To order any of the materials mentioned in this article, please contact:

The US Department of Health and Human Services
Public Health Service
National Institutes of Health
National Cancer Institute
Publication Ordering Service
PO Box 24128
Baltimore, Maryland, 21227
USA

Conclusion

Jizan was the source of over 35.4% of all the habit-proximity oral cancer sites, even though the Province has only 6% of the population of Saudi Arabia. The amount of oral cancer from Jizan can be reduced by not using *shamma*. In addition, many patients with oral cancer present

late in the course of this disease, when prognosis is poor and treatment more expensive. The examination for oral cancer offers a simple and effective way to detect the disease early in its course, when treatment costs less and the patient has a better opportunity for cure and survival.

The cost of this program would include: 1) announcements on TV, radio and newspapers for 20 years, in order to span a generation; 2) the booklets from NIH for several thousand healthcare staff and teachers in Jizan Province; and 3) the time needed to perform an annual examination for oral cancer on Saudi patients in Jizan Province. Since the treatment for advanced oral cancer is very expensive, the savings to the healthcare system would be considerable. The benefit would be to the Saudi citizens of Jizan, who would no longer be victims of *shamma* and oral cancer.

Acknowledgements

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