

# Nonalcoholic steatohepatitis leading to cirrhosis of the liver as a complication of hypothalamic disorders in a course of craniopharyngioma- case report

URSZULA WĄTROBIŃSKA<sup>1</sup>, ANNA BENDYSZ- GOLATOWSKA<sup>1</sup>, ELŻBIETA MOSZCZYŃSKA<sup>1</sup>, MIECZYSLAW SZALECKI<sup>1,2</sup>

<sup>1</sup>Department of Endocrinology and Diabetology, Children's Memorial Health Institute

<sup>2</sup>Faculty of Health Sciences, UJK, Kielce, Poland

## Background :

*Craniopharyngioma* is low- grade malignant tumor with high survival rate. Its incidence is 0,5 to 2,0 cases per milion persons per year. 30% to 50% of all cases occur in the childhood. The tumor location leads to numerous complications like deficits of pituitary function, impairment of vision, neuropsychological deficits and obesity. Excess body fat is observed in 40- 50 % of craniopharyngioma patients.

### 1.

### Case study :

We present two patients after neurosurgery carried out as treatment of craniopharyngioma with extreme obesity and liver cirrhosis secondary to NASH.

The first patient is a 17-yr-old girl and the second patient is now 27-yr-old male who was under the care of the Department of Endocrinology in the period from 6 to 18 years of age.

In the history both of them were in good condition till age of 6. Since then the symptoms of CNS tumor appeared.

In case of the girl : tumor around the optic chiasm and in the third ventricle was diagnosed.

In case of the boy : MRI CNS showed cystic tumor of the suprasellar region.

### After total resection of craniopharyngioma

- symptoms of panhypopituitarism,
  - diabetes insipidus,
  - hyperphagia and steady weight gain were observed.
- In first six months after the operation the boy has put on weight by 35 kg and the girl during the next 2 years - 25kg. Attempts to modify the diet were unsuccessful.
- In both of them the following examination revealed hyperinsulinism , IFG (only boy), carbohydrates intolerance (only boy) and features of fatty liver.

### 2.

### Additional tests :

Fig.1.MRI CNS picture of craniopharyngioma of the girl.

