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Trabzon Teratology Information Service
Trabzon, TURKEY

SAFETY OF LIRAGLUTID DURING PREGNANCY : A CASE REPORT

Hakan Ozdemir, Busra Kuru Pektas, İlknur Erkoseoglu, Gokcen Kerimoglu, Mine Kadioglu*, Mehmet A. Osmanagaoglu, Nuri Kalyoncu, Ersin Yaris
Teratology Information Service, Faculty of Medicine, Karadeniz Technical University, Trabzon, TURKEY

Introduction:

Liraglutide is a synthetic glucagon-like peptide-1 receptor agonist and belongs to a class of antidiabetic drugs known as incretin mimetics. It was approved for treatment of type 2 diabetes , long-term weight management and obesity.

Studies on pregnant rats showed an increase in birth defects at doses lower than those considered therapeutic for humans.
Birth defects included abnormalities and variations in the kidneys, and irregular skeletal ossification effects in rats.

In rabbits, reduced growth and an increase in total major abnormalities were observed at systemic exposures lower than human exposure.All tested dose levels in rabbits led to reduced maternal weight gain and it was difficult to determine whether liraglutide selectively affected embryo development.

Human data on liraglutide exposure during pregnancy are limited. We wanted to present another case of a pregnant woman exposed to liraglutide.

Methods:A 20-year-old woman undergoing liraglutide treatment prescribed by endocrinology was referred in 2024 to the Karadeniz Technical University Teratogenicity Information Service (KTU-Trabzon TIS) for a teratological evaluation. The referral came via email from the Pharmacology Department of another university in Turkey. The multidisciplinary team at KTU-TIS reviewed her medical history, including demographic details and pregnancy-related risk factors. After the delivery, the KTU-TIS team followed up with the patient via phone to gather information on the newborn's health status.

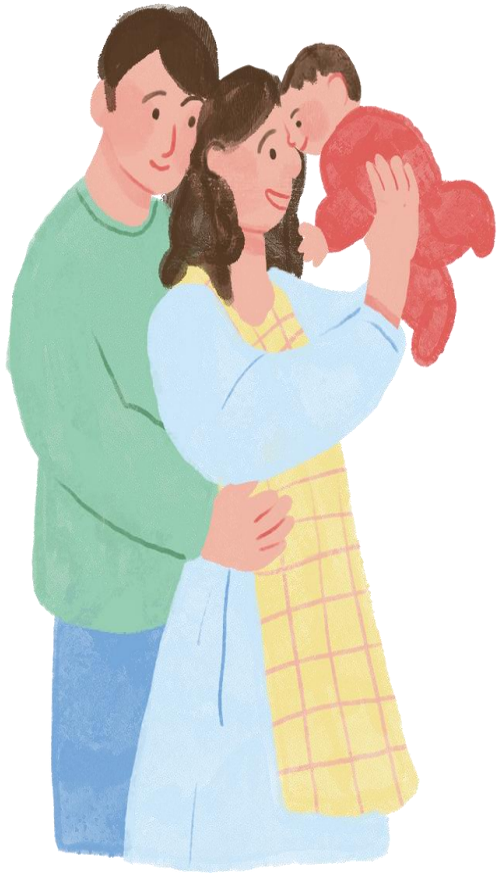
Results: A 20-year-old woman with obesity (BMI: 34.7) was evaluated by endocrinology for weight loss and was prescribed with liraglutide.She received liraglutide (subcutaneously, 0.6 mg/day , in increasing doses as needed) between the preconceptional period and three weeks and five days of gestation.

When the mother was evaluated for gestational diabetes, she was found to be close to the border and was followed with dietary recommendations.She was consultated to our department with an e-mail because of the risk of teratogenicity due to drug use.

The woman delivered a male infant at 34 weeks via cesarean section. The baby was kept in the neonatal intensive care unit for 1 week due to transient tachypnea of the newborn.The baby's birth weight was 2700 grams and his length at birth was 50 cm. When we contacted the mother by phone to get information, we learned that the baby continued to develop healthily at his age of 6 months.

Conclusions: The prevalence of obesity among reproductive-age and pregnant women is expected to continue growing. Obesity during pregnancy is linked to various maternal and fetal problems; however, maintaining a moderate gestational weight gain based on pre-pregnancy BMI is crucial for favorable fetal outcomes. Weight loss medications are not recommended during pregnancy. Animal studies have shown equivocal increases in abnormal embryo development following liraglutide exposure. Given the limited human data available, we aimed to present this case report to contribute to the existing literature.

In this case, the pregnancy resulted in a late preterm birth at 34 weeks. No major developmental concerns were noted after discharge from NICU. Further research and human data are needed to assess the safety of liraglutide use during pregnancy.



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