



# General principles of treatment of mucosal diseases

## Indication of local antiseptics

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FAKULTNÍ  
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M U N I

# Systemic treatment

- causal treatment **against microbes**  
(antibiotics, antifungals, antivirotics)
- **analgetics, antipyretics**
- **antihistaminics, (corticosteroids, immunosupresives)**
- immunomodulators - to increase the immunity



# Local treatment

- removal of irritation factors
- improvement of OH (precaution against secondary bacterial infection), soft diet
- antiseptics, antiflogistics
- antibiotics, antifungals, antivirotics
- adstringent agents, epitelization agents
- local anesthetics for topical use

Solutions (mouthwash, spray), gels, mucosal adhesive ointments (orabase), ointments (lip vermilion)

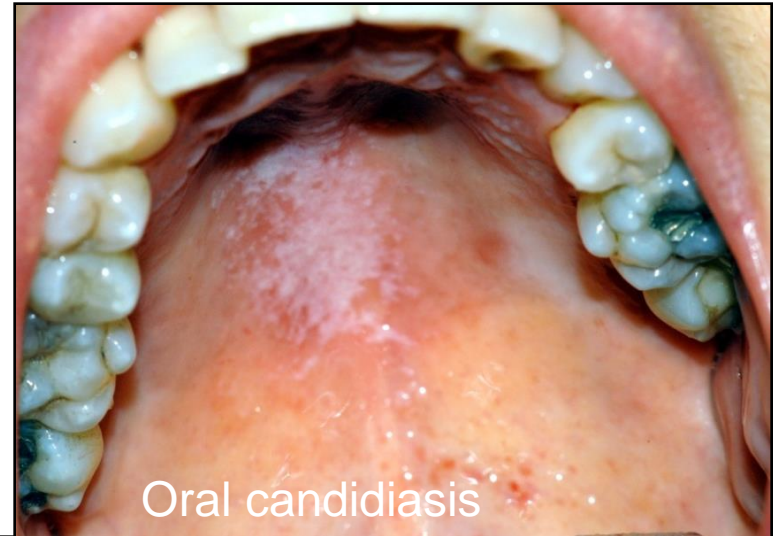
# Local treatment - Local antiseptics

- Disinfectant (skin) - Antiseptics (mucous)
- When topically applied, they kill bacteria (the possible antifungal and antiviral effect)
- Attention in children! (avoid swallowing - cotton ball on a stick)
- Beware of large mucosal lesions! (large wound area, KI of alcohol solutions)
- Scale efficiency of mouthwashes

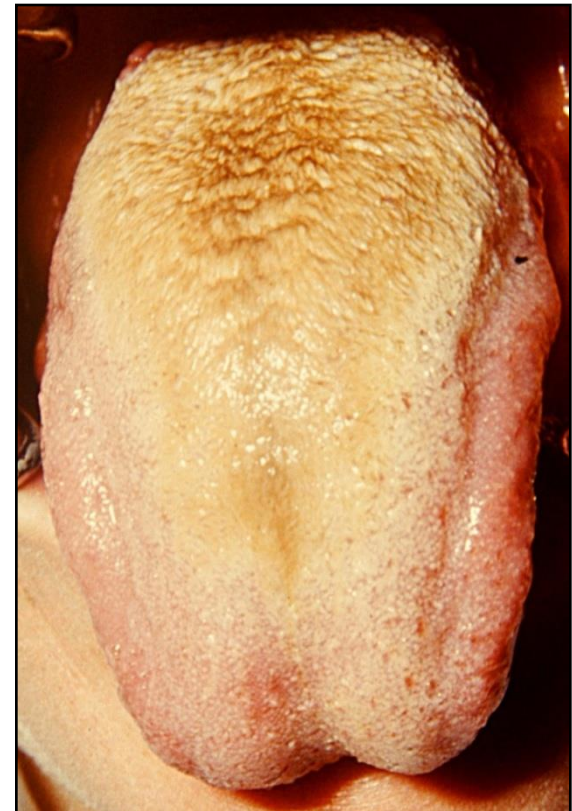
# Indication of Local antiseptics

- Mucosal diseases
- Infectious diseases of oral membrane mucous
- Symptomatic treatment
- Prevention in certain patient groups (HIV+...)
  
