**\*\* Malignant tumors of oral cavity\*\***

**( types and presentation)**

When we talked about oral cancer mainly we talked about International classification of diseases (ICD)

ICD and WHO classified each disease and every one of them has a certain code to ease the communication and statics

Oral cancer has a code 9 .. ICD 9 has many sites ,, oral cancer of lips , gum , FOM , tongue , and some non-specific site mainly BM .. EXCLUDING cancer of minor salivary gland: nasopharynx , oropharynx, and hypopharynx these areas have certain specification : diseases and cancers that happen here differ from any other disease and cancer in the oral cavity

Oral cancer : tongue , lip , gum , FOM ,BM

More than 90% of oral cancer is SCC.. 10 % the other lesions

The most common site of oral cancer is the tongue ( mainly the lateral border ) OR the floor of the mouth .. why “OR” ?? This is according to the studies (where it happen )

So SCC starts as dysplasia then carcinoma in situ and then the invasion of the surrounding structures (deep layers) occurs .. and then SCC will develops

-Verrecous carcinoma : some consider it as a variant of SCC .. The good thing about it ,, it spreads by invasion of the surrounding structure it doesn’t or rarely cause metastasis ,, so usually it is better prognosis than SCC ..

Management is by surgical excision with good safety margin and when we see safety margin in malignant tumors we remove wide margin of surrounding tissue ( more than 1.5 cm) we excise it totally and it doesn’t have tendency to spread as SCC

2. minor salivary gland tumors : different types like : muco-epedermoid carcinoma and adenoid cystic carcinoma ,, some has better prognosis than other

**Incidence and prevelance**

90% of oral cancer cases are SCC .. so we mainly talk about it

Statistic is very different : incidence and prevalence is very different in oral cancer types .

Oral cancer in our part of the world is not that common .. it is more common in other part of the world

In India it is consider as one of the most common malignancy that affect the population there .

-High incidence of SCC in some part of the world in India ,, related to habit there which is betel quid chewing : (plant and tobacco mixed together they chew it for long period of time ) this factor increase the incidence in India .. in other part of the world this habit is not that high (here the smoking is more common)

Incidence of oral cancer is going down in Europe and in united states ,, incidence of smoking decrease too

In the past the ratio of M:F is higher in Male than Female , but now the ratio is almost equal !

**Early signs and symptoms of oral cancer**

Persistent mouth ulcer , lump, painless, stays for 2 weeks , speckled , affecting the underlying structures ..

Parasthesia : in the late stage

The main problem of the oral cancer is that in the early stage it is asymptomatic disease , so people don’t know about it they don’t aware about them in the early stage and they aware in the late stage

Prognosis of oral cancer will decrease,, so the 5-yr survival will decrease too

Early stage : may present as white lesion , pigmented , speckled , ulcer , asymptomatic and once it infected it reach a size that cause pressure on the surrounding structure and here signs and symptoms will present

Any abnormal findings we must start thinking about the possibility of (something wrong) for example : non-healing socket and ulcer with elevated edges,,

The idea of 2 weeks related to the cause in factor which means if we have ulcer with elevated edges and fixed with the underlying structure if I don’t find a source of trauma (no opposing tooth that cause the trauma to this structure )so there is no need to take a biopsy ,, we took a biopsy if we suspect there is a cause ,, if we don’t suspect a cause of a trauma that cause this ulcer and this ulcer has a “finding of malignant lesions “ in this case go for a biopsy and don’t wait for 2 weeks

The pt may come with enlarged lymph node and we took a biopsy : the biopsy has a positive result then you must think about primary cause of cancer

Sometimes we saw lymph node enlarged and we don’t know from where this cancer had come

We need to do prober examination that may need GA ,, we need good clinical examination to find the primary tumor ,, sometimes we may use Toluidine blue to find the primary cause of the lesion

The Dr showed different photographs of different clinical scenario of early SCC (pigmented ,white or speckled ) all of these make you suspicious about presence of malignant tumor

**Site** is very important : FOM and lateral of the tongue increase the possibility of having SCC

The Dr showed another scared image showing the early sign of SCC presented on the lateral border of the tongue (typical lesion) if we follow the edges of the ulcer (the arrow) we see it on all over of the tongue ,, this is a typical late presentation of SCC on lateral border of the tongue ,, this pt died after few years .. taking the consideration of the size tumor : this is stage 4 ,, 5 yrs survival is low ..

**Risk factors :**

Smoking , tobacco , alcohol, malnutrition , sunlight exposure and mutation ..

