Masterclass in Oral Diseases

Oral Cancer
with
Dr Andre W van Zyl[1]

Oral Cancer- Clinical variants of importance

[1] Andre W. van Zyl
MChD (Oral Medicine & Periodontics)
Private Practice, Hermanus, South Africa

Introduction

It is a well-known fact that patients consult their medical practitioners rather than the dentist for oral lesions. This is especially true for older patients who are more at risk of developing oral cancer.

We all have a role to play in early diagnosis of oral cancer to have a successful treatment outcome.

It is my experience over the past 5 years that patients will visit the medical rather than the dental practice when they have a lesion of the oral mucosa. This indicates a lack of patient education regarding our responsibilities and expertise as dentists and perhaps a neglect from our side in educating our patients.

Any delay in the diagnosis of oral cancer may lead to a lower 5 year survival rate. Early detection of oral cancer may save lives and achieve a 5 year survival rate of 90% whereas late diagnosis may be as low as 20%. Late diagnosis will also increase the morbidity of treatment.

High risk areas for oral cancer are the lateral and ventral surfaces of the tongue and the floor of the mouth and this can account for half of oral cancer sites.

We need to guard against dentists being seen as responsible for drilling teeth and providing dentures and medical practitioners as responsible for other oral diseases.

Oral healthcare providers have the knowledge, equipment, and the opportunity for a thorough routine examination of the oral cavity. A thorough screening of the oral cavity should not take longer than 2 minutes.

Many studies have shown a lack of awareness regarding the danger of oral cancer not only amongst patients but general medical and dental practitioners. The longer a practitioner has been qualified, the less aware they may become of risk factors and danger signs. We should all guard against this. The only healthcare providers who examine the oral cavity on a routine basis, is the oral healthcare provider- including dentists, dental therapists, and oral hygienists.

Every patient who is consulted, old and new, should receive a full and thorough examination of the oral cavity at every visit. So why after decades of focus on undergraduate training and awareness campaigns do we still see lesions going undetected or worse, detected but treated as innocent tooth/denture irritations when it is clearly a malignant lesion?

I cannot answer that, but I would like to place you in a position to think on a different level when seeing an oral lesion. After 38 years of experience in oral medicine with much of that time spent in academic training, I believe that a different approach is necessary for you as clinician. I want to remove the academic descriptions and try to convey to you what I sense when looking at a possible malignant lesion. I want you to have an immediate sense of the danger of a certain clinical presentation- and to know when a lesion should be biopsied or referred. As stated in the previous MC on biopsies- if you are in a remote location, you may have to biopsy lesions yourself and not be able to refer. Removing a tooth is a much more invasive procedure than a biopsy, so there can be no excuse for not doing it.

I will attempt show you as many clinical variants of oral cancer as

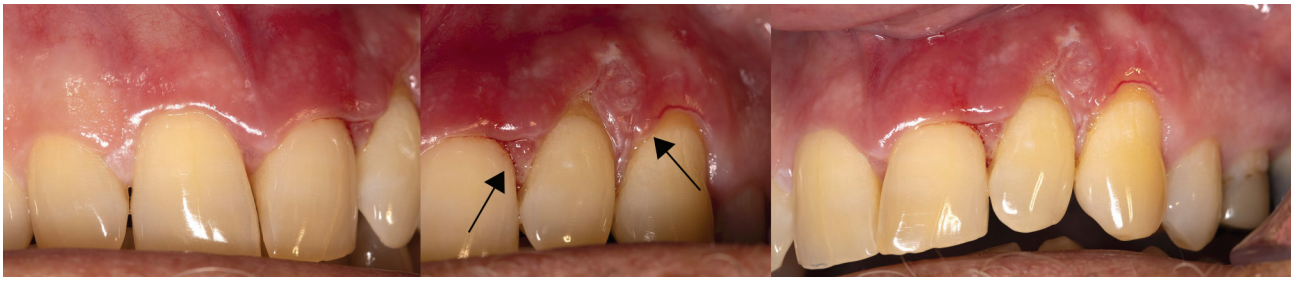

Figure 1: This patient presented with an extremely healthy periodontium with no signs of periodontitis. The only abnormality was pronounced inflammation from 21-23, with deep pockets on 21 and 22. Notice the arrows indicating not only inflammation of the gingiva but an increase in the tissue volume with a wart-like appearance. This was a carcinoma that had already extended into the jaw and the patient was referred for a partial resection of the jaw.

