

# Fluoxetine induced Hypoglycaemia in a patient with Congenital Hyperinsulinism on Lanreotide Therapy

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## Background

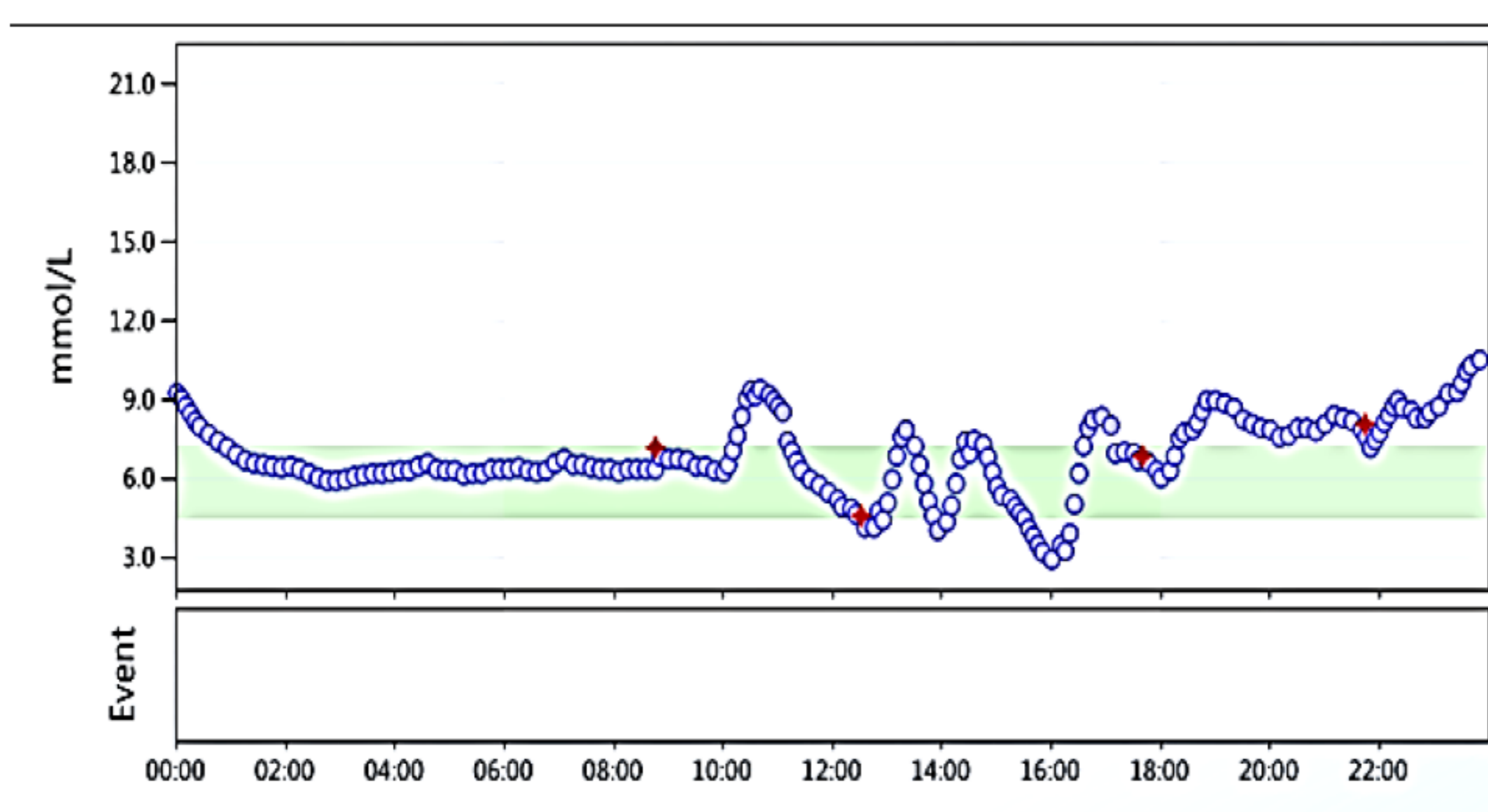
Lanreotide is a long acting somatostatin analogue that has been used successfully in the treatment of congenital Hyperinsulinism (CHI) in patients who are unresponsive or intolerant to diazoxide. Antidepressant drugs are reported to cause alterations in blood glucose homeostasis in adults with diabetes mellitus. We report a patient with persistent CHI on Lanreotide therapy, who developed recurrent hypoglycaemia following Fluoxetine therapy.

