

JCHS

Journal of Clinical and Health Sciences

#2
2026

SUPPLEMENTARY ISSUE

Malaysian Obesity Society
MYOS



ND **2 NATIONAL OBESITY SCIENTIFIC CONFERENCE**

ABSTRACT BOOK

11th - 12th April 2026
**Connexion Conference &
Event Centre,**
Kuala Lumpur, Malaysia

Theme
**Obesity as a Treatable
Chronic Disease:
Science, Strategy,
and Success**

Issue **September 2026** | Volume **11** Issue **02 (Supplementary)**
eISSN 0127-984x
jchs-medicine.uitm.edu.my



**UNIVERSITI
TEKNOLOGI
MARA**

PD-56

Early Significant Liver Involvement at Initial Diagnosis of Adolescent Obesity: A Case Series

Hooi Peng Cheng

Paediatric Endocrine Unit, Sarawak General Hospital, Sarawak

Corresponding Author email: hooipeng@moh.gov.my

Introduction:

Metabolic dysfunction-associated steatotic liver disease (MASLD) affects approximately 20% of the general population and up to 70% of adolescents with obesity (1). Progression from hepatic steatosis to fibrosis may occur silently, and early-stage disease is frequently under-recognized due to its asymptomatic nature.

Methods:

We report two adolescents in whom significant liver abnormalities were identified at the time of initial obesity assessment.

Case Presentation:

Two 12-year-old boys with obesity were admitted electively for polysomnography and underwent hepatobiliary ultrasonography as part of metabolic evaluation.

The first patient had class III obesity (BMI 146% of the 95th percentile). Clinical and biochemical assessment demonstrated insulin resistance, including acanthosis nigricans, impaired glucose tolerance, and elevated HOMA-IR (8.8), with a strong family history of type 2 diabetes mellitus. Hepatobiliary ultrasonography revealed coarse hepatic echotexture and nodular liver margins suggestive of early cirrhotic changes.

The second patient had class I obesity (BMI 106% of the 95th percentile) and clinical features of insulin resistance. Ultrasonography demonstrated grade 2 diffuse hepatic steatosis.

Discussion:

These cases illustrate that clinically significant hepatic involvement, including radiological features suggestive of advanced liver disease, may already be present at the initial recognition of obesity in adolescents. Notably, substantial hepatic abnormalities were detected even in mild obesity (class I), highlighting the heterogeneity of metabolic risk independent of BMI severity alone.

Conclusion:

MASLD in adolescents may be underdiagnosed and can present with advanced hepatic changes at first evaluation. Early metabolic screening, including hepatobiliary ultrasonography, should be considered in adolescents with obesity, particularly in the presence of insulin resistance or a family history of type 2 diabetes mellitus.