

Oral medicine
Sheet#18

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Today we will continue talking about facial pain and we defined pain last lec as an unpleasant sensory or emotional state caused by tissue damage (actual or perceived by the pt) and we mentioned the causes of facial pain:

Local causes like toothache and other causes like neurological and vascular and iatrogenic and referred facial pain

Features of dental pain:

From the teeth: reversible pulpitis or irreversible pulpitis

Or from periodontium and gingiva like periodontal abscesses

Pts with ulcers in the oral mucosa may experience facial pain

Or post surgical pain (after extraction for ex) as in dry sockets or infections

This should be easy for u to diagnose from the history and clinical examination

Burning mouth syndrome:

Common

It's a burning sensation or burning pain in oral mucosa with spontaneous onset and can't be attributed to local or systemic factors

Mostly females post menopausal females complaining from discomfort or burning sensation in oral cavity when we examine the pt we can't find any local or systemic factors explaining her pain

2 types:

1. primary Burning mouth syndrome: harder to treat there's no cause

2. Secondary Burning mouth syndrome: easier to treat bcoz here we have a cause like geographic tongue or iron deficiency anemia or B12 and folic acid deficiency

Key features:

-post menopausal women

-high prevalence of anxiety and depression (it happens either bcoz of the Burning mouth syndrome or its associated with it)

-strict oral location (the most imp point) which means that the pain is only intraorally (localized in the intraoral cavity) so the pt will not complain from pain around the eye or the jaw or radiating to the neck

Theres no known cause for Burning mouth syndrome this is why sometimes we call it idiopathic Burning mouth syndrome or primary Burning mouth syndrome

There are some theories explaining it:

1. steroid change theory

"It says that after menopause there are some changes in the hypothalamic-pituitary-adrenal axis, so the secretion of steroids will be affected and changed, neurodegenerative changes in the nerve fibers of the oral cavity will occur, and as a result the burning sensation occurs."

2. neuropathic change in taste buds:

"It says that there is an interaction between the taste sensation and the general sensation normally the taste sensation inhibits the general one, but in BMS pts there is loss of this inhibition so they'll have more sensitivity to general sensation appears as BMS, all these changes are bound to hormones mainly estrogen"

What's between the quotation marks "" are further explanations from last year's sheet the doctor didn't mention them in our lecture

3. some people say it's related to hormones like estrogen that's why part of the treatment is estrogen replacement therapy

We don't know exactly the percentage of its occurrence because not all people come to complain and sometimes the patient suffers from other medical problems so they think the burning mouth is just one of its causes

More common in elderly females >> more than 50 years

Sometimes it persists and sometimes it heals spontaneously

Clinical features:

The patient comes complaining of burning sensation in any place inside the oral cavity (palate tongue gingiva lips and pharynx ...)

Bilateral symmetrical and not related to the nerve pathway so the patient won't complain of pain in the lower lip or chin in the place of distribution of the mental nerve

Variable pain intensity (mild moderate severe)

Sometimes the burning sensation is associated by xerostomia and altered taste

Usually continuous sometimes it may follow a pattern for example the pain is more severe in the morning or it increases during the day so it has variable patterns

Pain can be relieved by eating and drinking

No clinical signs

Sometimes it's associated with sleep disturbances and this is from the depression and anxiety

To differentiate between 1ry and 2ry BMS we have to exclude any doubt of systemic cause we make blood tests as hemoglobin level, folic acid, Blood glucose level, urea, electrolytes, check the drug history (some drugs such as ACE inhibitors causes burning sensation),

candida (Candidal swab), and some other tests if we want to test sjogren's syndrome some pts are allergic to certainty types of food or materials but it's very uncommon

Mainly blood and urea and glucose and electrolytes

And exclude any local cause like if there is a pressure area in the ridge when wearing the denture or is the tongue space is limited

Management:

If 2ry its easy u treat the cause like for ex if the pt has deficiency anemia u treat it then the burning sensation improves or if the pt has uncontrolled diabetes u control his blood glucose and the symptoms improve

