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### **ABSTRACT BOOK**

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*Theme*  
**Obesity as a Treatable  
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**Real-world Experience with Liraglutide in the Management of Adolescent Obesity**

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**Introduction:**

Obesity in adolescence is an increasing concern, with significant long-term health implications. This case series describes two teenagers with severe obesity, both of whom were started on liraglutide therapy to promote weight loss. Despite regular pharmacologic and lifestyle interventions, neither patient experienced a significant reduction in body mass index (BMI) over an 8-9 month treatment period.

**Methods:**

Case 1: A 14-year-old boy with a BMI of 56 kg/m<sup>2</sup> (weight 150.6 kg, height 164.2 cm), who has had obesity since age 4, was referred for management at age 7. Despite initial lifestyle interventions, his BMI continued to increase. He had hypertension, pre-diabetes, and fatty liver. He was started on metformin and liraglutide. After 9 months of liraglutide therapy (3 mg daily), his weight slightly increased to 154.2 kg, and his BMI rose to 57.3 kg/m<sup>2</sup>. There were no significant changes in his lipid profile, although HbA1c improved from 5.8% to 5.2%.

Case 2: A 13-year-old girl with a BMI of 52 kg/m<sup>2</sup> (weight 115.65 kg, height 149.3 cm) under follow-up for childhood obesity and bronchial asthma since age 3. She had severe obstructive sleep apnea, pre-diabetes, and fatty liver. Despite adherence to diet, exercise, and medications, including metformin and liraglutide, her weight increased to 122.25 kg and BMI to 54.4 kg/m<sup>2</sup> after 8 months of liraglutide therapy. Although HbA1c improved from 6.2% to 5.6%, there were no significant changes in her lipid profile.

**Results:**

Both patients demonstrated limited success with liraglutide, showing minimal weight reduction despite adherence to the treatment regimen. Both families remain committed to supporting weight loss, with a continued focus on diet, exercise, and medication.

**Conclusion:**

The management of severe obesity in adolescents remains challenging. Early intervention is crucial for effective weight management, and prevention remains key in addressing this issue.