

DRY MOUTH

วิชาการฝ้ายทันตสาธารณสุขปี 2565



DRY MOUTH

XEROSTOMIA

- Subjective
- Questioning individuals
- Female
- Psychological factors
- Mucin component ↓

HYPOSALIVATION

- Objective
- Measuring salivary flow rate
- Age
- Medication

MOST FREQUENT CAUSE OF HYPOSALIVATION

MEDICATION

Antihypertensives
Antihistamines
Psychiatric drugs

RADIOTHERAPY CHEMOTHERAPY

Head & Neck

SJÖGREN'S SYNDROME

Autoimmune disease

CAUSE OF DRY MOUTH

- Chemotherapy
- Mouth breathing
- Dehydration; Fever, excessive sweating, vomiting, diarrhea, blood loss, burns, renal failure
- Psychogenic
 - Fear, stress, anxiety
 - Anorexia, Bulimia
- Habits; smoking, alcohol consumption, caffeinated drinks
- Disease
 - Salivary gland disease (Trauma/ Tumor)
 - Salivary aplasia
 - Autoimmune disease; SLE, Primary biliary cirrhosis
 - Sarcoidosis
 - Parkinson's disease
 - Alzheimer's disease
 - Cystic fibrosis
 - Lymphoma
 - Asthma
 - Endocrine disease; Uncontrolled DM, Hypothyroidism
 - Infections; HIV, Hepatitis C



DIAGNOSIS

HISTORY TAKING

Dry mouth questionnaire

ปริมาณน้ำลาย

มีปัญหาตอนกลืน

ปากแห้งขณะทานอาหาร

ต้องดื่มน้ำ/ของเหลวเพื่อช่วยในการกลืนอาหารแห้ง

Subjective complaints

ทานอาหารแห้งลำบาก

ต้องจิบน้ำบ่อย

เจ็บหรือรู้สึกแสบร้อนที่เยื่อบุผิวช่องปาก

การรับรสเปลี่ยนไป

HISTORY TAKING

Objective complaints

Mirror sticks to buccal mucosa or tongue

Saliva frothy

No saliva pooling in floor of mouth

Loss of papillae of tongue

Altered (smooth) gingival architecture

Glassy appearance of oral mucosa

Cervical caries (more than 2 teeth)

Tongue lobulated/ highly fissured

Debris on palate



PAST MEDICAL HISTORY: **DRUG-RELATED XEROSTOMIA**

- Most common ADRs in the oral cavity
- Common complaint of elderly persons
- More than 500 –list dry mouth as an adverse effect
- Increasingly common in elderly patients taking multiple medications (polypharmacy)
- Reversible phenomenon



PAST MEDICAL HISTORY

Antihypertensive drugs

ACE inhibitors: -ril

Beta blockers: -lol

Na channel blocker: Procainamide

Diuretics

Thiazides

Furosemide

PAST MEDICAL HISTORY

Antidepressants

TCA: **Amitriptyline**

SSRIs: Fluoxetine (Prozac®), Paroxetine (Paxil®), Sertraline (Zoloft®), Citalopram (Lexapro®)

Mix-re-uptake inhibitor: Venlafaxine (Effexor®)

Dual-re-uptake inhibitor of serotonin and norepinephrine: Duloxetine Hydrochloride

Moderate serotonin selective re-uptake blocking properties and direct 5-HT₂ antagonism: nefazodone

Selective norepinephrine re-uptake inhibitor (selective NRI) : reboxetine

Noradrenergic and specific serotonergic antidepressant (NaSSA): mirtazapine

Selective re-uptake inhibitor of dopamine and norepinephrine: bupropion

PAST MEDICAL HISTORY

Antipsychotics

Conventional phenothiazine antipsychotics: fluphenazine

Newly developed antipsychotic drugs: clozapine, olanzapine, quetiapine, risperidone

Antihistamines

Older antihistamines: chlorpheniramine

Newer H1 receptor antagonists: acrivastine, astemizole, cetirizine, ebastine, fexofenadine, loratadine, mizolastine, terfenadine

