PIERREL

60 seconds to save a life?

The role of dental professionals in early detection of head and neck cancer.

With this paper, we present the extracts from two articles published by Nichola Tong* on the role of dental office professionals in visualizing oral cancer and in the use of the fluorescence technique for this purpose.

It's a brief reading that reveals how decisive the dentist's action can be in changing the life's course of patients or saving a life.

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Have you ever diagnosed a mouth, head or neck cancer? Any one of us could be responsible for identifying a head or neck cancer and play a role in getting early treatment for a patient and even helping to save a life.

Last November, I had the honour of attending the Swallows / Your Cancer Journey International Head and Neck Cancer Conference in Nottingham. The conference is organised by the founder and chairman of the Swallows Charity, Chris Curtis, a pharyngeal cancer survivor: he was diagnosed in 2011 with throat cancer, which had gone undetected by his dentist during regular routine dental checks.

I was there to carry out intra and extra oral screening and to raise awareness of the need for early detection. I was profoundly moved by the stories of the patients who were attending this conference and I feel compelled to shout out about the vital part we play in preventing and detecting head and neck, mouth and pharyngeal cancer.
I wonder just how many of you reading this have first-hand experience of a friend, colleague, loved one or patient who is living with the devastating after effects of a mouth, pharyngeal or head and neck cancer?

Head and neck cancers are differentiated in to sub groups depending on location: mouth cancers affect the lips, salivary glands, tongue, gums, palate and inside of the cheeks, while tumours at the root of the tongue, soft palate, tonsils and the upper part of the pharynx are defined as pharyngeal cancer. Cancers affecting the nasal cavity and paranasal air sinuses are also included in head and neck cancers.

We know that early detection of head and neck cancer can significantly increase the survival rate of over three years. As with any serious diagnosis, living with the after effects of head and neck cancer therapy is traumatic and life changing. This is for the 'lucky' ones who survive beyond one year, but life for them will never be the same. Many of the things we take for granted like speech, enjoying a nice meal, or a lovely glass of wine are forever denied to some of the people who do survive. Not to mention issues with depression, anxiety, and self-esteem.

We know that the increase in diagnoses is attributable in the large part to HPV

transmission, more so now than alcohol and tobacco as causative factors but 25% of mouth cancers have no known causative factors. We also know that by the time a mouth cancer is visible or detectable to us it is already in its advanced stages. This makes it very difficult to treat and significantly lowers the five year survival statistics.

We know that early detection is difficult for various reasons and because these cancers can spread quickly, only 29% are diagnosed early. Therefore, most are not being diagnosed until stage iii (tumour is <3cm and present in one node/ or >4cm but has not metastasised) or stage iv (determined by tumour size in cm and pattern of invasion into surrounding nodes and tissues).

WHAT SHOULD WE BE DOING?

Some basic knowledge, simple equipment (part of which is present in nearly every dental surgery) and 60 seconds is all it takes.

A best practice 3 step approach could be:

1. Extra oral examination including sub mandibular and submental lymph nodes, the cervical chain and thyroid area

2. Intra oral examination

3. Auto fluorescence adjunctive screening technology.

There are over 30 different areas of the head and neck where cancer can develop so signs and symptoms vary. Some of the most common include:

- Hoarseness persisting for more than six weeks

- Ulceration of the mouth persisting for more than three weeks

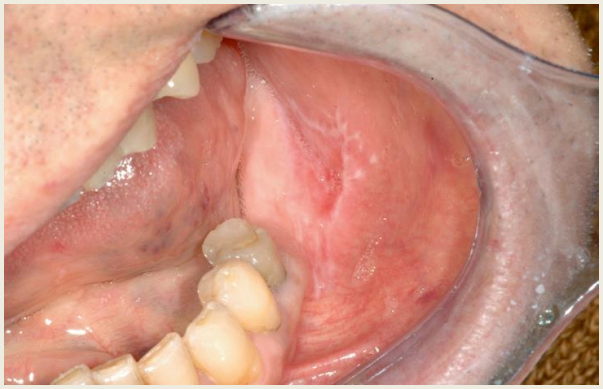
- Oral swellings

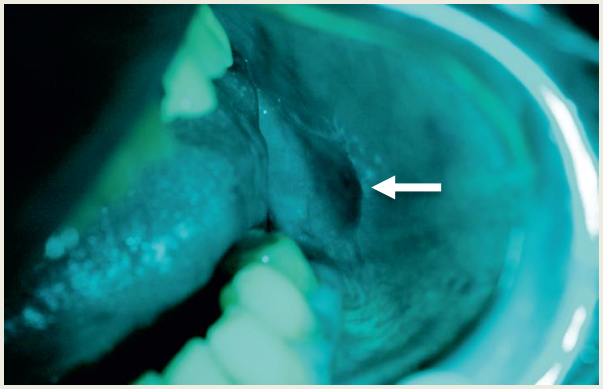
EARLY DETECTION TECHNOLOGY

Tissue auto fluorescence can help us to spot potentially pathologically altered tissues and is another weapon in our armoury to fight against mouth cancer. It's an adjunctive tool specifically for the purpose of early detection used alongside the traditional intra oral and extra oral examinations.

For the past four years I have been using adjunctive tissue auto fluorescence technology to help show up potentially pathologically altered tissues. It’s a device for our toolbox for early detection. Auto fluorescence first came into medicine in the 1920’s for cervical cancer screening. The concept has good research to show that it can detect early, moderate and advanced dysplastic cells, carcinoma in situ and squamous cell carcinomas. If a malignancy is clear to see, tissue auto fluorescence can help determine the borders for biopsy and excision procedures.

IMAGES and INFORMATION





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The two articles can be viewed at the following links:

https://www.nature.com/articles/s41407-019-0069-7

https://njthealth.co.uk/published-articles

Experience with GOCCLES can be seen in practice in this short video:

https://www.youtube.com/watch?v=-N3snTzMge8

The GOCCLE box

To know more about GOCCLES

www.goccles.com

Further general information

www.oralcancerfoundation.org

www.mouthcancerfoundation.com

AUTHOR INFORMATION

*** Nichola Jayne Tong R.D.H. BSc(Hons) Dip D.H.** qualified as a dental hygienist in 1991 with the Royal Army Dental Corps and gained the BSc (Hons) degree in Health Sciences, has worked in specialist implant/cosmetic referral practices and for Oral–B Professional Health Team UK & Ireland as a Territory Manager. Nichola has had work published in peer reviewed dental journals and has run professional development courses for dental professionals.

Currently, Nichola presents to dentists and hygienist/therapists on topics such as the evidence which informs bisphosphonate therapy and dental implants, also advocates early detection of mouth cancer with autofluorescence technology. Nichola is a clinical consultant with Dental Sky for GOCCLES, a low cost and modern autofluorescence screening device.

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