V.N. Karazin Kharkov National University

Department of Internal Medicine

Close to the patient: the cause is on the top but the doctor is blind

Speaker: 5th year student Reng Gloria John
Advisers: assistant prof. Petrenko O.V.,
assistant prof. Zhuravka N.V.,
associate prof. Brynza M.S.
professor Yabluchansky N.I .

Introduction

Specialized doctor is like a gingival abscess – his fullness is one-sided.
Kozma Prutkov.

- With age the comorbidity problem becomes more pressing issue
- It seems difficult to interpret complaints such as fatigue, general weakness, malaise
- Specialized doctors tend to interpret this complaints in favor of "their" diagnosis, which prevents them to see the whole problem
- We present the clinical case of general somatic complaints presenting for several years
- Patient was treated by three specialized doctors without significant effect, and finally it ended up in banal cause

Our Patient

Ph.L.Y.,	female
Date of birth	11.02.1970
Age	47
Occupation	does not work
Address	Kharkiv

Main Complains

- “I'm just feeling bad”
- tiredness
- general weakness
- low energy
- heaviness in the legs

Review of Systems

- Dyspnea and tachycardia with low physical exertion
- No heart intermissions, chest pain, cough
- Face and legs puffiness
- Dizziness in the metro
- Low blood pressure, sometimes up to 70/40 mm Hg (mostly after menstruation)
- Lack of appetite, remaining review of digestive system unremarkable
- Sometimes imperative urge to urinate
- Menstrual periods are regular, last 2-3 days, painless, bleedings are not profuse
- Review of musculoskeletal system unremarkable
- Work capacity slightly reduced

Anamnesis Morbi

- Presenting complaints gradually increased over 2 years
- During this time appealed to:
  - endocrinologist: the diagnosis of thyroid gland hyperplasia was made, euthyroid state; supplements with selenium was admited, with no significant effect
  - cardiologist: the diagnosis of cardiopsychoneurosis, mitral valve prolapse of 2nd degree was made; “Detralex” (micronized purified flavonoid fraction consists of diosmin and flavonoids in the form of hesperidin), asparaginat K-Mg, and trimetazidine was admited, with short and insignificant effect
  - gastroenterologist: after endoscopy the diagnosis of gastropathy was made; mebeverinum and pancreatinum was admited for 10 days, with no effect

Anamnesis Vitae

- Since 2005 yearly visit gynecologist because of uterine fibroid; surgical treatment was not recommended
- Family history is negative for autoimmune disorders, cancer, early CVD, genetic abnormalities
- Currently no medications, vitamin supplements or over the counter drugs
- Remaining anamnesis vitae is unremarkable

Status Praesens Objectivus

Height	1.58	**BMI**	20	**PS**	86	**RR**	12
Weight	50	**Waist circ.**	60	**BP**	110/70	**T**	36.6

- light yellowness of the skin, scleras are white
- visible mucosa of normal color, moist
- thyroid hyperplasia
- lungs examination unremarkable
- heart borders are not expanded, sounds are muffled, rhythm regular, systolic murmur at the heart apex
- abdominal examination unremarkable
- puffy face, hands, ankles
- supine: BP 130/90, HR 86 bpm; standing: BP 120/70, HR 86 bpm

Preliminary diagnosis

Mitral valve prolapse, 2nd degree

Heart failure?

Anemia?