- Perio diseases
- Initial phase of perio treatment
- Maintenance phase
- People with difficult conditions
- People with mental or physical disabilities
- Perio surgery

- Infectious diseases of oral membrane mucous



- Initial phase of perio treatment
- „*Full mouth disinfection*“



- Maintenance phase

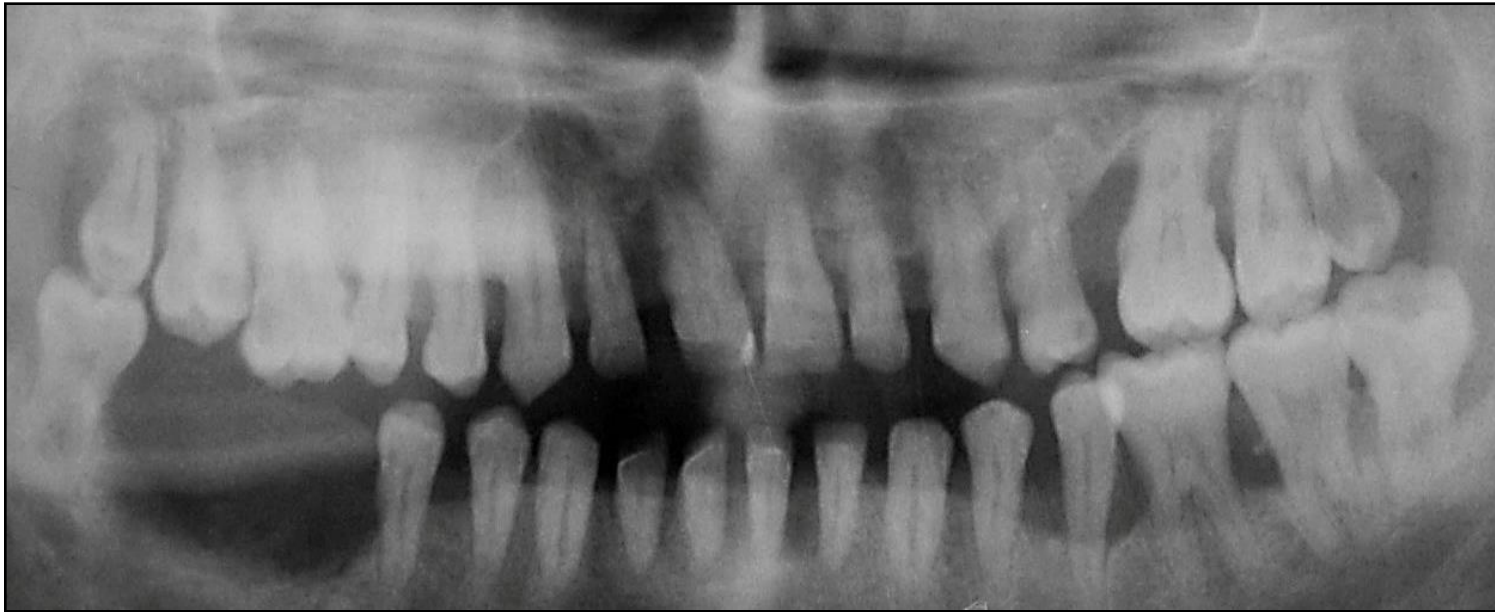




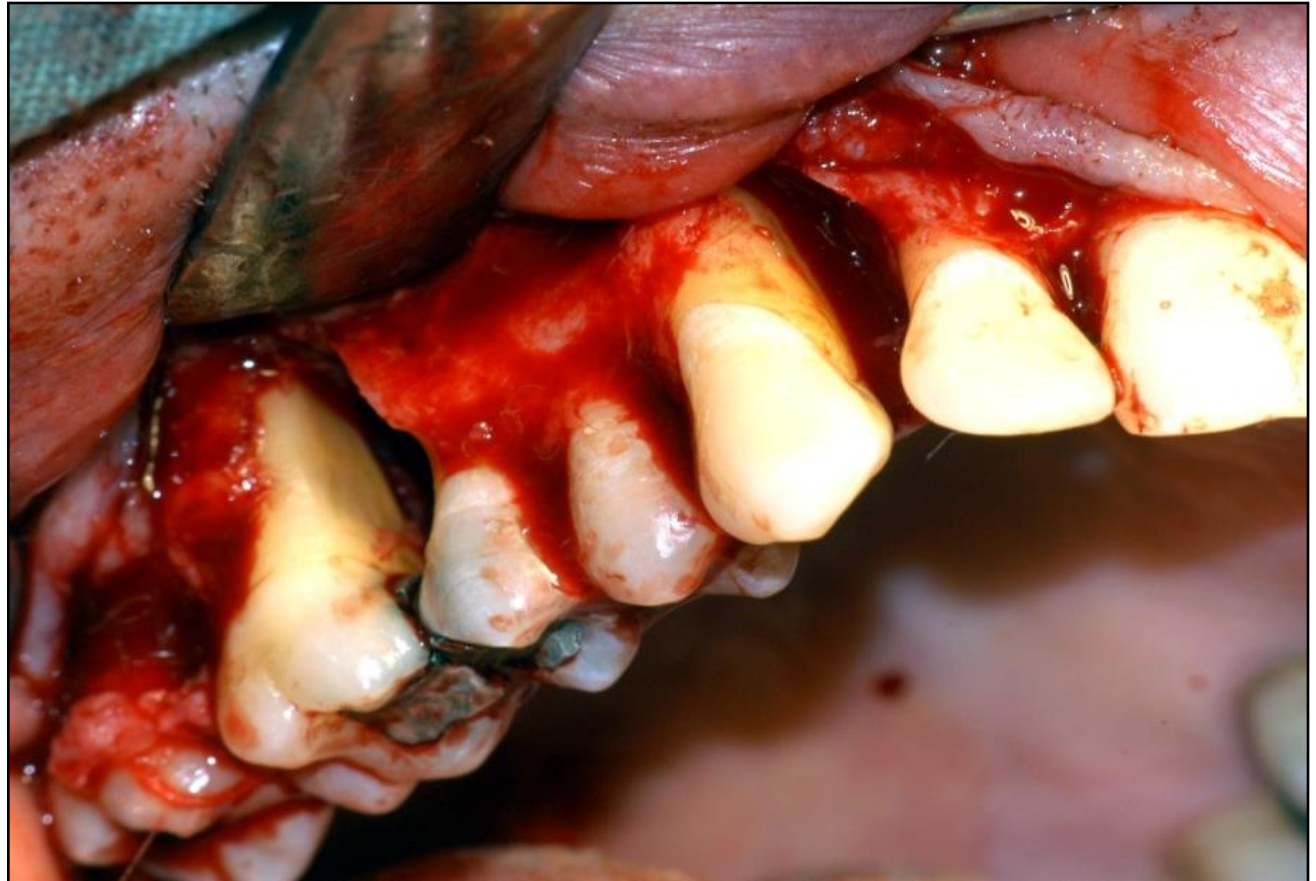
- People with **difficult conditions**



- People with mental or physical disabilities



- Perio surgery
  - before (bacteriemia)
  - after (sec. infection)



- High risk of caries



# Side effects

- dysgeusia, dark coloration of dorsum of the tongue and of fillings
- epithelial desquamation
- allergies
- poisoning if ingested (children)



# Local antiseptics

- Chlorhexidinum
- Hexetidinum
- Cetylpyridinium
- Benzoxonium
- Benzalconium
- Benzydaminum
- Iodium
- Triclosanum
- Hydrogen Peroxide



# Chlorhexidinum

- Gold standard
- Antibacterial, antifungal, antiviral effect
- Bacteriostatic - germicid (bactericid) effect
- Chemical inhibitor of plaque
- The ability to adhere to the oral mucos (depot)



