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KOÇ UNIVERSITY HOSPITAL

PATIENT'S NAME:	Nina Oroz
PATIENT ID:	204308301
GENDER:	F
DATE OF BIRTH:	27.12.2009
DATE OF EXAMINATION:	28.12.2020

MRI of upper abdomen

Indication: Metabolic syndrome. PICOS.
Contrast: 8 ml I.V. Dotarem (gadoteric acid)

Findings:
Liver craniocaudally measures 17 cm, which is above the age-specific normal limit. In comparison to in-phase images, hepatic parenchyma exhibits marked signal loss in out-of-phase images, which is consistent with hepatosteatosis. Hepatic parenchyma is free of mass lesion.
There is no pathological signal or enhancement in parenchyma.
No dilatation is observed in intra/extrahepatic bile ducts.

Size and wall thickness of gallbladder are normal. No remarkable intraluminal calculus is noted.

Spleen is unremarkable.

Thickness and configuration of pancreas are normal. Parenchyma does not show any pathological signal or enhancement. Peripancreatic fat planes are intact.

Adrenal glands appear normal in MRI view.

Both kidneys are normal-sized and have regular contours. Corticomedullary signal intensity and enhancement are normal. No dilatation is seen in collecting systems.

Visualized areas are free of lymph nodes of pathologic size.

There is no sign of thickening on peritoneal surfaces or intraabdominal ascites.

IMPRESSIONS:

- **Hepatosteatosis**

Associate Prof. Evrim Özmen, M.D.
Department of Radiology

KOÇ UNIVERSITESI HASTANESI
DR. Evrim OZMEN
Radyoloji Uzmani
DIPLOMA Tescil No: A37605

KOÇ UNIVERSITY HOSPITAL

PATIENT'S NAME:	Nina Oroz
PATIENT ID:	204308301
GENDER:	F
DATE OF BIRTH:	27.12.2009
DATE OF EXAMINATION:	18.12.2020

USG of whole abdomen

Indication: Metabolic syndrome, PCOS?

Findings:
Liver measures 170 mm, which indicates hepatomegaly. Contours are regular. Hepatic parenchymal echogenicity is increased, consistent with grade 2 hepatosteatosis.
A 18x12 mm hypoechoic area with obscured contours is seen proximity of gallbladder. This area is primarily evaluated as a fat-spared zone.

Intrahepatic bile ducts and vascular structures are normal. Portal vein is normal-sized.
Gallbladder is normal-sized and has normal wall thickness. Intraluminal echo is homogeneous and no sludge or calculus is detected.
Choledochus cannot be evaluated precisely due to gas superposition.
As far as visualized, pancreatic head is normal-sized and exhibits normal echogenicity.
Spleen is normal-sized. Contours are regular and parenchymal echogenicity is normal.
Right kidney is at the normal anatomic location. Size is within normal limits (93x39 mm) and contours are regular. Parenchymal thickness and echogenicity are normal. No significant ectasia is detected in pelvicalyceal structures.
Left kidney is at the normal anatomic location. Size is within normal limits (90x43 mm) and contours are regular. Parenchymal thickness and echogenicity are normal. No significant ectasia is detected in pelvicalyceal structures.
Major midline vascular structures appear normal.
No abdominal or pelvic loculation or ascites is seen.
Bladder exhibits homogeneous filling and normal wall thickness.
Size of uterus is compatible with the patient's age group.

Right ovary measures approximately 23x20 mm. Left ovary cannot be evaluated precisely due to gas superposition. Millimetric ovarian cysts are seen in both ovaries.

There is a collection measuring approximately 50x35x12 mm between the cervical orifice and vagina. Continuity to vagina cannot be identified precisely (hydrocolpos?). If warranted, advanced investigation is recommended.

