Successful Pregnancy Outcome In A Patient Suffering From Chronic Kidney Disease Stage V Undergoing Continuous Ambulatory Peritoneal Dialysis - a Case Report

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Abstract:

A successful pregnancy and outcome is rare in patients suffering from End Stage Renal Disease undergoing renal replacement therapy. Because of good hemodynamic stability the outcome of pregnancy is slightly better in patients undergoing Continuous Ambulatory Peritoneal Dialysis (CAPD) as compared to patients undergoing Hemodialysis (HD). Here we report a case of successful pregnancy with favorable maternal and child outcome in a patient undergoing CAPD.

Keywords: Chronic Kidney Disease, Peritoneal Dialysis, CAPD, Pregnancy

Case Report:

A 37 years old Mrs. L was diagnosed CKD V and initiated CAPD on 11th April 2011. She was married for seven years before she was detected to have CKD and could not conceive a child. She was doing well with 3 exchanges per day with 2 Litres Dianeal twin bags of 1.5%. Her menstrual cycle was irregular and when she missed her period she did not pay much attention until she was found to be pregnant for 28 weeks. She and her family wanted the child very much and she continued the pregnancy. She was hospitalized on 11th June 2013 and under close observation by the obstetrician and nephrologist. She continued 4 exchanges per day in low volume and was advised bed rest to avoid pre term delivery. At the time of admissions her parameters were Hb 10.4 gms/dL, serum creatinine 5.4 mg/dL, serum albumin 3.7gm/dL. She was asymptomatic.

The patient had a normal vaginal delivery of a preterm male baby on 17.6.2013 in the hospital without any maternal complications. The baby was preterm and weighed 1.3 Kg only. The baby was managed by the neonatologists in the neonatal ICU and kept in the incubator for a period of 3 weeks. Baby started taking feeds gradually and gained weight. The mother and baby were discharged on 12/07/2013 in healthy conditions. At the time of last hospital visit on 30th August 2013, both the mother and baby were doing well (Picture in the cover page of this issue).

Discussion:

Among the patients undergoing Renal Replacement Therapy, the chance of getting pregnant is 1% to 7% only and of these pregnancy only about 30% to 50% had a favorable pregnancy outcome. Pregnancy may be missed in a patient undergoing CAPD because of the irregular menstruation, PD fluid in the abdomen and symptoms of early pregnancy like nausea vomiting being seen in CKD patients. Both hemodialysis and peritoneal dialysis can be performed in pregnancy. However because of marked changes in hemodynamics and Blood Pressure during Hemodialysis, there is alterations in placental blood flow affecting the fetal homeostasis. This may lead to premature termination of pregnancy. Peritoneal Dialysis is more physiological and there is less hemodynamic

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fluctuations in the mother thereby causing less hemodynamic changes in the placental circulation with better pregnancy outcome. Peritoneal Dialysis has a favorable outcome in pregnant CKD patients as compared to Hemodialysis. A potential problem with peritoneal dialysis in pregnancy is the abdominal discomfort and less peritoneal surface area available for exchange with advancing pregnancy. However this can be minimized by reducing the fluid volume and increasing the number of exchanges per day.

The present case is a rare one as there are no reports of CAPD patients giving birth to normal baby in India. There are few case reports from other parts of the world. The initiation of RRT in the form of CAPD in our patient may have improved the chance of conception as she could not conceive during the seven years of her marriage before the initiation of CAPD. In our case the baby was delivered preterm and with the intensive management in NICU, the baby survived the initial crucial days and the baby became alright at the end of hospitalization.

Conclusions:

Though pregnancy is not normally encouraged in patients on CAPD, this is a rare instance where the pregnancy was detected late because of the mother's irregular menstrual history and PD fluid in the peritoneum masking the pregnancy. The family also wanted the child and hence the pregnancy was allowed to continue and ultimately with a good outcome. We can conclude that CKD patients on CAPD have a better chance of successful pregnancy as compared to patients on hemodialysis. If required pregnancy may be allowed to continue in selected patients of CKD on CAPD.

Disclosures:

The authors have no financial disclosures and conflict of interests

Bibliography: