

Outcome of pregnancy in women with glomerular diseases

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Background

The use of modern immunosuppressive regimens led to improved quality of life of patients with glomerular diseases and to increased rate of pregnancies in this population. Nevertheless, pregnancy in patients with renal disease confers a high risk of complications affecting not only the pregnant woman but the embryo as well.

Aim of the study

To record the outcome of pregnancies in women with glomerular diseases.

Patients-methods

14 pregnancies and 16 neonates of 12 women with glomerular diseases were studied between 2010 and 2016. 2 patients had two pregnancies and another 2 women had twin pregnancies.

Among 12 women, 3 suffered lupus nephritis, 1 p-ANCA vasculitis, 2 IgA nephropathy, 3 focal segmental glomerulosclerosis, 2 membranous nephropathy and 1 minimal change disease (figure 1)

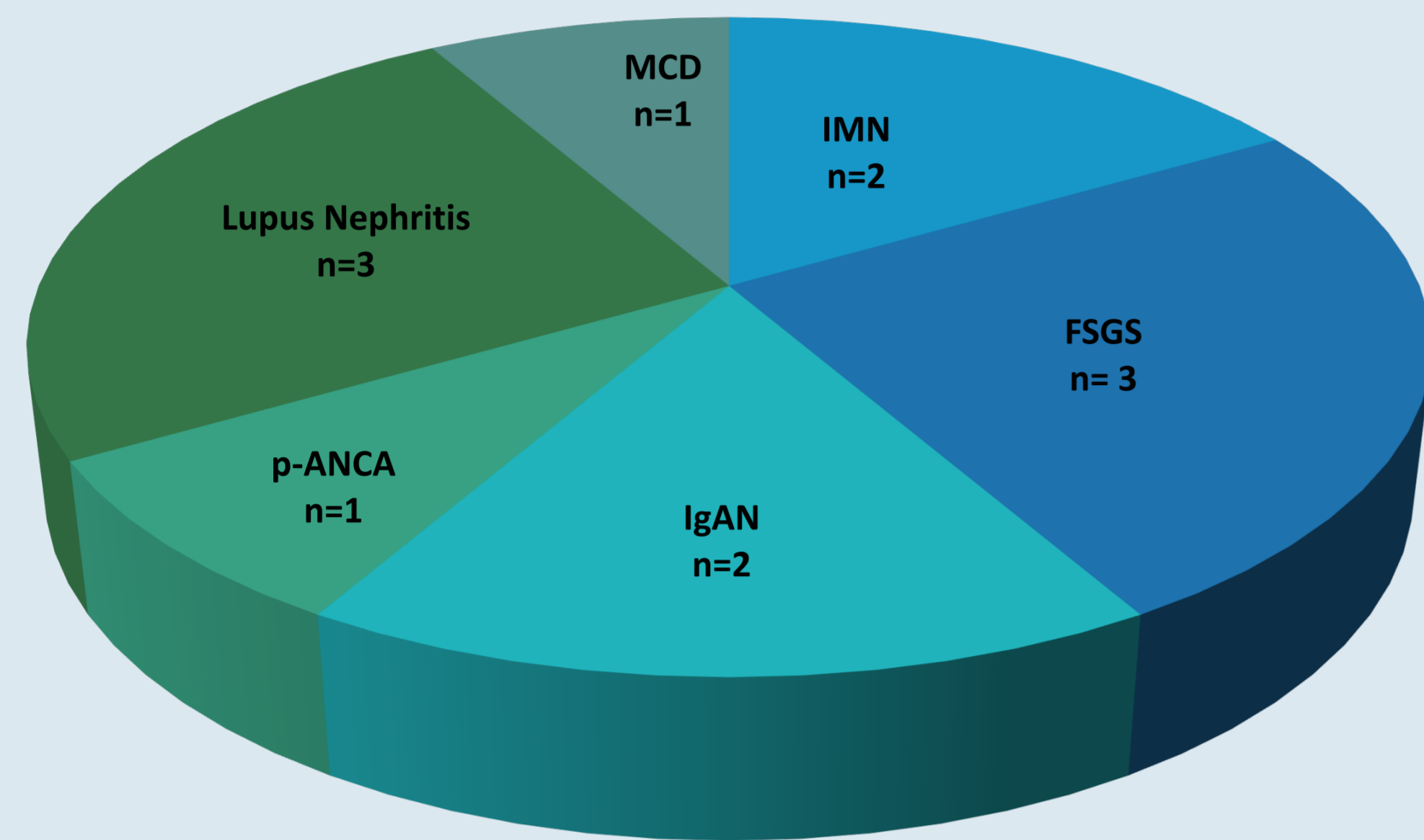


Figure 1. Classification of glomerular diseases.

Mean age at conception were 33 years. Median time from diagnosis of glomerular disease to pregnancy was 12.5 years. 10/12 (83%) patients had received immunosuppressants with a median time of 8.5 months from therapy cessation to conception. 2/12 (17%) patients with membranous nephropathy and subnephrotic proteinuria had been on RAS blockade. All patients were at remission at the time of conception. 7/12 (59%) were at complete remission (median time of 3.5 years) and 5/12 (41%) at partial remission.