Plan of investigations

- Complete blood count
- Blood smear
- Urinalysis
- Fasting plasma glucose
- Renal function tests
- Total protein
- Electrolytes
- T3, T4, TSH
- ECG

Complete blood count

Options	Results	NR
Hemoglobin	**47**	130,0 – 160,0 g/L
Erythrocytes	**2,5**	4,05 – 5,15 × 10^{12}/L
Color Index	**0,56**	0,85 – 1,05
Leukocytes	4,9	4,0 – 9,0 × 10^{9}/L
ESR	**22**	2-15mm/h
Stab neutrophils	2	1-6 %
Segmented neutrophils	63	47-72 %
Eosinophils	5	0,5-5,0%
Basophils	1	1-1,0 %
Lymphocytes	23	19-37%
Monocytes	6	3-11 %
Platelets	213	160-320 × 10^{9}/L
Hct	**17**	37 – 47%

Conclusion: severe hypochromic anemia

Blood smear

- Erythrocytes: mainly hypochromic, pronounced anisocytosis and poikilocytosis
- Normoblasts are not revealed
- Leukocytes: white blood cells morphology within normal limits

Urinalysis

Options	Results	NR
amount	60,0	
color	light-yellow	
clearness	clear	
specific gravity	1016	1008-1026
pH	5,0	5,0-7,0
protein	-	to 0.033 g / l
glucose	-	absent
ketone bodies	-	absent
erythrocytes	-	absent
leucocytes	single	0-1
epithelium	Squamous and transitional, in some places	absent or single
bacteria	-	absent

Conclusion: the presence of transitional epithelium may reflect mucosal lesion of the urinary tract due to anemia

Biochemical panel

Options	**Results**	**NR**
Total protein	69,4	66 – 83 g/l
Albumin	44,6	32 – 53 g/l
Creatinine	116,7 µmol/l	44 – 97,2 µmol/l
Urea	3,26 mmol/l	2,0 – 6,7 mmol/l
eGFR (Cockcroft-Gault Equation)	46 ml/min/1,73m^2	> 90 ml/min/1,73m^2
Glucose	4,25 mmol/l	4,2 – 6,0 mmol/l
K	3,0 mmol/l	3,6 – 5,5 mmol/l
Na	140 mmol/l	130 – 155 mmol/l

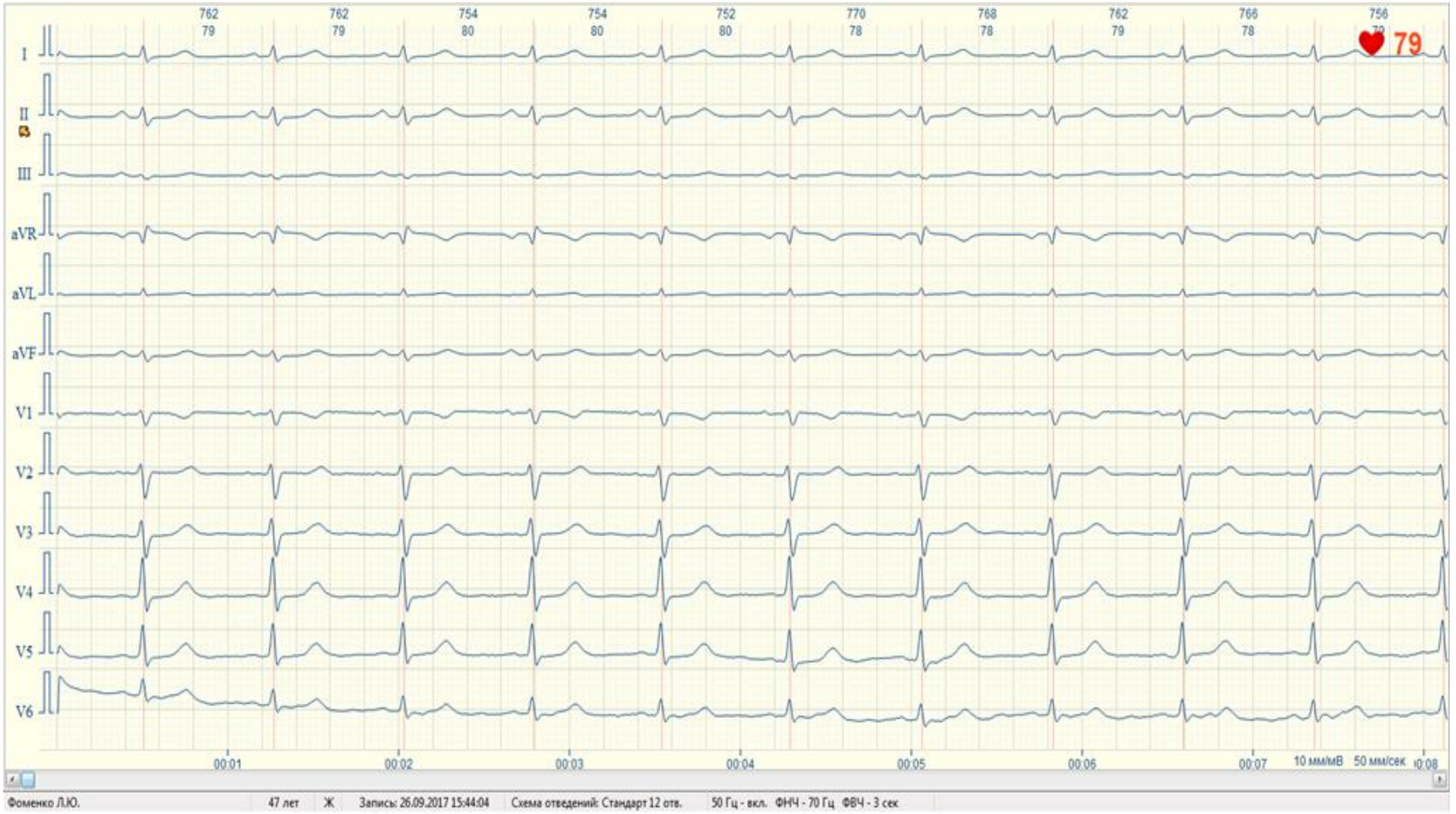
Conclusion: elevated creatinine, moderate decline in GFR, hypocaliemia

