PREGNANCY AND NEONATOLOGY

PREGNANCY IN DIALYSIS PATIENTS: MYTH OR REALITY? A SYSTEMATIC NARRATIVE REVIEW OF OUTCOMES AND TREATMENTS IN THE NEW MILLENNIUM

Fosca B Minelli1, Martina Ferraresi2, Federica N Vigotti3, Marta Nazha3, Valentina Consiglio4, Stefania Scognamiglio3, Rossella Attini1, Tullia Todros1 and Giorgina Piccoli5

1Obstetrics, Surgical Sciences, Turin, Italy, 2s, Clinical and Biological Sciences, Turin, Italy, 3SS Nefrologia - ASOU s. Luigi Gonzaga, Orbassano, Clinical and Biological Sciences, Turin, Italy, 4ss, Clinical and Biological Sciences, Turin, Italy, 5University of Torino, Clinical and Biological Sciences, Torino, Italy

Introduction and Aims: The great advances in the care of high risk pregnancies and in pre-term babies, the increasing attention to quality of life of chronic patients and the advances in dialysis treatment are the basis for the growing interest in pregnancies in dialysis patients, a new frontier in the treatment of end-stage kidney disease. Since the last systematic review of the literature (10 studies from 2000 to 2008, 90 pregnancies), the number of reported cases quadrupled in about 5 years, suggesting to update critically review the results. The aim of the paper is to review the literature on pregnancy in dialysis patients, with special attention to materno-foetal outcomes, risks and open questions.

Methods: PubMed, Embase, and the Cochrane library were searched in August, 2014 (MESH and free terms on pregnancy and dialysis or hemodialysis). Eligibility criteria: pregnancy in women on chronic dialysis. A separate narrative analysis was performed for case series (at least 5 cases) and case reports, and according to mode of treatment (peritoneal dialysis (PD) versus haemodialysis (HD)) and to conception before or after dialysis start. Search strategy, paper selection and data extraction were performed in duplicate. The high heterogeneity of the studies led to a narrative review.

Results: We obtained 149 full texts from 672 references. We selected 98 papers (series: HD 21, PD 1, both HD and PD 5; cases: HD 61, PD 9, both HD and PD 1) with a total of 535 pregnancies in 505 patients. Preterm delivery is the rule in most series (73%, min 12%, max 100%); residual kidney function is probably important, since patients who conceive before dialysis have overall better outcomes (largest series: Anzdata Registry). All Authors report to increase dialysis efficiency. On HD this is mainly obtained increasing dialysis frequency (quotidian dialysis sessions are the most frequently employed, weekly dialysis hours range from 18 to 56 hours), On PD, fluid exchange are increased to more than 10 litres per day. The best results are so far obtained with long-hours HD (>36 hours per week allow a live birth rate at least of 85%).

Conclusions: Evidence on pregnancy on dialysis is heterogeneous but rapidly accumulating; the main determinant of outcomes on HD is the dialysis schedule. The differences between PD and HD should be further analysed. Within these limits, we expect that pregnancy will be increasingly encountered in dialysis patients, thus suggesting that obstetricians and nephrologists should become more accustomed to this issue.