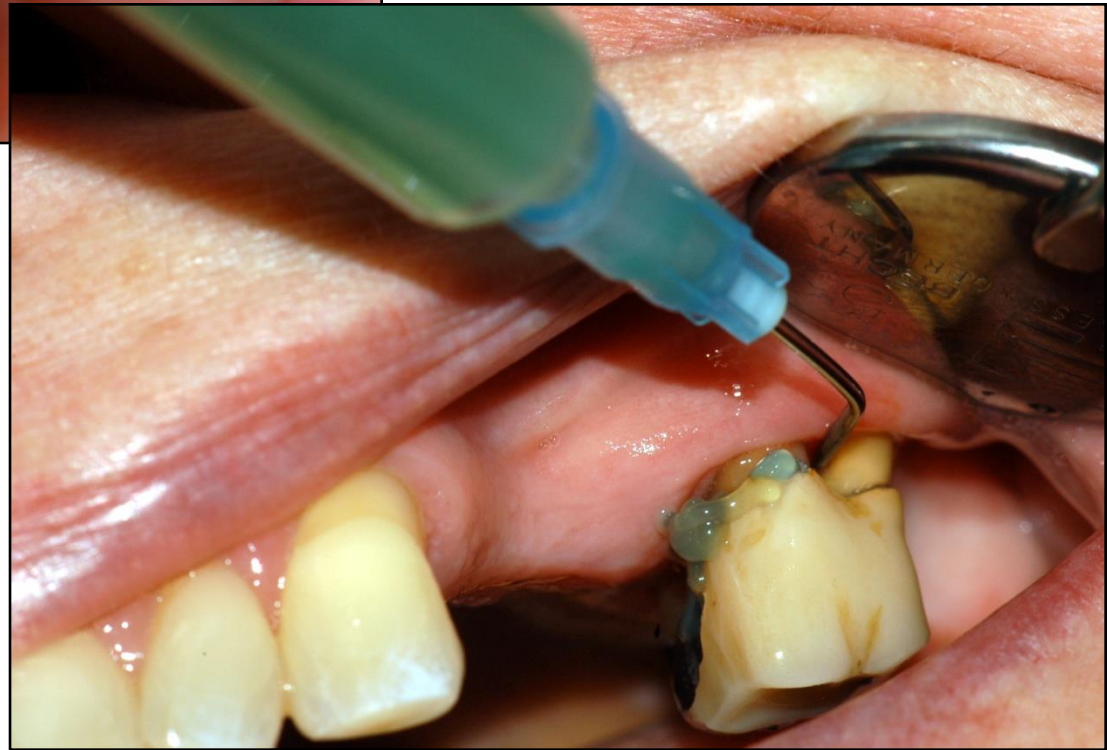
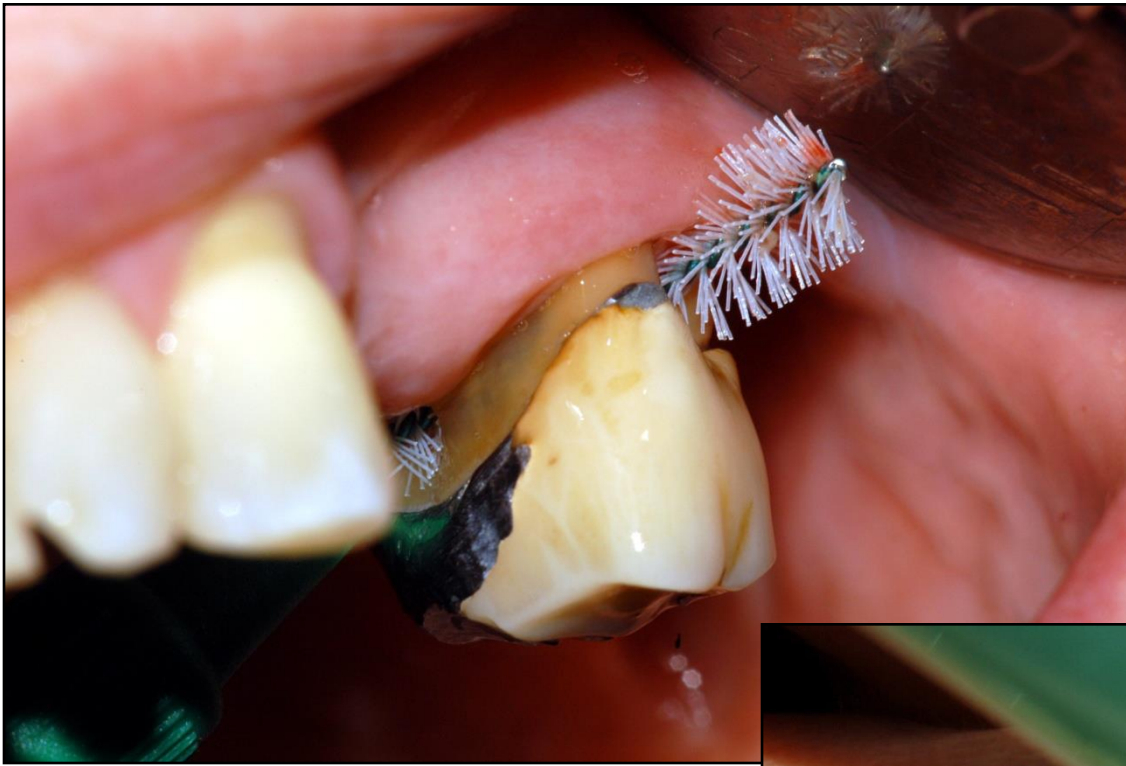
CHX – mouthwash 0,05%..... 0,2%  
– 2 times a day for 1 min