Age and gender are not risk factors : gender by itself is not a risk factor,, statics shows that it is more common in male than female in the past by 6:1 and 7:1(this is mainly due to the risk factor that presents mainly in males and not present in females ) .. but now it is 1.5:1 .. so it isn’t a risk factor

Also the age isn’t a risk factor : oral cancer is more common in male in the 6th decade ( above 65 years) and this is mainly due to the mutation

Mutation occurs normally in our bodies and it appear one day , when it appear it depends on the genetic factors and the risk factors ,, some pt may have mutation that is related to the tumor suppression gene .. our bodies defense against genetic malformation (the mutation) .. if there is mutation in the tumor suppressing gene so the oral cancer will present on certain age and this differ from one to another .. it may present in someone so the oral cancer present at the age of thirty or forty or sixty for example ,, and this mutation may be very small and the oral cancer will present at the age of 150 years and because rarely to live for 150 years this mutation will not present ..

For pt who has a risk factor I must find the rate of appearance of the disease : someone who may develop the mutation at 150 years age , if he smokes and drinks every week and has malnutrition ,, this mean that this mutation might appear at early age and this will increase the risk factor ,,

Also if the pt originally has a primary tumor ,, the chance for having another lesion ,cancer , SCC will increase because he has the tendency to develop it

What is the relationship between alcohol and the smoking ?? (basic Q in dentistry )

It is synergetic .. why the pt who smoke and drinks alcohol has high tendency to develop oral cancer ??

Alcohol +smoking = synergetic effect ,, here we talked locally (not systemically )

Alcohol cause atrophy and thinning of mucosa ,, so the effect of the pt who smoke will be double the pt who doesn’t smoke

Other risk factor : viruses ,, certain viruses are related to carcinoma like : HPV and HSV ,, retrovirus and adenovirus ,,EPV

ALSO there is a genetic factor : which is the tendency for certain disease including the oral cancer (they are of higher risk to get certain disease )

Lower socio-economic class : related mainly to malnutrition (which is a rick in oral cancer)

Immunosuppression and premalignant condition : premalignant condition is related mainly to the viruses and most have genetic mutation and these people have high risk of developing malignancy

Iron deficiency : is related to Plummer Vinson syndrome

Orodental factor : poor oral hygine is not acceptable to say that poor oral hygiene and caries are related to oral cancer ,, but this can be related ( not consider as a risk factor)

 Put you attention ,, In some cases of poor oral hygiene you might find this condition in those pts who drink alcohol , has malnutrition , smoker (other factors related to oral cancer) but those make you more suspicious

 Sometimes there is head and neck cancer and they need Radiotherapy for treatment and this is one of the factors to cancers in general .. and SCC specifically

**Prognosis :**  It is according to the stage

In general it is poor prognosis : so early detection is mandatory ,, why ?

You HAVE TO DO YOUR JOB PROBERLY ! Pt come to the clinic ,, doing fillings , extractions for him ,,examine for ridges and implants ,, and missed to examine a lesion and this lesion may has a risk of oral cancer

The first line of prevention of oral cancer is early detection and the most effective way to do is by prober screening of our patients (by dentists) ,, it is not cost effective in place like Jordan and middle east for example ,, to have medical campaign and look for cases of oral cancer the cost is very high and the benefit is not that important ,, because we don’t have a lot of oral cancer cases ,, it is more effective if this occur in India for example ,, this is duty of the dentist because you are the only one who have to look inside the pt mouth ,, examine and see if there is malignant lesion inside

Prognosis of oral cancer depend on the stage ,, and the stage depend on : the size of the primary tumor ,, metastasis to the lymph node

If there is metastasis to other part of the body ( distant metastasis) stage 4 .. the prognosis will be very poor

The main factor of oral cancer is the lymph node ,,

Local invasion : the oral cancer start small and will increase in size until reach a certain size but the tumor may present at in early stage in terms to the size of the tumor(2cm) (it may be in stage 1 for example ) and once the spreading to the lymph node occurs ,, the prognosis will go down

Lymph node is the most important factor in terms of prognosis,, which if metastasis occurs or not

Lymph node metastasis may be unilateral or bilateral ,,bilateral is worse

Level of metastasis is different : submental and submandibar( level 1 in the neck) , cervical or lateral cervical (in SCM muscle which is level 2 )or on ant or post tringle of the neck

Spreading more : worse prognosis ,, the size increase : poor prognosis

Something may occurs during surgery which is called : extra capsular spread in lymph node ,, and related to the site of the tumor

Tumors of the lip rarely cause metastasis to lymph node which is good thing ,, prognosis of lip cancer is better than any other tumor in the oral cavity : firstly :due lymph node(as I mentioned previously) ,, and early detection is the main causes ..