IMPRESSIONS:

- **Hepatomegaly, hepatosteatosis**
- **Area primarily evaluated as fat-spared zone in hepatic parenchyma**
- **Collection between cervical orifice and vagina (hydrocolpos?). If warranted, advanced investigation is recommended.**
- **Other findings detailed above**

KOÇ ÜNİVERSİTESİ HASTANESİ
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KOÇ UNIVERSITY HOSPITAL

Patient's Name: Nina Oroz	**Date of Birth & Gender:** 27.12.2009 - F
Hospital No.: 204308301	**Insurance:** -

Pediatric Gastroenterology, Hepatology and Nutrition Evaluation Form

Date of report: 21.12.2020

History of present condition: 13.10.2020, notes of Pediatric Endocrinology - The patient had been gaining weight rapidly since 2.5 years of age, yet more rapidly after 7 years, at which time she was told that she had diabetes. Since she was 8 years old, she had been on metformin, still taking 500 mg three times a day. Elevated blood pressure had been observed for the past 3-4 months [she was on Angiotec (enalapril) 1-1/2 tablets; Cushing syndrome had been suspected before]. Although she did not have much of an appetite, she still gained weight. A hypophyseal MRI was performed before. No clear result had been reported yet. The girl also had hypothyroidism and was taking Euthyrox (levothyroxine sodium) 25 mcg. Her height was developing normally and never slowed down.
17.12.2020 - The patient lost 6 kg in 2 months and currently feels better. She does not describe frequent water consumption, urination or nausea. Current medication: Victosa (liraglutide), 1x1.8 mg, subcutaneous; Matofin (metformin) 2x500 mg; Angiotec (enalapril) 10 mg, b.i.d; Detrusitol (tolterodine) (started by Pediatric Nephrology, planned for 1 year); Euthyrox (levothyroxine sodium) 25 mcg/day. She walks 30-45 minutes a day and her appetite is markedly reduced. Diet is followed very well.

Past medical history: Weight at birth: 2860 gr. Term delivery without significant postnatal history. According to the mother, neuromotor development was normal, although she did not remember clearly. Up until 2.5 years of age, she was completely normal and had no hearing or visual problem. Her academic success is optimal as well. No menarche yet.

Familial history: No consanguineous marriage among parents. Mother's height: 172 cm. Father's height: 175 cm. Her older brother is 25 years old and healthy. Both maternal grandmother and grandfather and also the father have type 2 diabetes. The father is also obese.

Pre-diagnosis: E66 - Obesity; K76.0 - Fatty liver, not elsewhere classified

Treatment plan and recommendations: Contrast-enhanced abdominal MRI, hepatitis markers and other tests relevant to hepatosteatosis were recommended. MRI images confirmed presence of hepatosteatosis. ALT and GGT levels were elevated. Liver function and autoimmune hepatitis tests were requested along with a hepatitis A vaccine. A FibroScan was planned for 3 months later (the family noted that they would not be able to have these tests performed at this time. She was started on Ursofalk (ursodeoxycholic acid) and Evicap (alfa tocopherol). Follow-up was scheduled for 3 months later.

KOÇ ÜNİVERSİTESİ HASTANESİ
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KOÇ UNIVERSITY HOSPITAL

PATIENT'S NAME: Nina Oroz
PATIENT ID: 204308301
GENDER: F
DATE OF BIRTH: 27.12.2009
DATE OF EXAMINATION: 16.12.2020

Abdominal CT angiography

Indication: Hypertension, elevated urinary catecholamine level
Contrast: I.V. 100 ml Ultravist (iopromide)

Findings:
Liver craniocaudally measures 16 cm, which indicates mild hepatomegaly. Parenchymal density is increased, consistent with hepatosteatosis. Contours are regular. Portal and hepatic venous systems appear normal.
Intra/extrahepatic bile ducts are normal.
Gallbladder is normal-sized with normal wall thickness.

Spleen exhibits normal size and parenchyma, which is free of demarcated mass. Splenic vein does not exhibit dilatation.

Pancreatic head, body and tail are normal. Peripancreatic fat planes are patent. No pancreatic duct dilatation is observed.

Adrenal glands are free of mass lesion.

Renal arteries appear patent. Right renal artery measures 3 mm and left renal artery measures 2.5 mm. There is no sign of stenosis. No accessory or polar artery has been identified.

Size, location, contours, parenchymal structure and pelvicalyceal systems of bilateral kidneys are normal. Kidneys are free of cystic and solid lesion.

Wall thickness and intraluminal content of bladder are normal.

There is no sign of pathologic wall thickening in colonic loops or gastrointestinal system.