Mean creatinine value at the beginning of pregnancy was 0.8 ± 0.4 mg/dl with estimated GFR (CKD-EPI formula) of 100 ± 34 ml/min. Mean proteinuria levels were 0.6 ± 0.3 g/24h. Creatinine and proteinuria levels at the beginning and at the end of each pregnancy are shown in figures 2 and 3.

None of the patients received preventive immunosuppression during pregnancy.

Figure 2. Cr before and after pregnancy

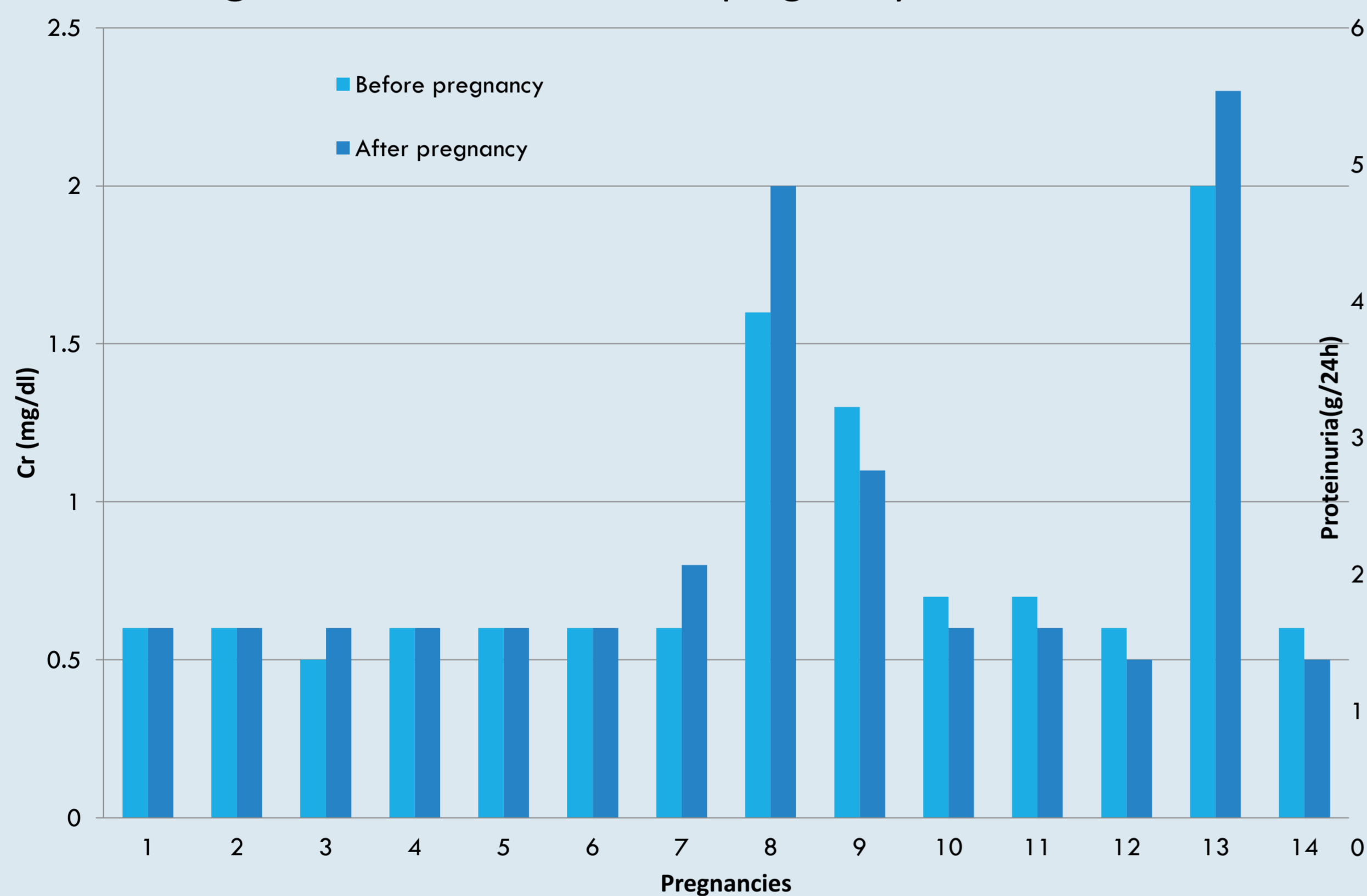
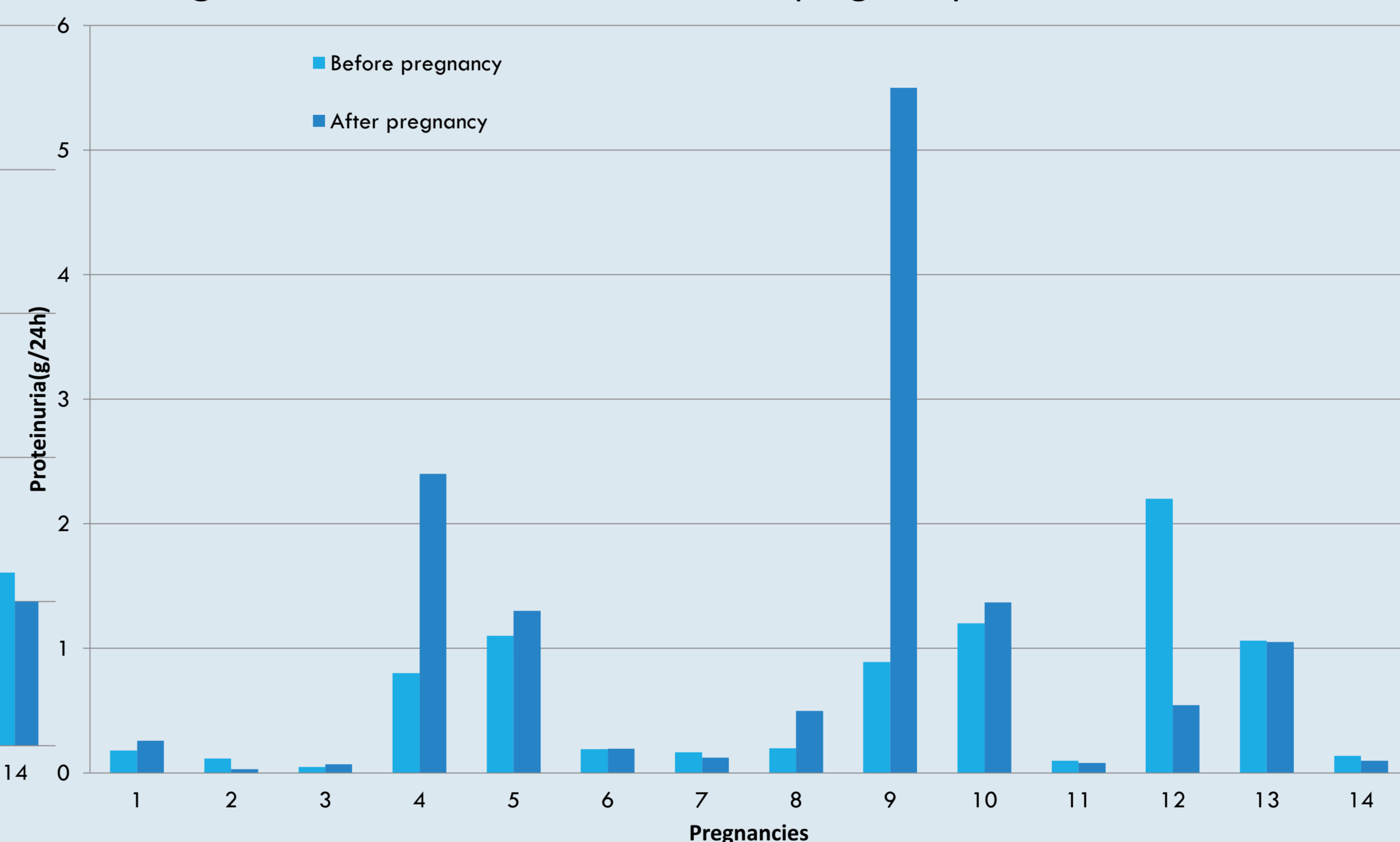