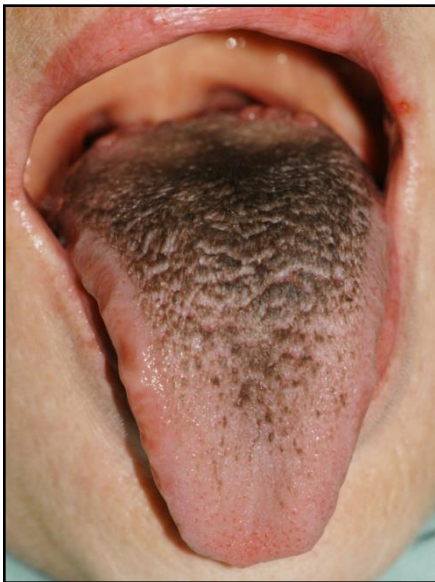
# CHX - toothpastes, gels, sprays, paints, pastils, varnishes, Perio chip





# Chlorhexidinum

- 0,05% - 0,1% - 0,12% - **0,2%**  
2 times a day (once per 12 hours)
- side effects - dysgeusia, dark coloration of dorsum of the tongue and of fillings, epithelial desquamation



- **Chlo-site<sup>®</sup> gel** (fy Ghimas, Italy)
- 1,5% CHX gel
- chlorhexidin digluconate a chlorhexidin dihydrochlorid 1:2



- **Perio Chip<sup>®</sup>** (Dexcel Pharma)
- 2,5 mg CHX (34%)



# Octenidolhydrochloridum

- Octenidolhydrochloridum in aqueous solution
- A very good bactericid, antifungal effect
- Less side effects than CHX/more expensive



# Cetylpyridinium

- The **broad antimicrobial spectrum**, but does not reach the efficacy of chlorhexidine
- 0,05 - 0,1%
- Less side effects than CHX
- **Combination with s CHX**
- Usually not for treatment of oral membrane mucous



# Calgel

- Cetylpyridinium, lidocainum
- Mild antiseptic and anesthetic effect
- Aroma chamomile
- Up to 6 times a day





# Essential oils

- Antibacterial effect
- Antiinflammatory
- Thymolum, eucalyptolum, mentolum, metylsalicylate
- Solution in alcohol – 25% (unsuitable for children)
- Not suitable for treatment of mucosal lesions !!!





CPC

propylen glykol

ZnCl

NaF ↑

# Listerne professional



## Gum therapy

-ethyl-lauroyl-  
-arginát-  
hydrochlorid (LAE)



## Fluoride plus

- NaF 450ppm  
- xylitol



## Sensitivity therapy

- calcium oxalate -  
NaF 220ppm

# Jodine preparations

- Strong broad-spectrum antiseptic
- Strong immediate effect without prolonged exposure
- Allergic reactions to iodine in the population



# Hexetidinum

Hexetidinum 0,1%, in alcohol

- Mild antibacterial, antifungal effect
- Mild local anesthetic effect
- Antinflammatory effect
- It does not bind to the mucosa, concentration decreases rapidly
- Undiluted rinses 3-5 times a day