But in 1ry its difficult bcoz there's no cause so the management is mainly medications and psychological support

In facial pain there's no evidence based medications

Examples of some medications: topical glunazepam , alpha- lipoic acid

Some pt we give them systemic medications like tricyclic anti-depressant (Amitriptyline mainly) , opiods like diazepam may help too selective serotonin re-uptake inhibitors, gabapentin, capsaicin(used to treat chronic pain and its effective)

So its really difficult to treat 1ry BMS bcoz there the pain is not a symptom of a disease here the pain is the disease and there's no cause to tell the pt why he is in pain so we need psychological support and some medications and they may not be effective as well

Psychological support is most important bcoz the pt may not tell you that he has anxiety in the first or second visit but they may tell you that later

Trigeminal Neuralgia

Severe type of pain

Sudden unilateral, recurrent stabbing pain

It's located exactly at the distribution of one of the Trigeminal nerve branches, and so you have to know the anatomy of the trigeminal nerve. If a patient comes with a complaint, we have to ask about the pain distribution, if it's the mandibular branch or maxillary or ophthalmic.

There are two types, primary and secondary.

The primary type is the idiopathic type and it's more common. The secondary type affects patient who have CBA (cerebellopontine angle), or it could be the first manifestation of multiple sclerosis.

The nerve is a sensory nerve, so upon stimulus you will feel by that nerve, but here it will work on its own without a stimulus. The theory says that the nerve is compressed when it's leaving the brain foramen, demyelination occurs so it will cause hyper-excitability in the nerve that will cause severe electric shock like pain. Another theory states a genetic predisposition.

It is hard to trust the pain description, there is no definitive mechanism of this pain. Mainly affects old age, 60 year olds.

If it occurs in a younger patient (40 years), it is usually secondary and mostly the patient has MS.

Familial tendency is rare, w bilateral involvement could happen but is rare, usually unilateral.

It won't undergo remission, so it needs treatment.

The pain is so severe sometimes, that the patient attempt suicide. It is a very severe type of pain and affects a person's life negatively. E.g. When a patient touches the skin below the eye, it gives an electric shock, it stays for seconds to minutes but is very severe. Most of the patient will become depressed with anxiety, and they try to hide away from society since all the social activities make the patient predisposed to or directly causes the attack of pain.

So it's severe pain, seconds to minutes

Electric shock in nature or like being burned.

Defined anatomical distribution

There's a trigger zone, which makes it differentiated from other diseases. In general there is absent of sensory defect, the patient will not complain of paresthesia or anesthesia and there is no signs or automatic features such as rhinorrhea. Most patients come to you after a dental treatment, which causes overlapped pain, making diagnosis complicated.

Patient who have trigeminal neuralgia come to you after having all their teeth endo-treated or extracted. This complicates things; after endo, the patient will describe pain similar to flare up

Investigations:

- blood tests: rarely helps in the diagnosis we make them to check the liver and the kidney function, because the medications might affect them it's only for exclusion.
- MRI >> Most important to exclude any brain lesion or injury or local cause tht might affect the nerve.
- sensory testing
- psychological assessment (adverse psychological reactions may occur as a result of the pain (stress, depression, anxiety))

Management:

It's mostly medical, some cases need surgical treatment, and all cases need psychological evaluation and treatment, because of depression caused by pain.

There's a long list of medications used for treatment, but the golden standard drug is carbamazepine, which is an antiepileptic drug, but it has shown to be effective in patients with trigeminal neuralgia and used as diagnostic drug. (They give the patient this drug, if the pain was relieved then it's trigeminal neuralgia).

It has side effects, such as dizziness and on the blood.

Surgical treatment if the neuralgia caused by a local factor, a tumor or a lesion.

It is rare, we don't know how rare, there are no studies, but we have to diagnose it to not treat teeth and make the diagnosis much more complex.