



# Outcome and Prognosis Factors of Pregnancies in Hemodialysis Patients

Marine Panaye<sup>1</sup>, Anne Jolivot<sup>1</sup>, Sandrine Lemoine<sup>1,2</sup>, Fitsum Guebre-Egziabher<sup>1</sup>, Muriel Doret<sup>2,3</sup>, Laurent Juillard<sup>1,2</sup>  
(1) Hôpital Edouard Herriot, Service de Néphrologie, Lyon, France (2) Université Lyon 1, Lyon, France  
(3) Hôpital Femme Mère Enfant, Obstétrique, Bron, France

## INTRODUCTION

Pregnancies in hemodialysis (HD) patients are rare and often associated with maternal and foetal complications. We aimed to determine pregnancies outcome in HD patients and to identify factors influencing maternal and foetal prognosis.

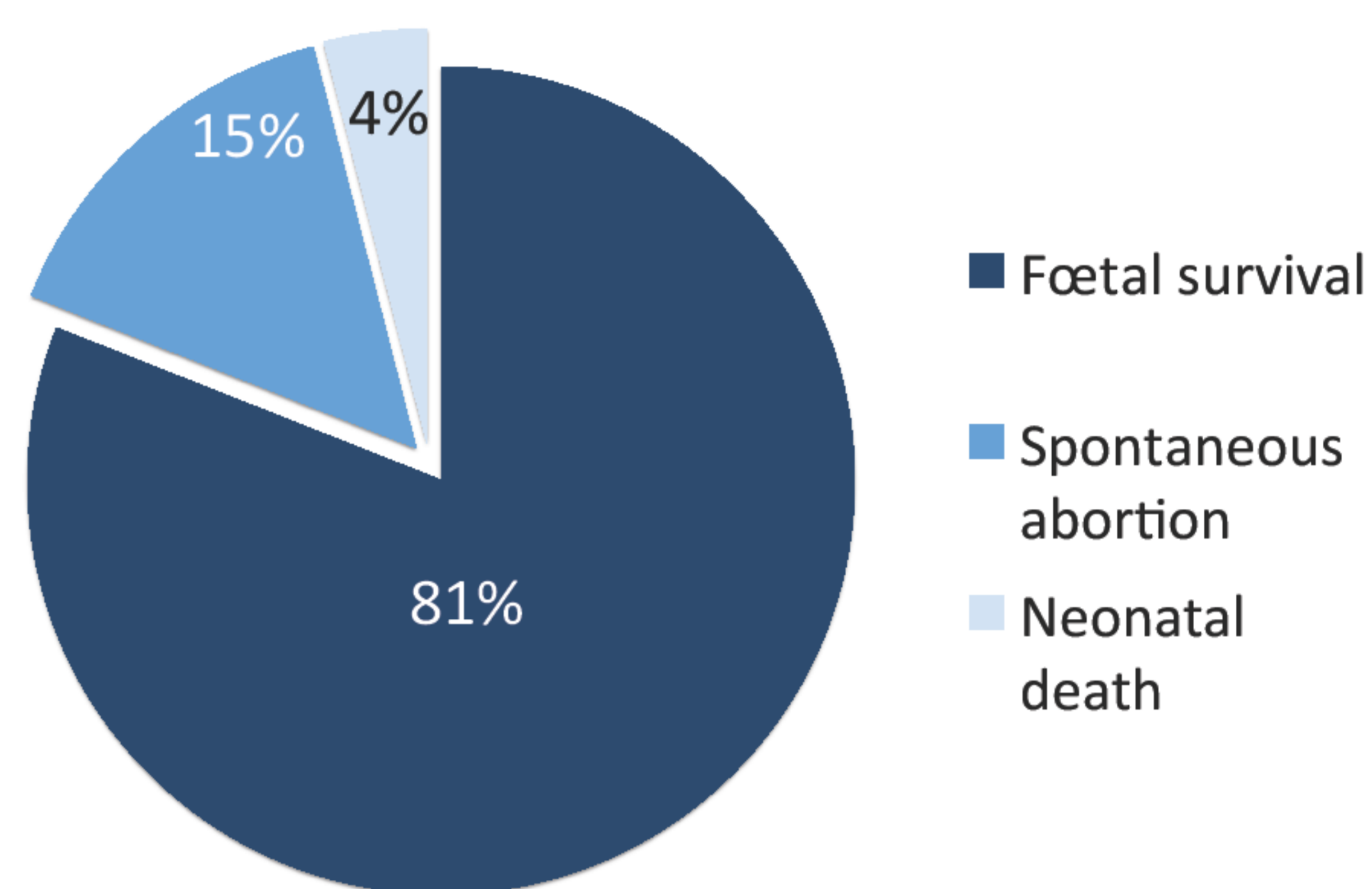
## MATERIALS AND METHODS

This is a descriptive retrospective epidemiologic study. Pregnant women while on HD from 1985 to 2013 in the South-Eastern of France were included.

