Oral Aspects of Diseases in Internal Medicine
Chest troubles

- **Disease of upper airpassages:**
  - Sinusitis, Pharyngitis, selective IgA deficiency

- **Diseases of lower air passage:**
  - Asthma Bronchiale

- **Other lung diseases:**
  - Emphisema, Brochitis (the patients hate the long dental intervention)

- **Tuberculosis:** (the aerosol of turbine spread the bacteria), Wegener granulomatosis, Sarcoidosis (diagnostic problems)
Bronchy Asthma

2-3% of the total population
Patients have suffering of a bronchial attack-like reversible process.
Antigen get into the body by the air passage, but attack can caused by Aspirin, nervousness or stress.
For a dental treatment patients bring with the drugs.

X-ray picture of a Pneumonia case
Tuberculosis

Frequent oral symptoms
Gumma-like tuberculum on the tongue
Lupus Vulgaris on the face
Chest X-ray of a TBC case
X-ray picture of a Tuberculotic Cavern
TBC-s are spread mainly of hematogenic way, but it could be infect the oral cavity with sputum. The drops of turbine aerosol, smaller than 8µm can carry the bacteria. The staff of a dental office has also in a risk of infection. Mask
Diseases of the Cardiovascular system
Diseases of Coronary: 
(ischémic heart diseases)
As a result of stress: 
Dental waiting room, 
anginonic mandibular pain.
Status Post Cardiac Infarction:
(premedication: anxiolytic drugs), be careful with the epinephrine.
Anesthetic possibility: sometimes general anesthesia.

The Company Arteries

- Aorta
- Coronary Arteries
Diseases of Coronary

- Coronary insufficiency
- Angina Pectoris
- Myocardial Infarction (if an anginic attack stay longer than 5 minute it could be infarceration)
- In this case the serum transaminase and LDH levels are increasing.

Drumstick fingers in ischemic cardiac disease
Dental Aspects (premedication)

- Patients difficulty tolerate the pain
- Anxiolytic premedication (in the case of angina pectoris: isosorbit, nitroglycerin)
- Patients taking anticoagulant need special attention-decrease the drug concentration before any surgical intervention.
- Decreased epinephrine concentration in anesthesia
Infective Endocarditis
Subacute Bacterial Endocarditis

It could be caused not only by bacteria, but fungi too.

Cawson: in 6-10% could found dental cause among they patients with endocarditis.

The most frequent is:

Streptococcus Hemolyticus A.
Dentist must concentrate on the next

- Previously the patient suffered: Rheumatic Fever, problem with Cardiac Valve, other heart problems.
- If there is a risk: antibiotic prophylaxis
- Before dental intervention the patients must rinse with antiseptic solution
- Risk factor patient: if there is fever after three months of dental intervention, the patient see the physician.
Antibiotic Prophylaxis

- **Amoxicillin**: 3 g, 1 hour before dental treatment and 1.5 g, 1.5 hours after treatment.
- If the patient has amoxicillin allergy: **Erythromycin**: 800 mg, 2 hours before treatment, and 400 mg, 6 hours after treatment.
- **Clindamycin**: 300 mg, 1 hour before treatment, and 600 mg, 6 hours after treatment.
Hypertension

In this disease either systolic or diastolic pressure sometimes both are higher, than the normal value.

It is a risk factor for the patients with cardiac or cerebrospinal diseases.
Dental Aspects

We need blood pressure apparatus in the dental office.

Most of the patients go to see dentist most frequently, than to see physician.

We can prevent: stroke, heart attack, irreversible kidney diseases, by equable blood pressure control.
The known high blood pressure patients must controlled before each dental treatment. We must know if the patients stopped any drug previously.
Hypertonic patients need carefully changed anesthetic and plan a short period treatment time. Tolas et al. shown out that Lidocain without epinephrine do not accentuate the blood pressure, as a result of given 0.001% epinephrine the blood pressure increase as much again.
The not well controlled hypertonic can cause severe postextraction bleeding.
These patients need very careful treatment avoid the increase the concentration of endogenous epinephrine. We can give anxiolytic drug to stop this possibility.
Most of antihypertensive drug have side effects can cause problems along dental treatment. The antihypertensive affects on the central nervous system can cause xerostomie, the methyldopa cause oral ulcers in 1%, and the calcium channel blockers gingival enlargement.
Venous Thrombois Thrombophlebitis

Most of these patients take anticoagulant drugs. They need same types of treatment schedule than the patients with cardiac infarction.
Diseases of Kidney