Thyroid hormones

Options	Results	NR
T4 free	12,8	10 – 25 pmol/l
T3 free	4,6	2,5 – 5,8 pmol/l
TSH	0,36	0,3 – 4,0 mmol/l

Conclusion: all parameters within the normal range

ECG



Conclusion: Low ECG voltage. Incomplete left anterior fascicular of left bundle branch block

Further investigations

- Serum Iron
- Serum Ferritin

Further investigations - results

Options	Results	NR
Serum Iron	7,5 mmol/l	9,0 – 30,4 mmol/l
Serum Ferritin	9,45 ng/ml	10 – 147 ng/ml

Conclusion: decreased levels of serum iron and ferritin

Clinical Diagnosis

Iron deficiency anemia, severe degree.

Uterine fibroid.

Mitral valve prolapse, 2nd degree.

Thyroid hyperplasia, 1st degree, euthyroid state.

Management

- Gynecologist consultation to decide if a surgical treatment is needed for uterine fibroid
- Iron supplementation both to correct anemia and replenish body stores
- Parenteral iron can be used when oral preparations are not tolerated
- Blood transfusions should be reserved for patients with or at risk of cardiovascular instability due to the degree of their anaemia

Guidelines for the management of iron deficiency anaemia / A. F.Goddard, M. W. James, A. S. McIntyre, B. B. Scott. // Gut. – 2011. – №60. – С. 1309–1316.

Follow-up

- Patient was hospitalized in the gynecological department of the regional hospital
- Red blood cells transfusions were given
- After restoration of hemoglobin level the laparoscopic fibroid removal was performed
- Discharged from the hospital in a week after surgery with no complaint and Hb of 88 g/l

Conclusion

- The cause of our patient's condition was anemia, which is not rare in patients of middle age
- Complaints presented by our patient are typical for many diseases and doctors can’t focus only on their specialization
- None of the specialized doctors who observed our patient prescribed a CBC, thus the cause was not reviled and treatment was not effective.
- Doctors should be closer to the patient and use the standard approach to diagnosis in a holistic manner