Site is important : tongue has the tendency to spread so the prognosis is poor ,, the lip doent has tendency to spread so it is better prognosis

Differentiation of cells in SCC : after taking a biopsy and send it to histopathology lab >> it may be well, moderate, poor differentiated .. when it is well-differentiated it is better prognosis .. poor differentiated : poor prognosis

**Staging system TNM**

T : tumor .. N : lymph node .. M : distant metastasis ( size of the tumor , lymph node involvement , and the metastasis )

**Factors affecting the prognosis**

Early vs late diagnosis .. extent of the disease .. site (posterior worse than anterior) .. pathology

Age and treatment : age by itself isn’t a problem in term of prognosis .. ageing increase with systemic diseases .. so fit and healthy pt will withstand the treatment (chemotherapy) better than other .. so the prognosis is better here

Although some studies said that oral cancer in early age is very aggressive but in terms of treatment the early the age the more the pt tolerate ,, so prober care from special centers must take place

TNM staging aims to ease the communication between the medical teams ,, dentists and their pts when you prepare the pt for radiotherapy he must understand his case by explain what occurs inside his body by using TNM to make it easy ..

Also we know the stage of the tumor and by that the prognosis too

TNM must be kept by heart

Tx : we know there is primary tumor but there is no information WE don’t make clinical examination when we referred the pt ,, so the size is not known here

T0 : we know that there is lymph node involvement has squamous cell and comes from the oral cavity but we don’t know the primary site of tumor

T1S : carcinoma in situ

T1 Tumor 2 cm or less in greatest dimension

T2 Tumor more than 2 cm but not more than 4 cm in greatest dimension

T3 Tumor more than 4 cm in greatest dimension

T4 (Oral cavity) invasion ,, from the cortical bone into deep structure ,, to the tongue ,, maxillary sinus and the skin (cause invasion for the adjacent structure)

 N : LYMPH NODE .. Nx :no prober information about lymph node

N0: we don’t have lymph node involvemt

N1 : Metastasis in a single ipsilateral lymph node, 3 cm or less in greatest dimension

N2 Metastasis in a single ipsilateral lymph node, more than 3 cm but not more than
6 cm in greatest dimension; or multiple ipsilateral positive lymph nodes none more than 6 cm

N2a Metastasis in single ipsilateral lymph node more than 3 cm but not more than 6 cm in greatest dimension

N2b Metastasis in multiple ipsilateral lymph nodes, none more than 6 cm in greatest dimension

N3 Metastasis in a lymph node more than 6 cm in greatest dimension(N3a), bliateral nodes (N3b) contralateral node or nodes (N3c).

Bilateral :go directly for N3 .. contralateral : Tumor in side and the lymph node in the other side go directly for N3c

This mean : if no lymph node involvement on CT scan clinically ,, on microscope metastasis appears .. but no lymph node involvement appear at radiological level .. this means it appears on other site the prognosis goes down

Mx : metastasis cant be assessed

M1 : no distant metastasis

M2 : distant metastasis

Staging give you an idea about 5 years survival :

Stage 1 about 85 % 5-years survival and it goes down in stage 3 : 41 % ..(any T1 with N1 ) whenever we have spread of ipsilateral lymphnode less than 3 cm ,, when spread occur the 5 year survival will decrease to 9 % in stage 4 ..

And this is why we said early detection of oral cancer ,, this make a big difference when we work on pt 85 % 5 year survival .. or 41 % !

T1 ,N0 ,M0 >> Stage 1

T2 , N0 ,M0 >> Stage 2

T3 ,N0 , M0 >> Stage 3 or any tumor T1 , T2 ,T3 plus N1 M0

Any T4 ,, N2 or N3 ,, M1 >> Stage 4

Why 5-year exactly ? usually we said 5 yrs bcz usually after years if the pt develop new primary tumor we consider it as new tumor ,, also we have statistic that done every 5 year other every 10 year .. other tumor have good prognosis they do it every 20 years ..some type of SG tumors(adenoid cystic carcinoma) grow very slow progressive disease so the five years survival is done for this kind every 20 years

Aggressive disease is studied on 5 years survival ,, when the aggressiveness decrease the survival increase

**4 MONTHS LEFT SENIORS :D ~**