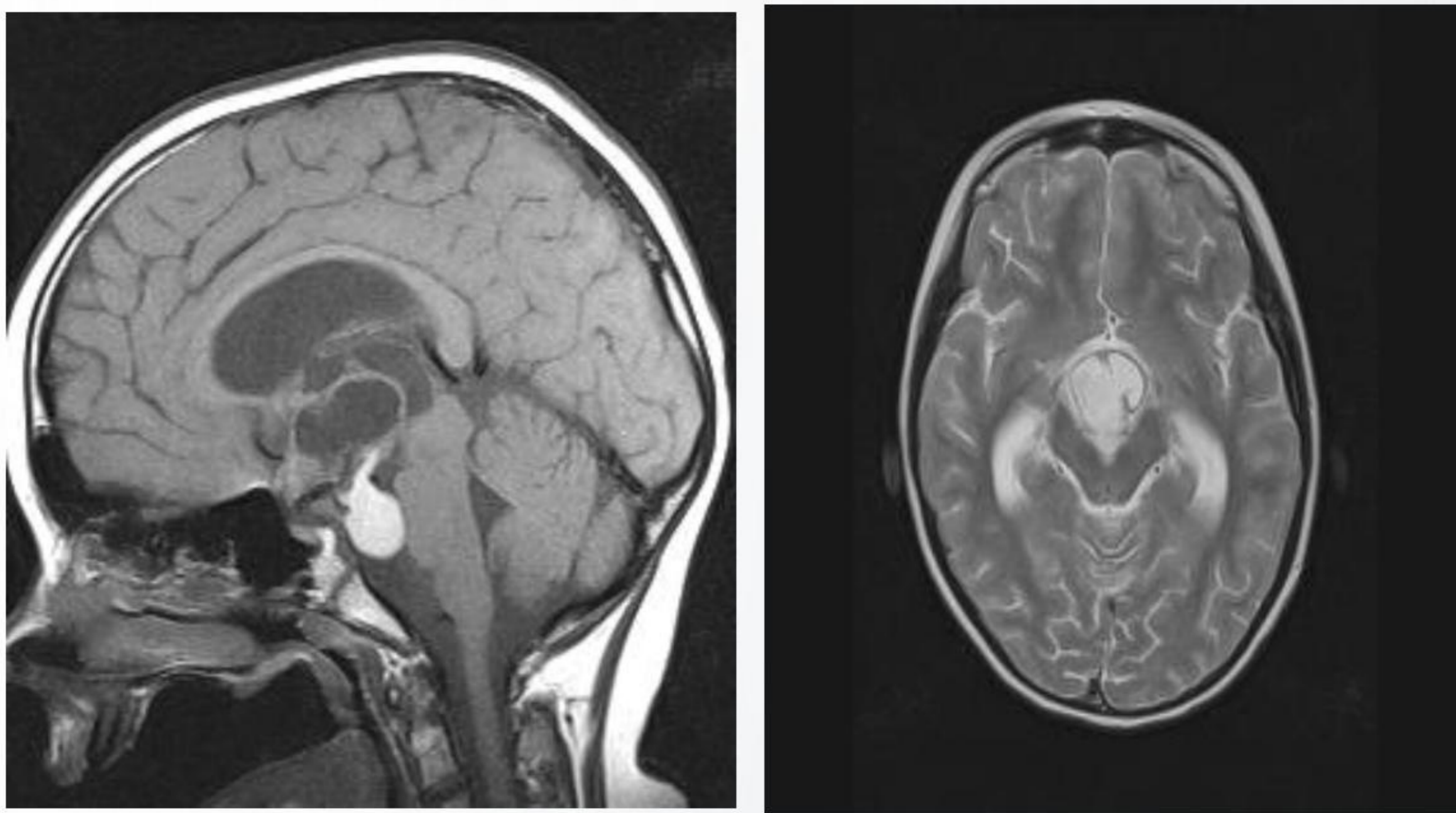
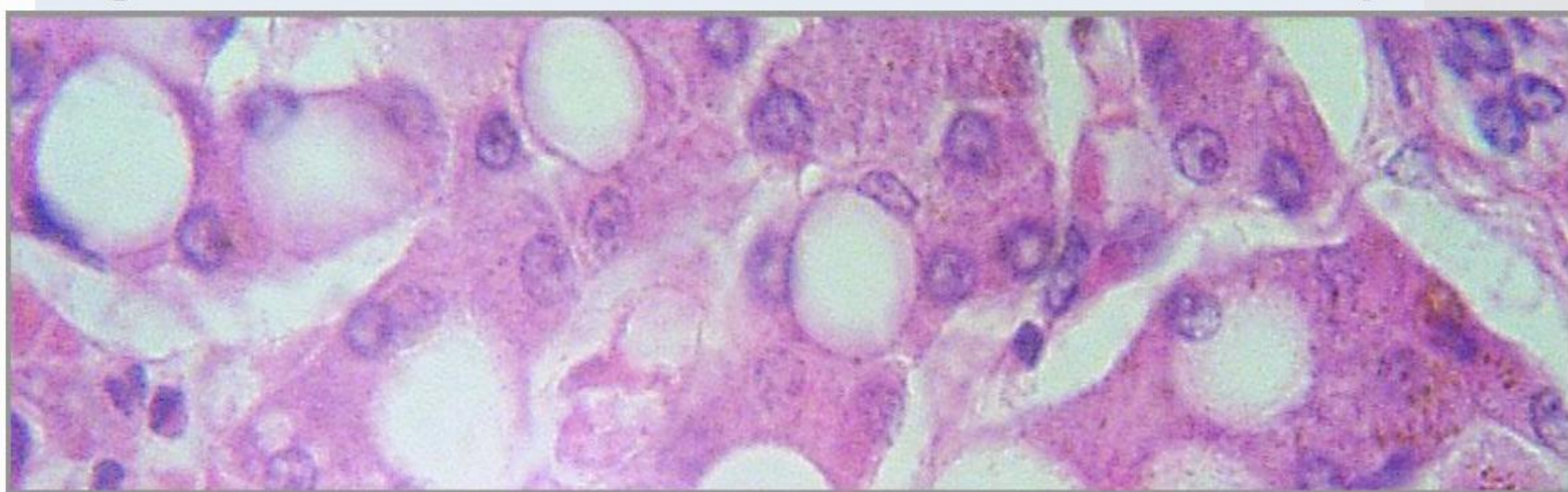


Fig. 2. Severe steatosis and fibrosis before LTX of the boy.



### 3. Oral Glucose Tolerance Test:

Girl :		Boy:	
Insulin (uIU/L)	glucose (mg/dl)	Insulin (uIU/L)	glucose(mg/dl)
0' <u>22,9</u> (N:<14)	0' 74	0' <u>23,4</u>	0' <u>119</u>
60' <u>120,0</u>	60' 99	60' <u>150,0</u>	60' 110
120' <u>178,7</u> (N:75)	120' 100	120' <u>180,7</u> (N:75)	120' 158

Both of them at 13-15 years of age began to show the symptoms of hepatopulmonary syndrome and liver failure.