Figure 3. Proteinuria before and after pregnancy



Results

Outcomes of mothers

2 disease relapses were recorded. The first was a nephritis relapse in a woman with proliferative lupus nephritis as primary disease. The patient underwent a kidney biopsy at 16th gestational week and received azathioprine and low dose methylprednisolone with good outcome. The second was a relapse of nephrotic syndrome (immediately after delivery) in a patient with focal segmental glomerulosclerosis. Cyclosporine and methylprednisolone were initiated and complete remission was achieved.

Obstetric complications occurred in 3 cases and included an episode of preeclampsia which was resolved by delivery at 34th gestational week, a case of central diabetes insipidus with spontaneous resolution and a case of puerperal infection. None of these events was complicated by deterioration of renal parameters.

Outcomes of fetuses

14 pregnancies resulted in delivery of 16 neonates. A cesarian section was performed in 12/14 (86%) of pregnancies. Mean pregnancy duration was 38 weeks and mean birth weight was 2459gr. No case of intrauterine death or neonatal loss was recorded. 3/16 (18.7%) neonates were admitted to the Neonatal Intensive Care Unit due to ARDS, sepsis and bradycardia but all of them had a successful recovery.

Conclusion

Given the good outcomes of pregnancy in women with glomerular diseases, physicians should encourage pregnancy among this special patient population when, of course, the necessary preconditions are fulfilled.