Oral Aspects
The patients treated by dialysis or kidney transplantation suffered in **Glomerulonephritis**. The prognosis of these patients improved in the last three decades, because of the improved preoperative and operative techniques.
Oral Aspects of Kidney diseases

As the patients state go from azothemia to uremia, decrease the quantity of glomelural filtrate, and a lot of accumulated materials cause different changes in the body.
The changes in the Oral Cavity must be recognised by Dentists:

- Taste and smell of ammonia
- Stomatitis, Gingivitis
- Decrease of saliva of Parotid gland
- Bad oral taste correlates with the BUN (blood urea nitrogen) level
Xerostomy caused by chemical inflammation of the salivary glands, dehydration and oral breathing. In childhood the increased level of urea-nitrogen decrease the caries frequency.
The patients in dialysis are thought hardly by their dental problems. More than 60% of these patients have had dental problems. The dentists are not glad to treat patients with severe systemic diseases.
After dialysation the patient's fluid and electrolyte balance and clearance normalized. The surgical interventions must be done before dialysis because the heparin concentration and platelet dysfunction smallest in this time.
Dialyzed patients are very sensitive for bacterial infections: such as endocarditis and endarteritis. In this cases the prophylactic schedule same as in cardiac diseases must be apply. Most of the dialyzed patients are positive for Hepatitis

The risk of it decreased by the improved transfusion examination.
Problems can develop in the dental chair drug treatment of these patients. Most of these drugs are metabolized by the liver and eliminated by the kidney. By this way the bio efficacy and destabilization of the drugs are important point of view. Many very saved drugs can give no or in decreased dose for uremic patients.
Kidney Transplantation
The most successful kidney transplantation are produce if the donor and recipient are closely relatives.

The cause of rejection are the HLA (histocompatible antigens) and Host versus Graft (HvG) reaction in which the recipient organism produce toxic lymphocytes against the graft.
Until 1983 kidney transplanted patients was treated with asathyoprin and 5-imidasolil derivates against rejection. These drugs affect either T and B lymphocytes. In present time we use Cyclosporine. Affect only on T lymphocytes and has neither hormonal nor carcinogenic side effects.
30% of cyclosporine treated patients have either 

**Gingival Enlargement** 

or  

**Periodontitis.**  

There is very close correlation between the extent of the gingival enlargement and the serum level of cyclosporine.
Other Dental Aspects

As a result of cyclosporine taking increase the risk of infections.
As a result of cyclosporine taking increase the number of many periopathogenic bacteria in the oral cavity:
   Klebsiellas,
   Pseudomonases,
   Prevotellas,
   Fungi and virus (Candida, HSV)
Hematological Diseases

Dentist must recognize them
Red Blood Cells

Anemia:

Iron deficient
Pernicious (Autoimmune)
Hemolytic
Polycytemia Vera
Iron-deficient Anemia
Autoimmune Hemolytic Anemia (AIHA)
As a result of hemolysis the level of serum bilirubin increase (mainly in the night).
Drugs frequently cause disease in this group

Analgesics, antiphlogistics, antirheumatics
Pyrazolon derivatives, such as metamizol; oxyphenbutazone, phenylbutazone, and others; phenacetin; paracetamol

Antibiotics, chemotherapeutic agents
Antibiotics: penicillin, streptomycin, tetracycline, vancomycin, cephalosporin, and others
Chemotherapeutic agents: sulfonamide; other chemotherapeutic agents, e.g., metronidazol

Hypnotics, psychopharmacologic agents, anticonvulsants
barbiturates chlorpromazine, and other tricyclic psychopharmacologic agents; hydantoin derivatives
Leukemia

Malignant tumors in the bone marrow. The function of normal elements of the bone marrow are blocked (anemia, thrombocytopenia).

Leukemic cells infiltrate parenchymal organs.
Classification of Leukemia

- Myeloid
- Lymphoid
- Monocytic

- Acute
- Chronic

Acute myeloid leukemia
Acut lymphoid leukemia
Oral symptoms are frequent in the acute cases.

The exercises of a dentist to recognize that. Patients is in a serious state, and send him or her to specialist.
Chronic Myeloid Leukemia (CML)
Not only the vestibular but the oral side of gingiva is enlarged
CML frequently symptomless and recognized in a routine laboratory test characterized by different developmental level of the PMN-s.

The chromosomal anomaly has diagnostic value: **Philadelphia Chromosome**

We lost the patients because a so-called blastic crisis, but there are thrombocytopenic crisis too.
CML, thrombocytopenic crisis
Dentist must recognize the leukemia, but do not treat the patients, send to specialists:

HEMATOLOGIST

But the patients dental problems belongs to dentists.
Thank you for your attention