Based on liver biopsy diagnosed with NASH, after that they underwent liver transplantation (LTX). In the long term observation patients are still obese. A qualification for the bariatric surgery is considered.

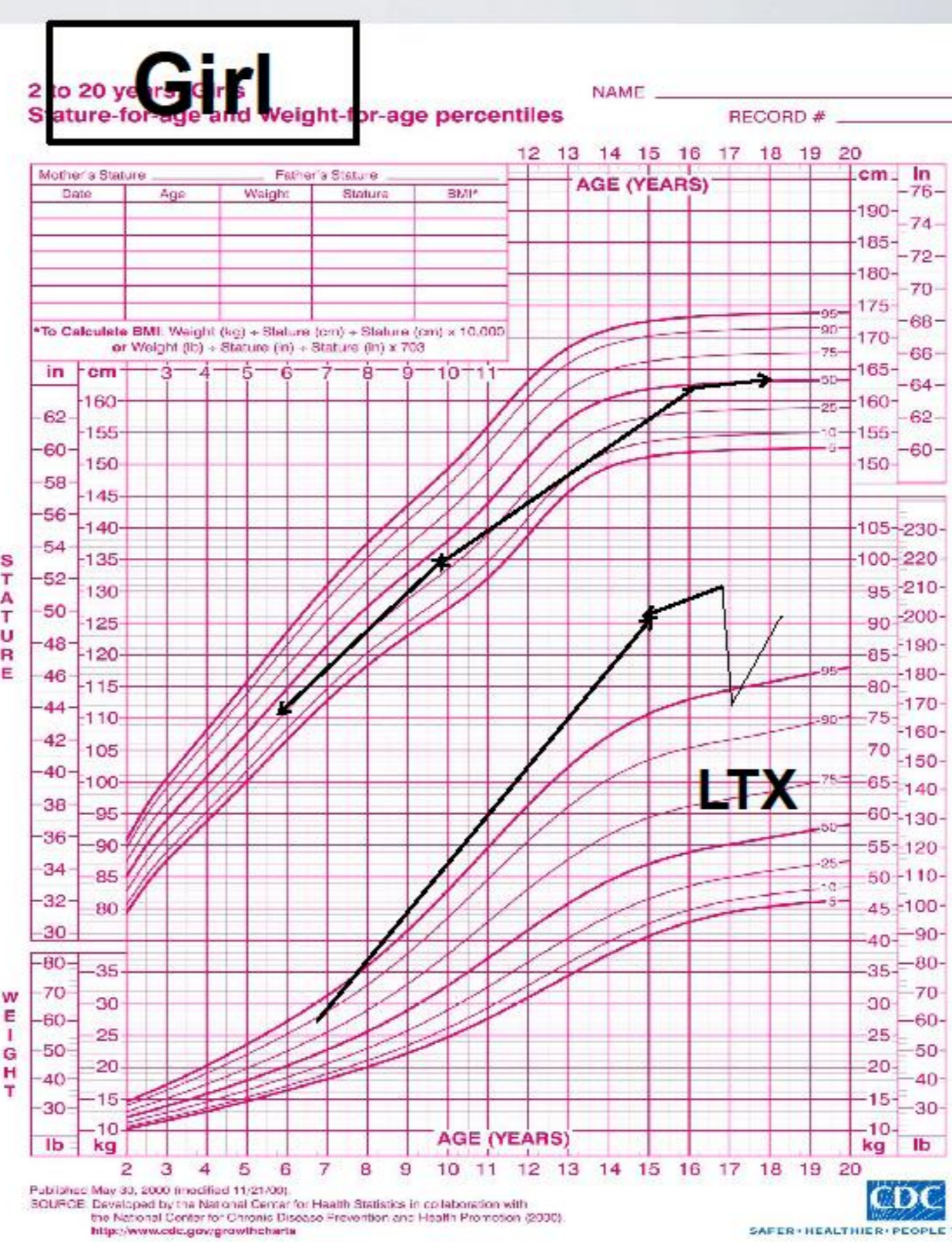


Fig. 3 . Stature and weight- for-age percentiles for girls.

Fig. 4. Pulmonary scintigraphy showed significant decrease pulmonary shunts of the girl.



### 4.

### Conclusions:

The aim of our study is to highlight fatty liver disease as a significant problem in obese children with hypothalamic damage caused by tumor. Thorough, long-term observation of patients and performed examinations may allow for early detection of progress from simple steatosis to steatohepatitis and finally cirrhosis of the liver.