Abdomen is free of loculated collection and ascites.

There is no intraabdominal lymph node of pathologic size.

IMPRESSIONS:

- **Hepatosteatosis**
- **No evidence of mass lesion in adrenal glands**
- **Patent renal arteries without any sign of stenosis**

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KOÇ UNIVERSITY HOSPITAL

Patient's Name: Nina Oroz	**Date of Birth & Gender:** 27.12.2009 - F
Hospital No.: 204308301	**Insurance:** -

Pediatric Nephrology Evaluation Form

Date of report: 16.12.2020

Chief complaint: Urinary incontinence and elevated blood pressure

History of present condition: The patient had been gaining weight rapidly since 2.5 years of age and followed by pediatric endocrinology after 7 years for this reason. Height development had always been normal and never slowed down. She had been taking metformin since 7 years of age. Cushing syndrome was suspected previously. Her previous hypophyseal MRI findings were normal. No specific note regarding adrenal glands was found on her USG report either. She also had hypothyroidism and was on Euthyrox (levothyroxine sodium). Thyroid gland was visible in her thyroid US. In her history, she was also diagnosed with hypertension and started on enalapril 10+5 mg. A 24-hour Ambulatory blood pressure monitoring monitor test was performed previously in May 2020. As a result of 19-hour monitoring, 70% of systolic measurements and 3% of diastolic measurements were found to be elevated. Of the measurements made at night, 100% and 44% were above the normal limit, respectively. There was no dipping. According to her Holter ECG, average heart rate was 97/min without any conduction disorder. Her abdominal US was normal in May 2020, yet no details were noted. She had a history of flushing sometimes with no palpitation. Ophthalmological examination was normal. Consultation with cardiology was requested.
Moreover, she had a nocturnal urinary incontinence problem, occurring 2-3 times a week and sometimes during the daytime. She would feel an urge of urination. Urinary retention was noted as well. She previously experienced urinary tract infection accompanied with fever. No constipation. Regular daily bowel movements. She urinated 5 times a day. New complete blood count results came out normal as well. Leukocyte count was 4-5 in urinalysis. Blood urea nitrogen and serum creatinine levels were normal. In September 2020, urinalysis revealed 20-25 leukocytes and also bacteriuria.
Since the latest visit, her urinary incontinence had improved. She did not describe any active complaint or headache. No inflammatory disease was experienced either. She was on a diet and had lost 6 kilograms. Her enalapril dose had been increased to 2x10 mg (followed for hypertension). Renin level was high (>300). A new urinary catecholamine test was planned along with a CT angiography.

Past medical history: Weight at birth: 2860 gr. Term delivery without significant postnatal history. According to the mother, neuromotor development was normal, although she did not remember clearly. Up until 2.5 years of age, she was completely normal and had no hearing or visual problem. Her academic success is optimal as well. No menarche yet.

Familial history: No consanguineous marriage among parents. Mother's height: 172 cm. Father's height: 175 cm. Her older brother is 25 years old and healthy. Both maternal grandmother and grandfather and also the father have type 2 diabetes. The father is also obese.

Examination findings: BP: 125/86 mmHg. Weight: 80 kg. Height: 166 cm. Waist circumference: 105 cm--103 cm. No edema. Cardiac and respiratory exam findings are normal. Striae are seen on abdomen and back. No organomegaly. No globe. Marked acanthosis is seen on the neck and axilla. No goiter. Buffalo hump appearance has started to improve. Extremities seem thin. Bilateral labia minor are hypoplasic.

Final diagnosis: E66 - Obesity; I15.2 - Hypertension secondary to endocrine disease; R32 - Urinary incontinence, unspecified

Investigations: CT angiography (normal), BUN, creatinine, aldosterone, urinary catecholamine, blood gas (normal), renin level is high again.

Treatment plan and recommendations: CT angiography scan showed no evidence of arterial stenosis. Renin level was still elevated (endocrinological problem?). Aldosterone and electrolyte levels were normal. Follow-up examination was scheduled for 6 months later. Blood pressure observations were requested to be sent via e-mail. The patient head hepatosteatosis and was also being followed by Gastroenterology.

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Date & time of amendment:			