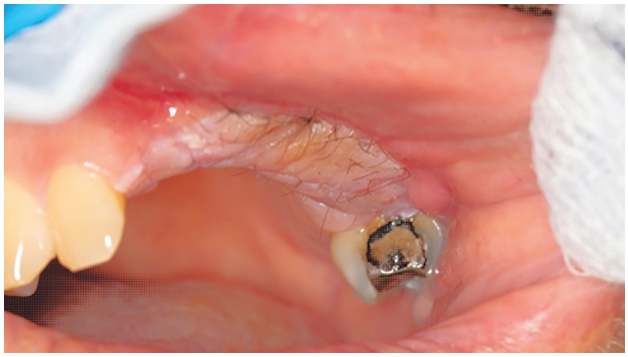

Figure 2: A small lesion like this still needed an extensive resection with the loss of healthy adjacent teeth.

you are likely to encounter in the hope that it will help you in the decision-making process. I will try to point out clinical tips of value.

Remember, a biopsy is a small procedure and may save your patients' life. Ignoring a dangerous lesion may sentence your patient to a terrible death or alternatively a mutilating treatment. If only one case can be diagnosed earlier by this Masterclass- it will have been worth it. All the cases shown below were found to be squamous cell carcinomas, which account for more than 95% of all oral cancers.

Case 1

This patient was referred with an unusual "periodontitis in the 21-23 area" (Figure 1). The rest of his mouth was extremely healthy with not even gingivitis present. A biopsy of the interdental papillae between 22-23 was done.

Danger signs

Periodontitis does not occur in a single site like this in the presence of excellent plaque control and periodontitis does not cause a wartlike increase in the tissue volume as seen here. What appears as a small lesion here- needed an extensive jaw resection with a free flap reconstruction (Figure 2).

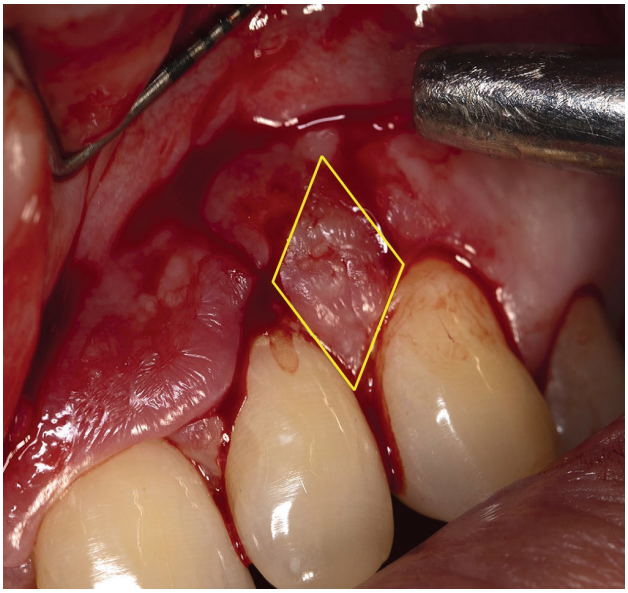

Figure 3: Biopsy of interdental papillae where enough depth of tissue can be taken. If no sutures can be placed, then pressure with a gauze swab can be applied by the patient for 30-60 minutes or as needed.

Clinical Tip

Normal healthy tissue must be recognised so that an abnormality such as this is not missed or ignored. Periodontitis can be caused by a local irritation such as a large overhanging restoration margin, but there is nothing here that may explain the periodontal lesion as the teeth are virgin-teeth. It therefore has to be a "tumour" of some sort. Always perform radiological examination when a lesion is within the periodontium and send this to the oral pathologist with the biopsy sample.

Biopsy

The biopsy is taken from the interdental papillae where there is more volume to be removed for histological examination (Figure 3). Often sutures are not necessary when biopsy is confined to gingiva. Pressure on wound with a gauze-swab for 30-60 minutes by patient will often control bleeding.

