



## Editorial

# Renal biopsy dilemmas in lupus nephritis<sup>☆</sup>

## Dilemas de la biopsia renal en nefritis lúpica



Kidney biopsy is considered the gold standard for the diagnosis of lupus nephritis in both, pediatric and adult patients<sup>1</sup>. Clinical manifestations are described, which could be correlated to the histology; however, this is not always the case. For example, a patient with microscopic hematuria and mild proteinuria is associated with the possibility of a class II nephropathy, but the histology may correspond to a class III or IV, which radically changes the therapeutic approach.

Clinical manifestations occasionally prevent us from establishing the difference between vascular involvement, thrombotic microangiopathy, or lupus podocytopathy. Medications and intercurrent infections are also associated with paraclinical alterations, or variations in the physical exploration; hence it is mandatory to do a kidney biopsy to clarify the diagnosis<sup>1</sup>.

Further information is required in clinical practice, not just the differential diagnosis and the classification of the nephropathy. Some of the factors reported in the literature, associated with poor prognosis are clinical: male gender, hypertension and nephrotic syndrome initially; failure to respond to treatment during the first 6 months, and paraclinical test results such as positive antiphospholipid antibodies<sup>2,3</sup>.

The histological characteristics of lupus nephritis – known since the 50s in the past century, and the changes introduced in the long term classification, until the last 2018 proposal, include the assessment of activity indexes and chronicity. Though their importance has been well recognized, the information available so far is controversial regarding their correlation with the manifestations at the time of diagnosis and forecasting of clinically significant outcomes<sup>1,4</sup>.

In pediatric patients, the information about the findings of the biopsy and the association of such findings with the clinical manifestations and the long term prognosis is limited.

Most of the information available establishes a correlation between the presence of proliferative nephritis and the clinical severity at diagnosis and the increased risk of progression to end-stage kidney disease. High chronicity indexes are also correlated with a worse renal prognosis. In the adult population, high activity indexes, particularly of the glomerular component, are associated with risk of relapses and high chronicity indexes of the tubular component are associated with long-term kidney dysfunction<sup>2–5</sup>.

In this edition of the Colombian Journal of Rheumatology (REVISTA COLOMBIANA DE REUMATOLOGÍA) Forero-Delgadillo et al. discuss a retrospective study in pediatric population, conducted in a reputable institution in Cali, Colombia. The intent of the study was to correlate the findings of the initial biopsy with the clinical manifestations and the long-term prognosis of patients (median follow-up 2,3 years). The correlation was made for each factor in the activity index and chronicity, finding a higher consistency between karyorrhexis and tubular atrophy; and, in the last visit, karyorrhexis, segmental sclerosis, tubular atrophy and kidney failure. However, none of the cases had a significant kappa coefficient. No correlation was studied with the type of nephropathy, or with the sum of the activity indexes and chronicity often reported in the literature<sup>6</sup>.

The authors conclude that for the group examined, the kidney biopsy was not sufficient as a predictor of survival based on kidney function; they emphasize the importance of conducting prospective studies combining biomarkers and clinical elements to guide the therapeutic approach and improve the prognostic forecast<sup>6</sup>.

This type of studies is important and learning about the local information enriches the dynamics in medical practice. Certainly, an accurate diagnosis, proper treatment and

follow-up of lupus nephritis are still challenging. The initial kidney biopsy and designing recommendations for biopsy during follow-up, the growing emphasis on urinary biomarkers research, a judicious therapeutic indication and treatment compliance shall all continue to improve the prognosis of the disease in both pediatric and adult patients.

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