Risk of pregnancy complications in living kidney donors: a meta-analysis

Ioannis Bellos[1]

[1]National and Kapodistrian University of Athens, Greece

Aug 28, 2021

dx.doi.org/10.17504/protocols.io.bxsnpnde

Ioannis Bellos

ABSTRACT

Living kidney donation is growing, especially among young women. However, the risk of subsequent pregnancy complications remain unclear. The present meta-analysis aims to clarify whether kidney donation is linked to higher rates of preeclampsia, gestational hypertension, gestational diabetes, preterm birth, low birthweight or fetal death. Current literature will be gathered and pooled, while the quality of evidence will be appraised.

DOI

dx.doi.org/10.17504/protocols.io.bxsnpnde

PROTOCOL CITATION

Ioannis Bellos 2021. Risk of pregnancy complications in living kidney donors: a meta-analysis. **protocols.io** https://dx.doi.org/10.17504/protocols.io.bxsnpnde

CREATED

Aug 28, 2021

LAST MODIFIED

Aug 28, 2021

PROTOCOL INTEGER ID

52782

1

1. Objective
   To determine whether living kidney donation is associated with higher risk of developing maternal or fetal complications in subsequent pregnancies.
2. Eligibility criteria
   The rate of pregnancy complications will be compared among women with history of living kidney donation and non-donors. The outcomes of interest will be: preeclampsia, gestational hypertension, gestational diabetes, cesarean delivery rate, preterm birth (<37 weeks), low birthweight (<2.5 kg) and fetal death. Both prospective and retrospective observational studies will be held eligible. Cross-sectional studies, case series, uncontrolled studies, conference abstracts, review articles, animal studies and in vitro studies will be excluded.
3. Literature search
   Literature search will be performed by systematically searching from inception PubMed, Scopus, Web of Science and CENTRAL (Cochrane Central Register of Controlled Trials). In addition, Google Scholar will be screened to provide grey literature coverage, while the full reference lists of the included studies will be examined to recognize potential missing articles. No date/language restrictions will be applied.
4. Data extraction

The following data will be extracted: year of publication, country, eligibility criteria, sample size, study design, data source, years of donation, participants' age at pregnancy and at donation, as well as the necessary data for the outcomes of interest.

5. Quality assessment
   The risk of bias of the included studies will be evaluated with the ROBINS-E tool, which takes into account the following domains: confounding, selection of participants, classification of exposures, departures from intended exposures, missing data, measurement of outcomes and selection of the reported results.
6. Data analysis
   Confidence intervals will be set at 95%. Random-effects models will be fitted using the Paule-Mandel method for between-study variance estimation. Pool estimates of odds ratios will be calculated. The inter-study heterogeneity will be quantified by the inconsistency index (I2), while the 95% predictive intervals will be calculated to assess the effects to be expected by future studies. Subgroup analysis is planned based on whether appropriate participant matching was applied or not. Funnel plots will be constructed and the Egger's test will be performed to assess their asymmetry, if appropriate (>10 studies).
7. Quality of evidence
   The quality of the existing evidence will be appraised following the GRADE approach. Specifically, evidence will be classified as very low, low, moderate or high by judging the following domains: study limitations, consistency, directness, imprecision and publication bias.

Citation: Ioannis Bellos (08/28/2021). Risk of pregnancy complications in living kidney donors: a meta-analysis. https://dx.doi.org/10.17504/protocols.io.bxsnpnde