



SUCCESSFUL WEIGHT LOSS AND RESOLUTION OF HEPATIC FIBROSIS IN A GIRL WITH SEVERE OBESITY

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INTRODUCTION

- Childhood obesity is continuing to increase worldwide
- This results in an increase in the number of individuals with complications secondary to obesity
- Non-alcoholic fatty liver disease (NAFLD) is seen in both adult and paediatric populations
- If is not treated appropriately, it is potentially life-threatening, as it may progress to advanced fibrosis, cirrhosis or hepatocellular carcinoma
- NAFLD has become the most common indication for liver transplant in adults

CONCLUSIONS

- We report successful resolution of steatohepatitis and 9.7% weight loss in an adolescent female with significant obesity following a 3-month course of liraglutide treatment along with intense MDT support.

CONTACT INFORMATION

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CASE REPORT

- 13yo female
- Presented to primary care as 10yo with abdominal pain
- BMI 28.8kg/m² (+2.97 SDS) and weight 69.2kg (+4.58 SDS)
- Deranged LFTs and liver ultrasound showed extensive fatty deposition in the liver
- Liver biopsy confirmed advanced fibrosis (NAFLD activity score of 7/8 and a chronicity fibrosis score of 3/4).
- Autoimmune and infection causes were excluded
- Patient managed with lifestyle intervention, but this was unsuccessful
- At 13yo, referred to MDT weight management clinic: BMI 36.1 kg/m² (+3.18 SDS) and weight: 110.5kg (+6.05 SDS)
- Following 3-month period of intense MDT programme (2 weekly reviews and liraglutide), patient demonstrated 9.7% weight loss
- After 3 months, BMI 32.9kg/m² (+2.81 SDS) and weight 99.8kg (+4.83 SDS)
- Repeat liver ultrasound revealed some echogenicity suggestive of fatty changes, but hepatomegaly and inflammation resolved

Table 1: Liver function tests following weight loss

Liver function tests (LFT)	Aged 10 years	Aged 13 years pre-treatment	3-months post-treatment
Bilirubin Normal range: 0-15 umol/L	5	8	10
Aspartate Amino Transferase (AST) Normal range: 12-41 iu/L	88	43	23
Alanine Aminotransferase (ALT) Normal range: 8-36 iu/L	177	82	35
Gamma Glutamyl Transpeptidase (GGT) Normal range: 0-50 iu/L	73	31	31

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