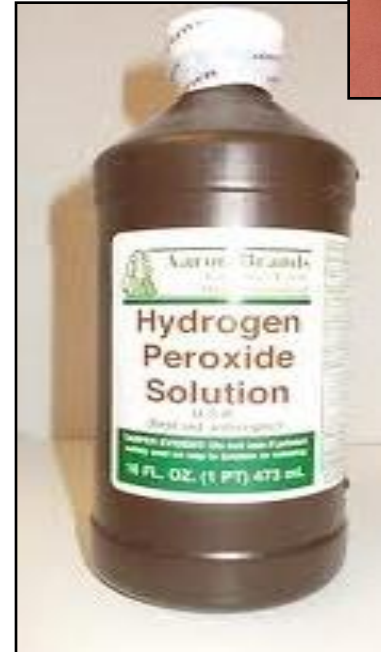
# Benzydaminum

- Nonsteroidal anti-inflammatory solution
- **Anti-inflammatory, anesthetic effect**
- Only mild antibacterial and antifungal
- 0,15%, in alcohol
- 4 - 6 times a day
- Sol, spray, pastils



# Hydrogen peroxide

- Treatment of ANUG
  - Deep tissue oxygenation
  - Short antibacterial effect
  - **Treatment of ANUG**
- Dentist's office:  
**10 - 30%** H<sub>2</sub>O<sub>2</sub> topical  
**3%** H<sub>2</sub>O<sub>2</sub> irrigation
- At home:  
**6%** H<sub>2</sub>O<sub>2</sub> topical application  
diluted 1:1 mouthwash (3%)







# Benzoxoniumchlorid

- Benzoxoniumchlorid, lidocain
- **Antiseptic effect** (bactericid G+, antifungal, antiviral)  
**local anesthetic** (lidocainum) effect
- Infection of pharynx  
and oropharynx
- Pas, sol, spr



# Salicylcholinum *Mundisal gel*

- Salicylcholinum, cetalconium chlorid
- **Anti-inflammatory**, anesthetic effect
- 3-4 times a day



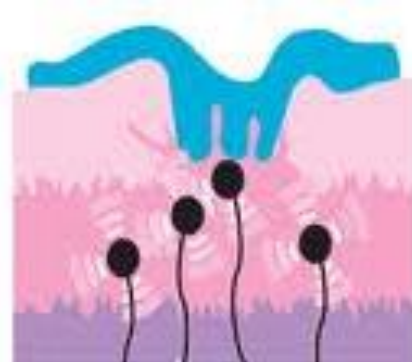
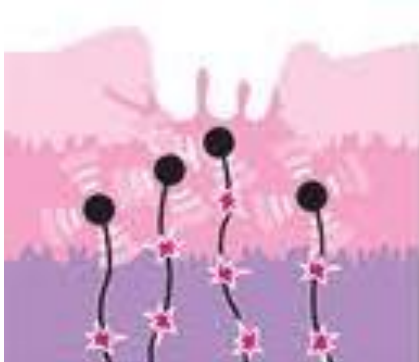
# *Solcoseryl dental **adhesiv paste***

- Deproteinized calf blood
- 1% **polidocanolum**
- The effect lasts for 1-5 hours



- Polymers
- **Natrium-hyaluronát**
- Gel, spray

Aphtgel, Aftamed, Alocclair  
Gengigel, Gelclair



# Herbs

- Herbal infusions of rinses
- **Mild** antiseptic, anti-inflammatory, adstringent, epithelization effect
- **Sage**, thyme, mint, oregano, agrimony, chamomile...
- Several times a day
- **Watch out for allergies !!!**





# Antiviral drugs - local treatment

- Antiseptics with antiviral effects

CHX, iodine preparations, Zincum sulfuricum

Rp. ✓ Sol. Zinci sulfurici 0,25% aquosae

- Specific treatment of **nucleosids** (HSV)  
**aciclovir topical cream** for labial herpes simplex  
- *Herpesin*



# Antiviral drugs - systemic treatment


- **Aciclovir** is active against most known species in the herpesvirus family - HSV, VZV (EBV, CMV)
- It is **inactive against latent viruses** in nerve ganglia
- **HSV** - 200 mg 5 times a day (serve every 4th hours + pause to sleep)
- **VZV** - 800 mg 5 times a day
- **Valaciclovir, ganciclovir, famciclovir**