Drug used to treat overactive bladder

Oxybutynin, Tolterodine, Propiverine hydrochloride, Tamsulosin, Terazosin

Decongestants

Pseudoephedrine , Loratadine plus pseudoephedrine sulphate, Cetirizine plus pseudoephedrine sulphate

PAST MEDICAL HISTORY

H2 receptor antagonist + proton-pump inhibitors

Ranitidine, Cimetidine, Omeprazole

Bronchodilators: Tiotropium

Antimigraine drugs: Rizatriptan

Skeletal muscle relaxants: Tizanidine

Opioids, benzodiazepines, hypnotics, drug of abuse

Morphine, Dihydrocodeine, Tramadol

Benzodiazepines (eg. diazepam, lorazepam)

Cannabis and Ecstasy

WHOLE SALIVA FLOW RATE (ML/MIN)

	Normal flow rate	Abnormal flow rate
Unstimulated (Resting) whole saliva	0.3 – 0.4	<0.1
Stimulated whole saliva	1 – 2	<0.5

SJÖGREN'S SYNDROME (SS)

- Chronic, systemic autoimmune inflammatory disorder
- Affects the exocrine glands, particularly the salivary and lacrimal glands
- Oral and ocular dryness
- All ages, ~50 years.
- Female to male ratio ~9 : 1



SJÖGREN'S SYNDROME (SS)

- **Primary SS:** dry eyes + dry mouth
- **Secondary SS:** primary SS + another chronic inflammatory connective tissue disease
 - rheumatoid arthritis
 - systemic lupus erythematosus
 - scleroderma
 - mixed connective tissue disease



COMPLICATION OF DRY MOUTH

COMPLICATION OF DRY MOUTH

- Reduce or alter the sensation of taste
- Impair speech
- Impede the mastication, swallowing function, leading to dysphagia
- increase the risk of dental caries, especially root caries
- Decreased self cleansing mechanism: effect on periodontal disease : gingivitis, halitosis
- Have profound effect on the oral mucosa : increased risk of angular cheilitis, mucosal ulceration, and more susceptible to oral infections, especially those caused by *Candida albicans*
- For edentulous patient, problem with denture retention





MANAGEMENT

MANAGEMENT OF DRUG-INDUCED XEROSTOMIA

Avoidance strategies

- Consult physician for similar acting drugs with fewer salivary side effects
- Avoidance of cariogenic sweet and dry, hard, sticky, acidic food
- Avoidance of caffeine, alcohol intake/mouth rinse + smoking
- Denture removal at night + denture disinfection
- Implant-retained denture

MANAGEMENT OF DRUG-INDUCED XEROSTOMIA

Replacement of saliva

- Frequent sips of water, ice chip
- Saliva substitutes

Stimulation of secretory function

- Chewing sugar-free gum, especially those containing xylitol (antibacterial properties)
- Sialogogues (Cholinergic drugs)

Prevention of oral disease

- Meticulous oral hygiene care
- Daily use of fluoride toothpaste/rinse
- Increased frequency of regular check-up
- Lips coating with lubricant
- Humidifying sleeping area



MANAGEMENT OF RADIATION-INDUCED XEROSTOMIA

Salivary stimulants : Parasympathomimetic drugs

- Pilocarpine
 - 5 mg given orally before meals, 3 - 4 times daily
 - 0.5-1% eye drops solution
 - 1% - 2% pilocarpine mouthwash for 1 min.
 - Good result and not sig. difference to systemic dose
- Cevimeline
 - 30 mg, 3 times daily



MANAGEMENT OF RADIATION-INDUCED XEROSTOMIA

Salivary stimulants : Parasympathomimetic drugs

Side effects :

excessive sweating

increased heart rate, blood pressure

bronchoconstriction

rhinitis

nausea

urinary frequency

gastrointestinal (GI) disturbances

diarrhea

Contraindication: patients with gastric ulcer, narrow angle glaucoma, uncontrolled asthma, hypertension, or beta-adrenergic blocker users