Case presentation

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- **Girl 10.5 Y/O**
- **Cc: Sudden onset Dyspnea**
- **Admitted in Emam sajad hospital**
- **Cx-ray: normal**

CBC:WBC:8.2,RBC:4.7,PLT:580000

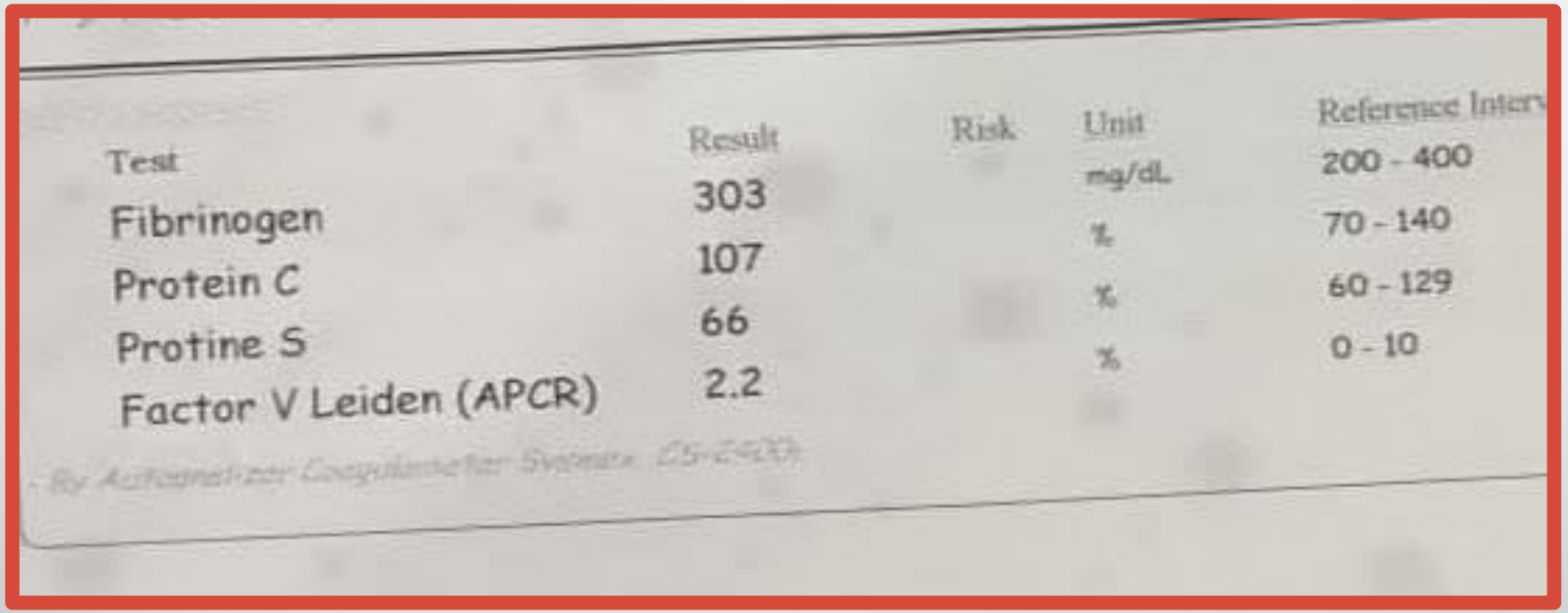
BUN:12,Cr:0.7

LFT: AST:18, ALT:20, ALKP:457,total bili:0.8,direct bili:o.2

ESR:35,CRP:negative

D-Dimer: positive

- **Ct angiography: filling defect in small branch**
- **D-Dimer positive**
- **Start heparin**



Test	Result	Risk	Unit	Reference Interv
Fibrinogen	303		mg/dL	200 - 400
Protein C	107		%	70 - 140
Protine S	66		%	60 - 129
Factor V Leiden (APCR)	2.2		%	0 - 10

By Automated Coagulometer System

- **Endocrinology consult**
- Girl **10.5** y with wt: **50kg** ,
- Ht: **150** cm (parents: male. **180,** female **170 cm)**

- SMR:

Breast: stege 5
Pubarch: stage 5
Menarch: + (from 19 Mo ago)

Due to abdominal pain and irregular mense:

Abdominopelvic sono was perform,

- Liver: NL
- spleen: NL
- Kidney: NL
- Uterus: normal size(66*28 mm)
- Endometrial thickness:11 mm
- Rt ovary: NL
- Lt ovary: hypoechoic solid cystic lesion (45*30 mm)
- Mid free fluid in posterior cul-de-sac

Drosbella, daily was started

(3mg drospironon and
20 microgram ethinyl estradiol)

- Ultrasonographic findings that are more suggestive of malignant tumors include:

1. Size ≥8 to 10 cm
2. Multiple lesions
3. Bilateral masses
4. Solid or heterogeneous (solid components >2 cm, thick septations, papillary projections), compared with cystic and homogeneous
5. Invasive or metastatic
6. Calcifications
7. Ascites
8. increased blood flow (compared with minimal or no blood flow)

- For patients with increased suspicion for ovarian tumor, **laboratory evaluation** includes:

1. A panel of tumor markers (**alpha-fetoprotein, beta-hCG, lactate dehydrogenase, inhibin A, inhibin B, and cancer antigen-125**);
2. estradiol and testosterone are obtained to evaluate hormonally active tumors (**eg, in patients with precocious puberty or virilization**)
3. Cytology of ascites fluid (if obtained).
4. Platelet count – Elevated platelets are a nonspecific marker of ovarian malignancy and may be helpful in the acute evaluation of ovarian mass with torsion