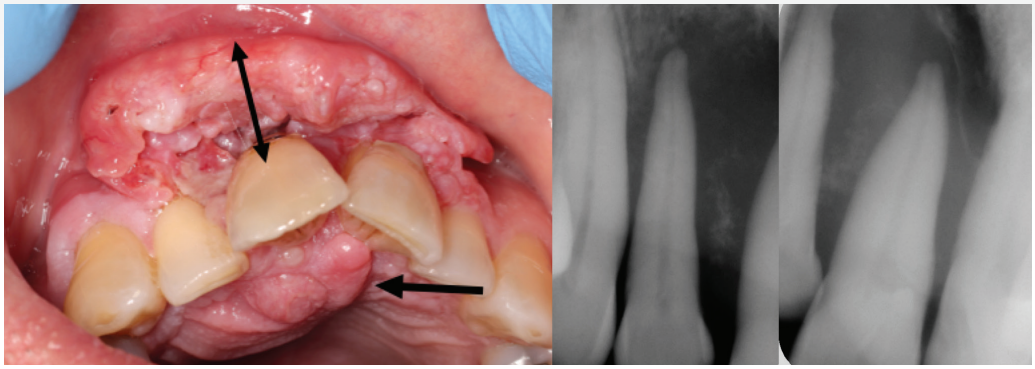

Figure 4: The gingiva is enlarged and loose from underlying teeth with a wartlike appearance. Tissue enlargement is also visible on palatal side. Radiographs sent by dentist shows complete destruction of all bone around teeth 12-21.

Case 2

This patient was referred for gingiva that did not want to heal after repeated treatment of the periodontitis. This case is like Case 1 but much more advanced as diagnosis had been delayed for months. Radiographs showed complete bone loss around involved teeth. Periodontitis or gingivitis does not look like this!

Danger signs

- Extensive wart like enlargement of the gingival volume as shown in Figure 4 (arrows indicating enlarged volume of tissue and abnormal morphology).
- Loosening of the gingiva from the teeth.
- Extensive destruction of underlying alveolar bone as seen on radiographs sent by dentist (Figure 4).

Clinical Tip

Look at the healthy gingiva on canines, indicating this is not plaque related. Periodontitis cannot cause such tissue enlargement and such localized destruction. Touch and palpate the tissue in such cases as it will feel like solid tissue. If this was periodontitis, one would expect spontaneous bleeding and puss flowing out of the sulcus and a flabby type soft tissue, not hard solid gingiva-like consistency.

Biopsy

Can be taken anywhere adjacent of tooth- as the tissue is showing such destruction that no biopsy can harm the periodontium. In this case an internal wedge was taken buccal of the 11 tooth (Figure 5).

Case 3

This patient was sent with a complaint of abnormal looking gingiva not responding to treatment (Figure 6). This is a clear case of very abnormal, bizarre appearing gingiva, white in colour and with wart-like extensions on surface. No normal

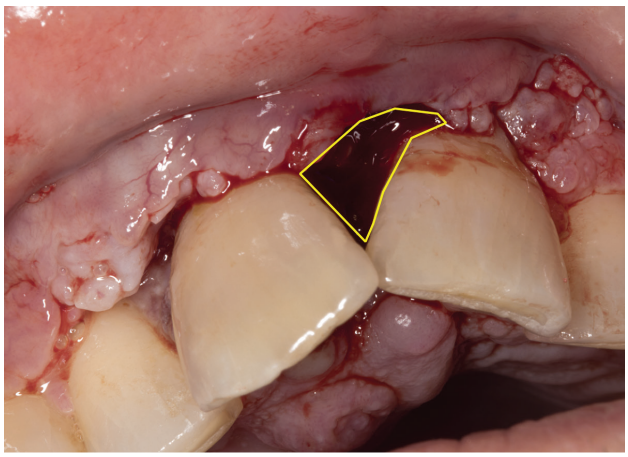

Figure 5: Biopsy taken interdental area and a single suture can be placed to close the site.