## RESULTS

We identified 26 pregnancies in 20 HD patients. Mean maternal age at conception was 28.5±4 yr. Time on dialysis before pregnancy was 60±60 months.

Urea concentration decreased during pregnancy with a median urea concentration of 15.1±0.9 mmol/L. Mean weekly dialysis time was 17.7±4 hours and 96% performed daily dialysis. Foetal survival was 81% with a mean gestational age of 33.8±0.8 weeks and a mean birth weight of 1951±157 g (Figure 1). A better foetal outcome was associated with an earlier initiation of daily dialysis, a lower urea concentration and a higher hemoglobin concentration (Figure 2). No association was found between foetal outcome and dialysis length



|                     | HD (N = 26)  |
|---------------------|--------------|
| Birth weight (g)    | 1951 ± 157.3 |
| Gestational age (w) | 33.8 ± 0.8   |
| GA < 37 weeks       | 71%          |
| Caesarian section   | 57 %         |
| Pre-éclampsia       | 10%          |
| Polyhydramnios      | 43%          |

Figure 1. Obstetrical and foetal outcomes on hemodialysis

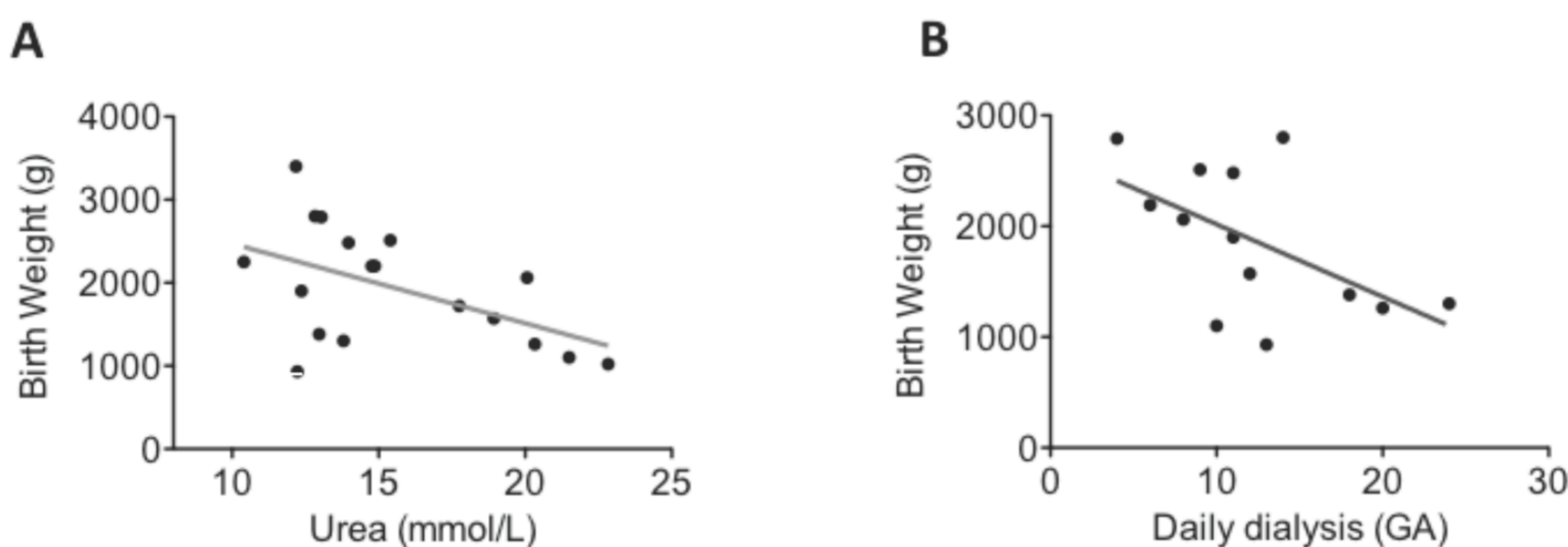


Figure 2. Linear regression upon birth weight.

A : Association between urea concentration and birth weight (R<sup>2</sup>=-0.26; p = 0.03)  
B: Association between time of daily dialysis initiation and birth weight (R<sup>2</sup>= 0.31; p = 0.05)



Hôpitaux de Lyon

## CONCLUSIONS

Pregnancies outcome in end stage renal disease has improved but remain at risk. Early initiation of daily dialysis and maintaining lower urea concentration improve foetal outcome. Altogether, this will surely allow us to reconsider our preconception counseling policy in order to accord and support pregnancies on hemodialysis patients ,as the outcome was close to recent studies in transplanted patients.

# Inserm

Institut national de la santé et de la recherche médicale

Université Claude Bernard  Lyon 1

