

Esophageal Atresia in a Newborn Born to a Parkinson's Mother Had L-Dopa/Benserazide Treatment during Pregnancy

Sir,

A 24 year old women with Parkinson's disease (PD) was admitted to give her first birth. The patient's history revealed that the patient had been suffering tremor of the right hand and slowness of movement due to a head trauma that she experienced at the age of 9 years. The patient presented to our polyclinic at the gestational week of 37 according to the last menstrual period. The patient was still using levodopa-benserazide 250 mg/day, and the neurological examination was normal except for bradymimia, bradykinesia. The patient was spontaneously pregnant after 5 years of infertility and had no clinical problems during the prenatal follow-up. The ultrasonographic measurements were consistent with 34 weeks of gestation. The patient had a spontaneous vaginal birth and delivered a live female baby weighing 2.050 g with an APGAR score of 7/9. The baby had a heart rate of 130/min, respiratory rate of 60/min, and oxygen saturation of 95%. On serial follow-up, the baby had excess secretions in the airway and developed tachypnea. An arterial blood gas revealed pH: 7.13, PCO₂: 60.5 mmHg, PO₂: 47 mmHg, and HCO₃: 17.3 mEq/l. Depending on these outcomes, the baby was intubated, an umbilical vein catheter was inserted, and fluid resuscitation was started with 10% dextrose 80 cc/kg/day. Surfactant was given since the complete atelectasis of the left hemothorax was seen on the chest X-ray. The baby was monitored in the incubator and an orogastric tube was inserted since the excess secretions in the airway were still continuing. The patient was considered to have esophageal atresia since the orogastric tube did not progress and was seen to curl up at the level of upper-middle esophagus in the chest X-ray. A consultation was made with the ear-nose-throat clinic regarding the facial anomalies, but no pathology was detected. The baby was then transferred to a tertiary-level neonatal intensive care unit and was operatively treated with a diagnosis of esophageal atresia. The baby was discharged after the feeding problem was treated.

PD is a common late-life neurodegenerative disorder. About 5% of PD patients have an onset younger than 40 years of age. The young-onset below the age of 20 is known as juvenile PD and is more common in men than in women.^[1] The coexistence of PD and pregnancy is rare. To our knowledge, about thirty cases have been reported in the literature.^[2]

In this report, we present a case with the coexistence of PD and pregnancy who used levodopa-benserazide during pregnancy and whose neonate was detected with esophageal atresia, which has never been reported in the literature.

In patients with severe and advanced-stage PD, performing daily activities and maintaining a proper posture may become difficult during pregnancy.^[2,3]

The combination of carbidopa or benserazide with levodopa appears to be safe, and no teratogenic effect of these combinations has been reported. Studies have shown that levodopa crosses the placenta, but carbidopa does not cross the placenta. In a previous study, an infant with prior exposure to levodopa was detected with osteomalacia, but no causal relationship was established.^[4,5]

In the case presented, although the levodopa-benserazide therapy caused no complication during pregnancy, esophageal atresia occurred in the neonate, which could not be completely attributed to the therapy. Accordingly, this is the first study to report the presence of esophageal atresia in the neonate of a mother with PD who used levodopa-benserazide during pregnancy. Nevertheless, there has been no case report regarding the use of ropinirole or apomorphine, and there is scarce information in the literature regarding the use of selegiline and rasagiline.^[4,5]

In the case presented, although the levodopa-benserazide therapy caused no complication during pregnancy, esophageal atresia occurred in the neonate, which could not be completely attributed to the therapy. Accordingly, this is the first study to report the presence of esophageal atresia in the neonate of a mother with PD who used levodopa-benserazide during pregnancy. Nevertheless, further studies are needed to investigate the relationship between neonatal esophageal atresia and the coexistence of PD and pregnancy.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

Mehmet Hamamcı, Kaya Yücesoy¹, Nur Pekmezci²,
Zeynep Erdoğan Çetin³, Refah Sayın⁴

Departments of Neurology, ¹Gynecology and Obstetrics, ²Pediatric Diseases and ³Otorhinolaryngology, Ardahan State Hospital, Ardahan, ⁴Department of Neurology, Medical School, Ufuk University, Ankara, Turkey

Address for correspondence: Dr. Mehmet Hamamcı, Department of Neurology, Bozok University Medical School, Yozgat, Turkey.
Email: drmehmetmehmet@gmail.com

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