

# Significance of Histological Crescent Formation in Patients with Diffuse Proliferative Lupus Nephritis

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## Commentary

By Professor Richard Glassock

The development of crescentic glomerulonephritis in the course of systemic lupus erythematosus (SLE) has been generally regarded as connoting a poor prognosis, but the impact of the degree of glomerular crescentic involvement on clinical manifestations and outcome has received little attention. Chen and co-workers from Nanjing, China, have helped to diminish this uncertainty by providing a detailed report on 520 patients with SLE showing more than 10% crescentic involvement in renal biopsies performed for evaluation of clinical features of lupus nephritis (LN). The findings were compared to 100 patients with diffuse proliferative LN showing no glomerular crescentic involvement. Crescentic involvement was graded as 10 to <25% ( $n = 240$ ); 25% to <50% ( $n = 160$ ) and equal to or >50% ( $n = 120$ ). Only biopsies showing >10 non-sclerosed glomeruli were included in the series. Patients with 50% or greater glomerular involvement tended to have a shorter course of SLE and LN, a lower likelihood of nephrotic syndrome, more gross hematuria, higher baseline serum creatinine and higher urinary C3 excretion. Serology did not distinguish the percentage crescents, but a positive ANCA was seen in 5.8% of those with  $\geq 50\%$  crescents compared to 0% in those without crescents. Capillary necrotic lesions were more common in those with advanced crescentic disease. Patients were treated with a variety of regimens, so evaluation of the benefits of specific regimens could not be

undertaken. Nevertheless, the complete remission rate was 55% at 1 year and 68% at 3 years for those with  $\geq 50\%$  crescents, and treatment failure was seen in only 11% of subjects at last follow-up (ranging from 1 month to over 10 years). Overall death rates were higher in those with any crescents and highest in those with  $\geq 50\%$  crescents. End-stage renal disease was observed in 2.2% of those with no crescents, in 4.3% of those with 10–25% crescents, in 6.4% in those with 25–50% crescents and in 10.2% of those with  $\geq 50\%$  crescents. A higher percentage of crescents was associated with a lower response to the treatment regimens. This nice study confirms the general impression of a worse prognosis as the extent of crescentic involvement increases, but also shows that aggressive treatment with currently available regimens can achieve success even in those subjects with LN and advanced crescentic disease. Exactly which regimen is best cannot be answered from this type of retrospective study.

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