## Case

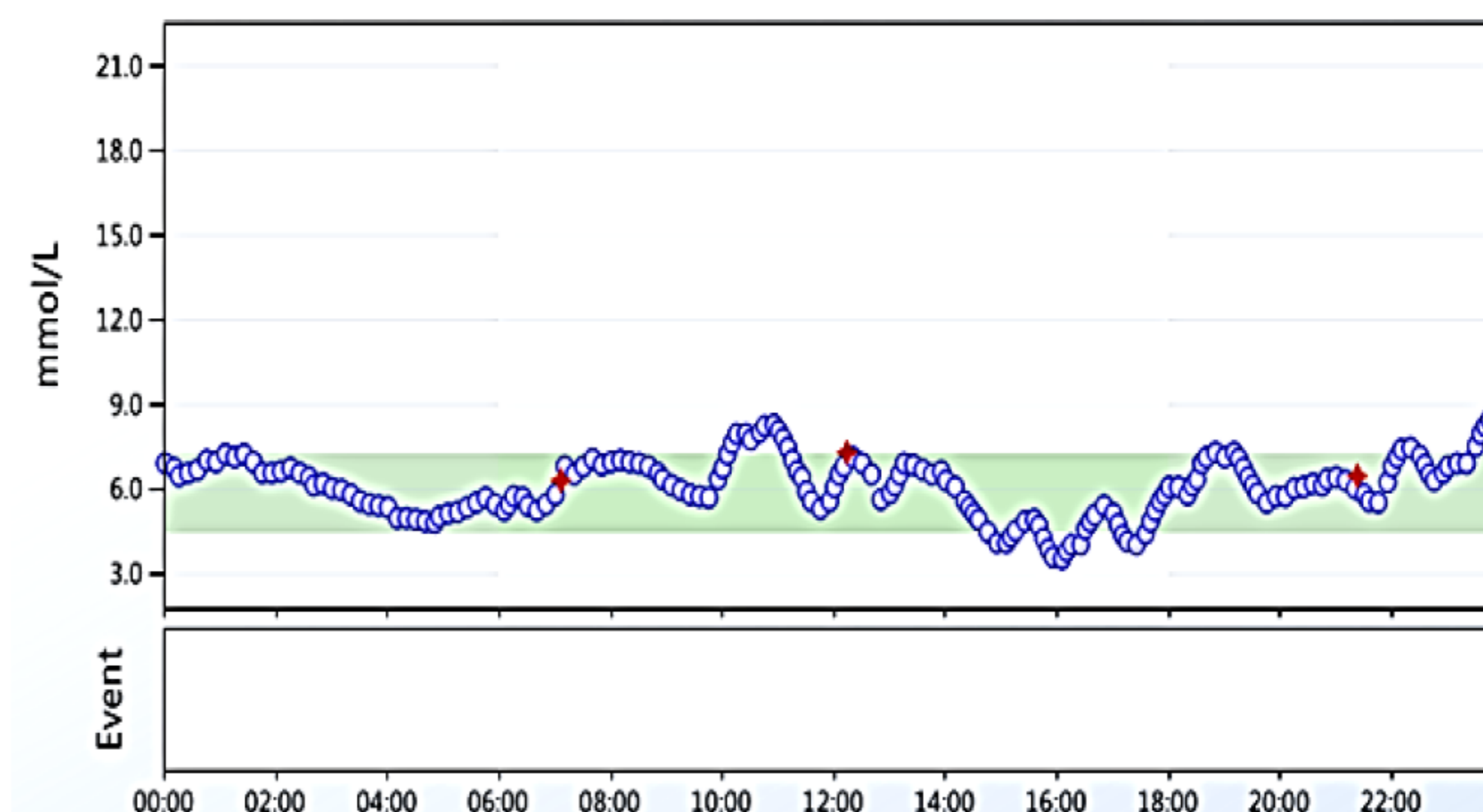
- 15 year old girl with a diagnosis of CHI from infancy was managed with diazoxide therapy.
- Genetic analysis revealed a novel de novo missense heterozygous mutation (L1390R, in exon 34) of *ABCC8*.
- 18-Fluro Dopa Positron Emission Tomography (PET) CT scan revealed diffuse disease.
- Long-term therapy with Diazoxide-troublesome hypertrichosis not amenable to therapies-waxing and laser.
- Huge impact on the quality of life with episodes of deliberate self harm needing psychological assistance.
- Subcutaneous octreotide was commenced (4 daily injections) and a good glycaemic response was noted.
- Difficulties in administering 4 times daily injections. Long acting somatostatin analogue (Lanreotide, 30mg) was given subcutaneously following which the daily octreotide was gradually weaned and stopped.
- Six months later, she developed depression due to psychosocial problems at school.
- Commenced on Fluoxetine by the psychiatry team.
- Developed recurrent hypoglycaemic episodes (blood glucose <3.5mmol/l), Fluoxetine was discontinued, following which the hypoglycaemic episodes resolved within a week. (Figure 1, CGMS)

Figure 1: Continuous Glucose Monitoring (CGM) Readings on Lanreotide

On Fluoxetine



Off Fluoxetine



## Discussion

Fluoxetine has been associated with hypoglycaemia, hypoglycemia unawareness, and increased insulin sensitivity in patients with diabetes mellitus. We report, for the first time, hypoglycaemia secondary to Fluoxetine in a patient with CHI. Hence, close blood glucose monitoring should be undertaken in patients with disorders of glucose homeostasis who are commenced on antidepressants.