# Corticosteroids

- **Dexamethasonum** (1 mg in 1 g of paste)  
(*Dexaltin oral paste*)
- **Indication** – autoimmune diseases, OLP, major aphthous ulcers, EEM, allergic reactions
- **Contraindication** - acute bacterial, viral, fungal infection, pregnancy, lactation
- 1 - 4 times a day in a thin layer

# Corticosteroids

Rp  Dexamethasoni      0,01  
Paraffin liq.      q.s.  
Ung. macrogol    ad 10,0  
M.f.ung.  
DS: apply to the oral mucosa  
3 times a day

# Treatment of oral candidiasis

- Clinical examination,
- Microbiological examination
- **Local Treatment** - always, often a combination of drugs (resistance is possible)
- **Systemic Treatment** - extensive involvement, recurrence, resistance, serious general health

# Local Treatment of oral candidiasis

- **Antiseptics**

- CHX 0,1% - 0,2%
- hexetidinum 0,1%
- iodium
- natrium tetraboricum  
5% – 20%

- **Antifungals**

- nystatinum

Rp. 

Nystatini                    2 mil IU  
Methylcellulosi            0,3  
Glyceroli 85%              0,6  
Aquae purif.                ad 20,0  
M.f. suspensio  
DS for application to the  
oral mucosa 4 times a  
day

# Local Treatment of oral candidiasis

- **Azol antifungals** - *Canesten, Clotrimazol* (lips)
  - suitable pharmaceutical form to oral cavity?
  - non lege artis - vaginal tablets to dissolve in the mouth
- **Solutions of triazol antifungals**
  - ketoconazolum, fluconazolum, itraconazolum
  - not available for dentists (only pediatrician)

# Systemic Treatment of oral candidiasis

- Extensive involvement, recurrence, resistance, serious general health
- Prophylaxis (long-term antibiotic therapy, immunodeficiency and immunosuppressive ter, HIV)
- Adequate doses for a sufficiently long time (minium 2-3 weeks)

# Systemic Treatment of oral candidiasis

- **Triazol antifungals**  
(ketoconazolum - *Nizoral*, fluconazolum - *Diflucan*, itraconazolum - *Sporanox*)
- KI - pregnancy, liver failure, **drug interactions** (cyclosporin A, warfarin, ATB)
- **Caring for dentures**
- **Reduction of predisposing factors**

# Caring for dentures

- New denture, relining (rebasing)
- Proper cleaning (light, glasses)
- Taking of at night
- Solution of baking soda (alkaline reaction),  
0,2% CHX



# Lip vermilion

- Ointments with antimicrobial effect  
**ATB** - *Framykoin* (Neomycini, Bacitracinum)  
**antifungal** effect - *Fungicidin*, *Pevaryl*, *Batrafen*  
+ hydrocortisonum (**anti-inflammatory**) - *Pimafucort*
- support of **epithelization**  
*Bepanten* (dexpanthenolum with CHX), *Calcium pantothenicum*, *Infadolan*



# Treatment of xerostomia

- Sufficient amount of **fluid** through the day
- Protection of **lips**
- Avoidance of drugs that may cause xerostomia, alcohol, smoking, dry or spicy food
- **Stimulation of salivation**
  - chewing gums  
diabetic sweets
  - parasympatomimetics  
(pilocarpin)



# Treatment of xerostomia

- **Substitution of saliva**

- artificial saliva
- mineral water (Vincentka) spray
- *BioXtra, Biotene, Xerostom* gel, mouthwash, spray, toothpaste, chewing gums



# Treatment of xerostomia

- Maintaining perfect **oral hygiene** - prevention of new dental caries
- Local **fluoridation**, careful treatment of **caries**
- Treatment of **salivary glands**
- Treatment of **oral mucous**
- Regular recall

# Questions for practical exam – Rp.

- Primary herpetic gingivostomatitis
- Herpes labialis, Intraoral herpes
- Oral candidiasis
- ANUG
- Traumatic erosion/ulcer
- Aphthous ulcers minor/major
- Hyposalivation with Xerostomia