Inhibin A:60.7 

Inhibin B:154 

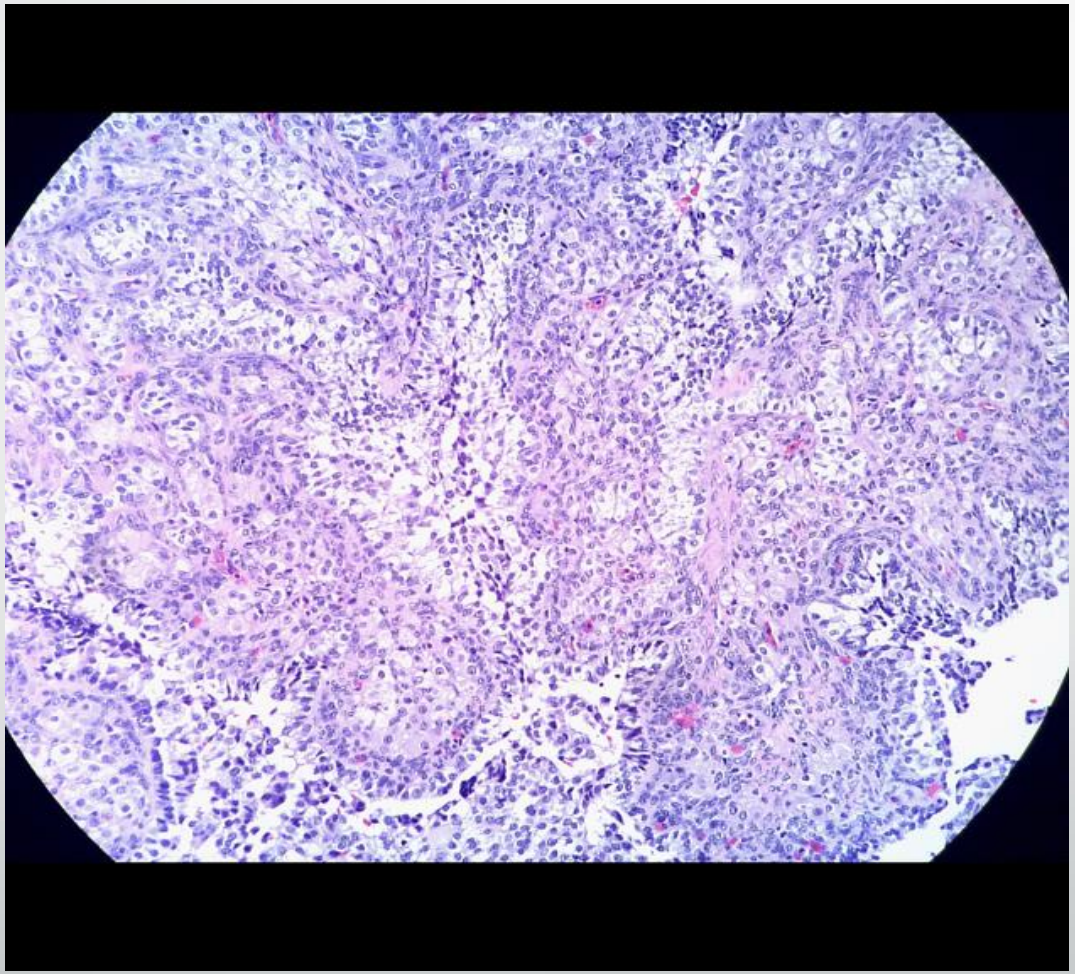
CA 125:11.7

AFP:0.5

Ovarian tumor markers in adolescents [1-3]

	Serum tumor markers						
	AFP	beta-hCG*	CA-125	Estradiol	Inhibin A and B	LDH	Testosterone
Ovarian tumors in which tumor markers may be present							
Malignant ovarian tumors							
Adult granulosa cell tumors				✓			
Choriocarcinoma		✓					
Dysgerminoma		✓ (rare)		✓		✓	
Embryonal carcinomas	✓	✓				✓	
Endodermal sinus tumors	✓					✓	
Epithelial tumors	✓		✓ (especially serous)				
Juvenile granulosa cell tumors					✓		
Immature teratoma	✓ (rare)		✓ (rare)	✓		✓	
Mixed germ cell tumors	✓	✓				✓	
Polyembryoma	✓ (rare)	✓					
Sertoli-Leydig cell tumors					✓		✓

Juvenile granulosa cell tumors of the ovary



Granulosa cell tumors are the most common type of potentially malignant ovarian SCST(sex cord stromal tumors),they comprise 2 to 5 percent of all ovarian malignant neoplasm and 90 percent of malignant SCST.

MICROSCOPIC APPEARANCE

- There are two subtype:
- Adult (95 percent)
- Juvenile (5 percent)
- Surgery alone is acceptable treatment for most patients with granulosa cell tumors.
- DX: pathology finding

behavior

- Most granulosa cell tumors have an indolent growth pattern.
- Estrogen effect are common ;androgenic effects are also possible.
- The prognosis depends upon the stage of disease at diagnosis and the presence of residual disease after surgery.

- Out come tend to be less favorable in the presence of a large tumor size (10 to 15 cm) or tumor rupture.

- These tumors have metastatic potential and a tendency for late relapse.

Thanks for your attention