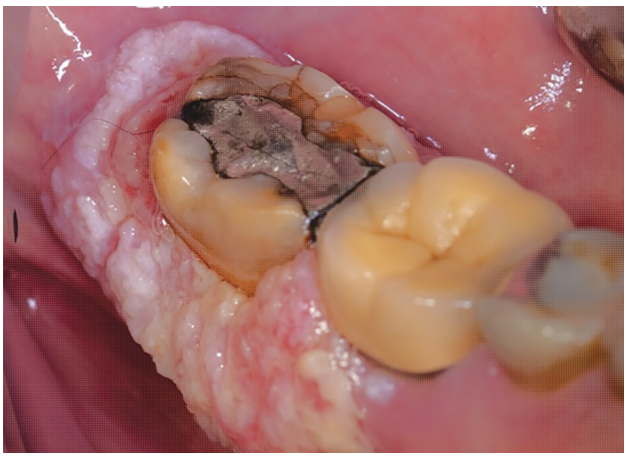

Figure 6: Wart-like cancer showing a lingual, distal and a buccal extension.

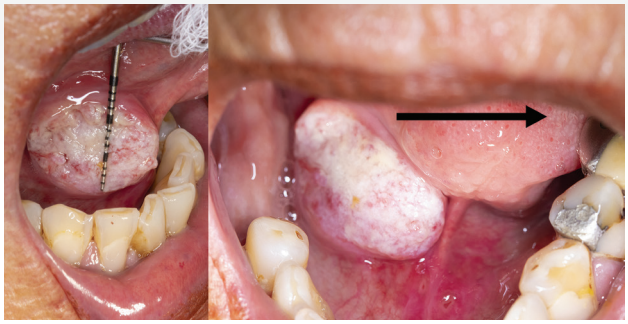

Figure 7: A raised hard lesion 10 x 15mm which has displaced tongue when in rest as shown by arrow.

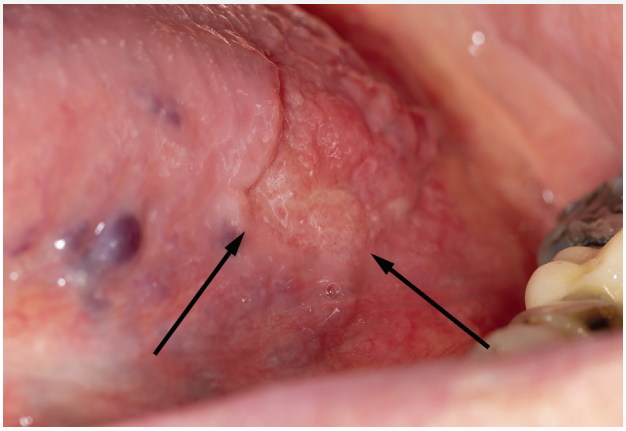

Figure 8: The lesion appears to be pushing from inside of tongue outwards, with a slight rough pebble/cobble-stone surface and raised borders. It is easy to mistake this for normal appearance so palpation important.

gingiva or gingival infection can look like this- and without a doubt this is a "growth" which must immediately be examined by taking a biopsy.

Danger signs

- A bizarre clinical appearance of gingiva
- Exuberant growth of gingiva with a clear margin between the wart-like appearance and the normal gingiva. This is not a single lesion- it is an area of abnormality - a clear danger sign.
- The lesion is in the periodontium and should always be examined radiologically for bone loss.
- The lesion is approaching the floor of mouth and treatment should not be delayed.

Clinical tip

Plaque plays no role here, there is no inflammation in the periodontium and adjacent gingiva is healthy. The tissue feels hard which is an ominous sign.

Biopsy

Biopsy can be taken anywhere to include the wart-like tissue and can be done easier with a 12 scalpel rather than a 15 blade. Sutures will not be necessary if a wedge of tissue is removed next to the tooth.

Case 4

This patient was seen with the complaint of a relatively small hard lump under the tongue in anterior floor of mouth (Figure 7). The tissue is once again wart-like with a white surface. No tooth or denture can cause a lesion such as this in the floor of mouth as it cannot touch the area.

Danger signs

- The lesion feels hard to touch.
- It is in the high-risk floor-of-mouth area and has already displaced the tongue sideways (see arrow in Figure 7), never a good sign.
- It is exophytic with raised borders and appears as an exuberant growth of tissue.

Clinical tip

Do not observe these lesions as there can be no benefit in doing so. Biopsy or refer patient as soon as possible. Palpate the lesion- it will feel hard.

Biopsy

Take a biopsy from within the lesion- even if a punch biopsy is acceptable- which will be easy to perform. Place sutures 3-5mm from edge to prevent tear-out or if it does not bleed much, no sutures will be necessary.

