



**MEDICAL UNIVERSITY - PLEVEN
FACULTY OF MEDICINE**

DISTANCE LEARNING CENTRE

**DEPARTMENT OF “NEPHROLOGY,
HEMATOLOGY AND GASTROENTEROLOGY”**

PRACTICAL EXERCISES – THESES

FOR E- LEARNING IN NEPHROLOGY

ENGLISH MEDIUM COURSE OF TRAINING

SPECIALTY OF MEDICINE

ACADEMIC DEGREE: MASTER

PROFESSIONAL QUALIFICATION: DOCTOR OF MEDICINE

PREPARED BY DEPARTMENT OF NEPHROLOGY

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CHRONIC PYELONEPHRITIS

MAIN PURPOSES OF THE EXERCISE:

1. To evaluate the presence of pyelonephritis.
2. To prove the chronic nature of the pyelonephritis.
3. To find out the etiologic and predisposing factors of the disease.
4. To define the renal sufficiency.
5. To manage the correct treatment of the patient.

PART I – EXAMINING THE PATIENT

1. *Asking basic questions.*

2. ***Case history:*** the sufferings may be of a great variety and are due to the location of the inflammatory process, to its activity, to possible urine drainage disturbances, to attendant complications, and to the state of the renal sufficiency as well.

- Waist pain could be either dull or strong, usually predominantly unilateral but in some patients could be bilateral, quite resembling a discopathy.

- Dysuria, pollaki- and polyuria, nocturia.

- Previous periods of and present pyrexia.

- General weakness, headaches, dryness of the mouth mucosae.

- Weight loss.

- Disorders in the act of urine passing.

Past history: knowledge of uroinfections in the early ages; proved congenital abnormalities; bacteriuria during pregnancies; data of renal lithiasis; anamnesis of a prostate adenoma; diabetes mellitus.

3. ***Family history:*** relations with diseases of the kidneys that may be inheritable, i. e. autosomal polycystic kidney disease, nephrolithiasis, congenital defects.

4. ***Physical examination:*** according the propedeutic rules. Findings of importance are pyrexia, high blood pressure and corresponding to it heart disorders, appearance that is characteristic of anemia, painful kidneys at palpation of the abdomen, positive renal succussion.

PART II – DISCUSSION OF THE CLINICAL FINDINGS

Attention must be paid to the presence of previous complaints and disorders as well as to the hypertensive and anemic syndromes.

It is necessary to evaluate the activity of the process according the patient's sufferings.

PART III – MEDICAL INVESTIGATIONS OF USE TO BACK UP DIAGNOSING

1. *Urinalysis:*

- proteinuria of a low degree, less than 1-1,5 g/l;
- sedimentation test shows leucocytes and bacteria, when there is an activity of the pyelonephritis; erythrocyturia is missing as a rule but may be found out at tuberculosis, tumors, glomerulonephritis;
- the specific weight is below the normal values;

2. ***Microbiologic assessment of urine cultures:*** significant bacteriuria is a sign of activity of the process; it also indicates the etiological agent.

3. ***ESR*** – elevated in case of activity of pyelonephritis.

4. ***Full blood count*** shows anemia.

5. *Functional diagnostic methods:*

-testing the kidney capacity of concentrating and diluting urine. The results are of hypo-isostenuria;

-PAH-clearance is of value below 480 ml/min;

-the renal plasma currence is lowered; the fraction of filtration is higher than 20%;

-the isotopic nephrogram is typical of the asymmetry in both kidneys functioning.

6. ***Ultrasonography:*** shows inequality in the shape and sizes of the kidneys; gives information about predisposing for pyelonephritis local factors; images the altered parenchyma-pelvic index.

7. *Excretory venous pyelography:* indications

- retarded excretion of the contrast substance;
- reduced intensity of coloring the pelvis and the calyces;
- smaller sizes either of one or both kidneys but always asymmetry is ascertained;
- disturbed outlines of the kidneys;
- disordered interpapillary line of Hudson.

PART IV - POINTING OUT THE LEADING DIAGNOSTIC CRITERIA

1. ***Anamnestic:*** previous episodes of uroinfection; predisposing local and general factors; hypertension.

2. ***Physically:*** fever; pain; positive renal succussion.

3. ***Laboratory settings:*** low-degreed proteinuria, leukocyte-and bacteriuria; elevated ESR; anemia.

4. ***Functional kidney disorders:*** hypo-isostenuria; changes in FF.

5. Instrumental: The kidney asymmetry that is found out by ultrasonography, isotopic nephrography and excretory venous pyelography.

PART V – TREATMENT OF THE PATIENT

1. Etiological treatment – only when the chronic pyelonephritis is in activity, accordingly the rules of treating acute pyelonephritis. Microbiological assessments of urine cultures as well as the values of white cell blood count and ESR determine the choice of antiinflammatory drugs.

Evaluating of the renal function is necessary in order to avoid a choice of nephrotoxic medication.

Groups of antibiotics that must be of a first choice: (a) beta-lactamic; (b) aminoglycosides; (c) chlornitromycin. Then sulfonamides and/or chemotherapeutics must follow the first antibiotal courses.

The course of treatment is controlled by periodically testing the urinary sediment, urocultures, ESR.

2. Dietary regimen: in case of hypertension the salt intake must be limited. In the activeness of the process – more liquids.

3. Against recurrence of the infection: Urostim 50 mg/d for 30 days; Urovaxom 2 mg/d.

4. Symptomatically: treating of hypertension, antipyretics, analgesics.