PREGNANCY OUTCOMES IN RENAL TRANSPLANT RECIPIENTS: A SINGLE-CENTRE STUDY

Sokratis Stoumpos1, Susan H McNeill1, Karl McPherson2, Morag Gorrie1, Patrick B Mark1,2, Janet E Brennand1, Colin C Geddes1 and Christopher J Deighan1
1Western Infirmary Glasgow, Glasgow, United Kingdom, 2Southern General Hospital, Glasgow, United Kingdom, 3University of Glasgow, Glasgow, United Kingdom

Introduction and aims: Fertility rapidly returns to women after successful kidney transplantation, and pregnancy occurs in up to 12% of young women. The aim of this study was to collect information about pregnancy, delivery and renal outcomes among all kidney transplant recipients in our centre.

Methods: Pregnant women with a kidney transplant were identified through our prospectively maintained electronic patient record and case-notes between January 1, 1970 and February 28, 2013. We retrospectively analyzed 40 years of pregnancy-related outcomes from 138 pregnancies reported from 89 kidney transplant recipients.

Results: Mean ages at the time of transplantation and pregnancy were 25.2 (SD 6.4) years and 30.3 (SD 5.1) years, respectively. Outcomes included 102 (73.9%) live births, 23 (16.7%) miscarriages, 8 (5.8%) terminations, 2 (1.4%) stillbirths, and 3 (2.2%) ectopic pregnancies. There were live births in 73.9% of pregnancies, with a high prevalence of preterm (<37 weeks) and caesarean deliveries (59.8% and 88.5%, respectively). Sixteen of the 138 pregnancies (11.6%) were within 1 year of transplantation, resulting in 9 (66.3%) live births, 4 (25%) miscarriages, and 3 (18.7%) terminations. Preexisting hypertension (or antihypertensive medications) was present in 56 patients (40.6%). Preeclampsia and gestational hypertension (defined as hypertension without proteinuria or other signs/symptoms of preeclampsia that develops after 20 weeks of gestation and resolves postpartum) were observed in 8.7% and 5.8% of pregnancies, respectively. Seven patients (5.1%) had an episode of acute rejection during pregnancy (three of which resulted in transplant failure and return to dialysis) and eleven additional patients (8.0%) had transplant failure within 2 years of delivery. The mean eGFR fell significantly when comparing pre-pregnancy and six months postpartum eGFR (55 versus 59 mL/min per 1.73 m², P=0.002). When patients with acute rejection during pregnancy were removed from analysis there continued to be a significant drop in eGFR (56 versus 53 mL/min per 1.73 m², P=0.008). Mean age at conception, time interval between transplantation and pregnancy, 10-year incidence of live and preterm births (per prevalent pregnancies in renal transplant recipients) remained unchanged over the last four decades (1970-1980, 1980-1990, 1990-2000, and 2000-2010).

Conclusions: The majority of pregnancies in renal transplant recipients have a good outcome but with increased risk of miscarriages, preterm and caesarean deliveries.

Despite advances in immunosuppression, the incidence of live and preterm births has not changed over the last four decades in our unit.

RISK FACTORS FOR OCCURRENCE OF EARLY AND SEVERE PREECLAMPSIA

Bijana Gerasimovska Kitanovska1, Katica Zafirovska1, Stevka Bogdanovska1, Vesna Gerasimovska1 and Aleksandar Skole1
1Department of Nephrology, Skopje, Republic of Macedonia

Introduction and Aims: Early preeclampsia (hypertension and new emergence of proteinuria before 34th gestational week) and severe preeclampsia (hypertension, proteinuria above 5 g/day and systemic signs) are subgroups of preeclampsia that have the most severe outcomes for the mother and the child. Identification of risk factors may assist in prediction and prevention of preeclampsia. To identify risk factors for preeclampsia and subgroups of preeclampsia.

Methods: The study was a longitudinal prospective study carried out in the Department of Nephrology, as part of a larger study that followed risk factors, biochemical and biophysical characteristics of gravidas. Subdivision of groups was made after delivery and gravidas were followed up regularly in 6 checkups during pregnancy and one check up after delivery. A total of 94 patients were included, of whom 54 without and 40 with preeclampsia. Of the 40 with preeclampsia, 10 had early preeclampsia and 12 had severe preeclampsia. Risk factors that were studied were family history, smoking, previous preeclampsia, BMI, age, controlled blood pressure, therapy, caesarean section, delivered before 37th gestational week and birthweight below 2500 g.

Results: In univariate analysis, patients with previous preeclampsia had a risk of recurrence of 2.2 (1.01-4.4 95% CI), while dual antihypertensive therapy and low-molecular weight heparin were found to be protective factors OR=0.11 (0.03-0.4 95% CI) and OR=0.2 (0.07-0.6 95% CI). They also had higher risks for cesarean section, delivery before 37th gestational week and birthweight below 2500 g.

In patients with early preeclampsia, multiparity carried a risk of 11,42 (1,29-30 95% CI), positive family history -2,33 (0,7-7,7 95% CI), and uncontrolled blood pressure - OR=4,72 (1,02-24,4 95% CI). They also had higher risks for cesarean section, delivery before 37th gestational week and birthweight below 2500 g. In patients with early preeclampsia, multiparity carried a risk of 11,42 (1,29-30 95% confidence interval), positive family history -2,33 (0,7-7,7 95% CI), and uncontrolled blood pressure - OR=4,72 (1,02-24,4 95% CI).

For patients with severe preeclampsia, OR for multiparity was 4,72 (1,02-24,4 95% CI) body mass index above 30 kg/m2 carried 2,34 times higher risk of preeclampsia (0,48-11,29 95% CI).

In the multivariant logistic regression, using significant parameters from univariate analysis, only two factors were found to be predictors of preeclampsia- age 35-50 and dual antihypertensive therapy (B=1.36 and -1.15 respectively, p=0.009 and 0.032).

Conclusions: Early identification of risk factors and stratification of risk groups may aid gravidas and they might benefit from more frequent controls and dual antihypertensive therapy.