Case 5

This is a tricky and difficult case of a patient with a complaint of a sore lesion left lateral of tongue (Figure 8). The lesion was blamed on adjacent sharp tooth and only after months of no improvement was the patient referred. It shows a surface which is not grossly abnormal and to some may look like foliate papillae. Here, the 2-3 week rule would have made a major difference. If polishing the adjacent tooth does not lead to resolution in 2-3 weeks, it must be biopsied or referred.

Danger signs

- Lesion is lateral border of tongue.
- Observe the slightly raised rolled-border (Figure 8 arrows)

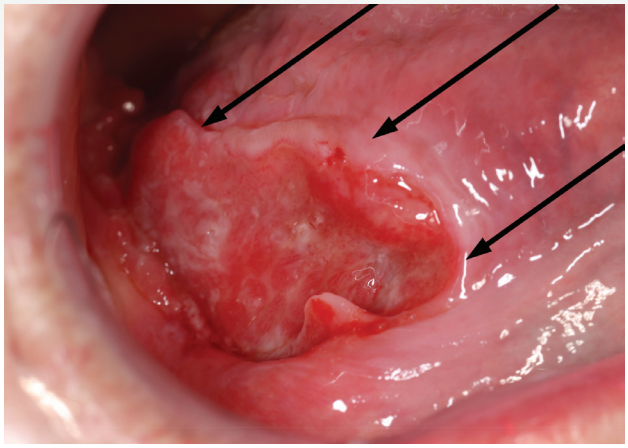

Figure 9: Massive ulcer posterior lateral border of tongue, extending into floor of mouth and into oro-pharynx. Do not delay in getting this patient to a surgeon for treatment.

and a "Cobble-stone or pebbly" appearance.
- The lesion felt like a hard lump within tongue due to induration.
- Pain is never a good sign and often a sharp tooth will be more of an irritation than the deep pain associated with a cancer.

Clinical tip
Palpate the area to feel for induration. Carefully observe the lesion borders which are more extensive than appears (Figure 8 arrows). This is not an ulcer so is unlikely to be from a sharp tooth and no white surface changes are seen which is often seen with friction against a tooth or denture.

Biopsy
Tongue must be stabilised with a gauze swab by pulling it forward and a biopsy taken from the anterior middle section of lesion. Make sure it is at least 7 x 5 mm and 3mm deep- or you may not get enough tissue for histology. These lateral tongue biopsies may bleed a lot. Place sutures deep and minimum 3mm from edge of incision as tongue muscle may tear out the sutures during chewing or talking.

Case 6
This is the classic text-book tongue cancer. It is lateral of tongue in the posterior third, extending into oro-pharynx and floor of mouth and this is due to the fact it has been growing for months/years without detection (Figure 9). It is always a scary moment when finding a lesion like this. An ulcer this size can never be from a sharp tooth! To prevent a lesion of ever reaching an advanced stage like this, is the main reason for always performing an oral examination by pulling out tongue, using the intra-oral mirror to push tongue side-ways and inspect the lateral border of tongue all the way as well as floor of mouth. Or just ask every patient to push tongue out as far as it will go and to the left and right- you will quickly notice an abnormality in surface or in limited movement. It takes seconds to do. These lesions may grow large before a patient complains of limited tongue movement and pain and are often diagnosed too late for a positive 5 year survival. These types of oral cancers are the reason oral cancer has such a bad reputation for survival.

Danger signs
- Position posterior lateral tongue
- Deep crater-like ulcer with raised borders (See arrows Figure 9).
- Indurated when palpated.
- Spontaneous bleeding surface.

Clinical tip
Always ask every patient to push tongue out to the right and left and look for lesions or limited movement, but even better, use gauze swab to pull tip of tongue further out. Use finger to palpate the lesion- it will often have a hard feel. These cases almost always have palpable lymph nodes.

Biopsy
As with all posterior lateral tongue biopsies- it may bleed so solid sutures are required. Take a deep anterior sample as in case 5.

Case 7
South Africa has one of the highest lip cancer incidences and this lesion is a classic lip lesion of someone who spent most of their lives outdoors. The lip shows crusting and often the patient will have no complaint and use lip-balm for the "dry lips" (Figure 10). These lesions are problematic as incision biopsies are often difficult due to lesions being very small, so excision of such a lesion is often done, even if suspecting oral cancer.

Danger signs
- Crusting of lip that has been present for months without fully healing.
- Patient has history of outdoor lifestyle with extensive sun exposure.

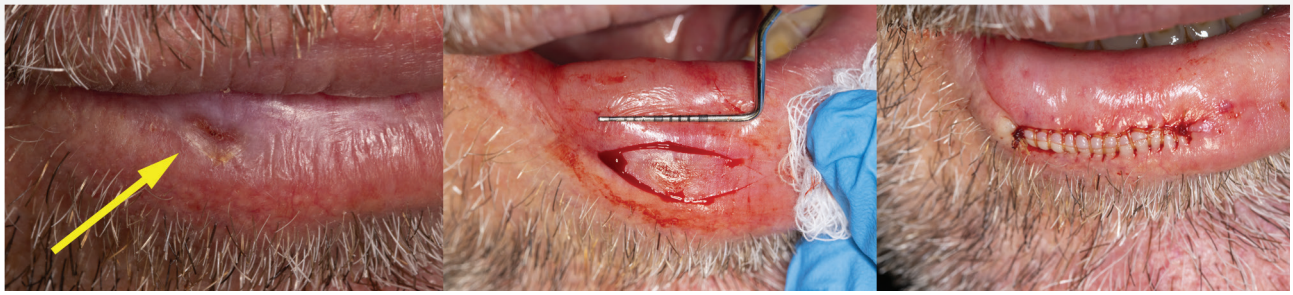

Figure 10: Patient presenting with a small depression crusting lesion of lip on mucosa-vermillion border. This was removed in a long elliptical incision, more for the effective closure of lip than to excise the lesion completely. It was a very early lip cancer, completely removed.

Clinical tip

Feel the lip in a gentle palpation. These lesions feel slightly harder than the soft lip adjacent. Inspect all lower lips very carefully for the whitish appearance in middle of lip as seen in the left side of image and specifically for crusting/ulcer lesions as shown by arrow (Figure 10).

Biopsy

Lip biopsies are not that easy but if no one else is available, it should be done as shown in a long elliptical manner and not deeper than 3mm. Patient must be informed that a post-operative mucous extravasation "cyst" may be a complication of any lip biopsy due to damage to minor salivary glands.

Conclusion

The cases shown here will provide a sense of the varied clinical appearance of oral cancer cases. The following tips are of importance:

- No ulcer should be left undiagnosed for more than 3 weeks. It must be biopsied as it may save the patient's life. Recall all patients 3 weeks after a tooth/denture was polished to inspect the lesion yourself for healing.
- Do not be afraid to touch and palpate ulcers or tumours of especially soft tissue such as tongue and floor of mouth. Oral cancer lesions often have a hard feeling (called induration).
- Most patients have some sharp edges on teeth and as more than 50% of oral cancers are seen on the lateral borders of tongue and adjacent floor of mouth, sharp teeth/dentures are often incorrectly blamed for the lesions. This may delay diagnosis and treatment for months. Recall patients after removal of sharp edges for inspection of healing or need for biopsy.
- Cancerous tissue may feel like cartilage when cutting into it for a biopsy- this is an ominous sign. In such cases, place sutures at least 5mm away from the edge of wound as sutures may tear out easy if too close to edge.
- Oral cancer does not heal by itself so if an ulcer/lesion is getting smaller 3 weeks after polishing a sharp irritation, it may be observed a while longer to see if it disappears.
- Oral cancer lesions will often show exuberant growth, with exophytic lesions common and ulcers having raised flower-like margins, often showing induration.
- If a patient does not have a medical aid, the cost of private pathology services may be too much for them. Speak to a dental school to courier the samples to the Oral Pathology department for analysis. I am sure they will be able to help, and the courier cost will be negligible if using PostNet™ or similar franchises. You may then want to refer the patient to the same institution for surgical treatment.
- Do not forget the lips as part of your comprehensive oral examination. I often recommend Zinc paste with a high SPF factor for those patients showing solar lip damage and spending much time outdoors.
- Check for sub-mandibular and neck lymph nodes when examining patients.
- Always perform radiological examination when dealing with lesions in the periodontium.