

Alastair Rankin¹, Bruce Mackinnon¹, David Kipgen², Jonathan Fox¹, Colin Geddes¹, Emily McQuarrie¹, ¹Queen Elizabeth University Hospital Glasgow, Renal and transplant unit, Glasgow, UNITED KINGDOM, ²Queen Elizabeth University Hospital Glasgow, Department of pathology, Glasgow, UNITED KINGDOM.

Introduction

Limitations of the Oxford classification of the pathological features of IgA nephropathy (IgAN MEST score) include: individual features of the score are not all predictive and Henoch-Schoenlein purpura (HSP) is excluded despite IgAN and HSP being pathologically indistinguishable on biopsy.

Aims

To assess the prognostic utility and the impact of crescents of MEST score in all patients with IgAN/HSP.

Methods

All adult patients with a native renal biopsy diagnosis of IgAN or HSP between 2010 and 2015 in a unit serving 1.5 million people were identified. Baseline characteristics, biopsy reports and outcome data were collected. The primary outcome was a composite of requiring renal replacement therapy (RRT) or doubling of serum creatinine (sCr).

Results

139 patients were identified with 7 excluded (4 inadequate biopsies for MEST scoring, 3 on RRT at biopsy)

Baseline Characteristics (n = 132)

Male	67%
Age, years (mean, SD)	51 (+/- 17)
Creatinine, $\mu\text{mol/l}$ (Median, IQR)	61 (104-234)
HSP	21 (16%)

IgAN vs HSP

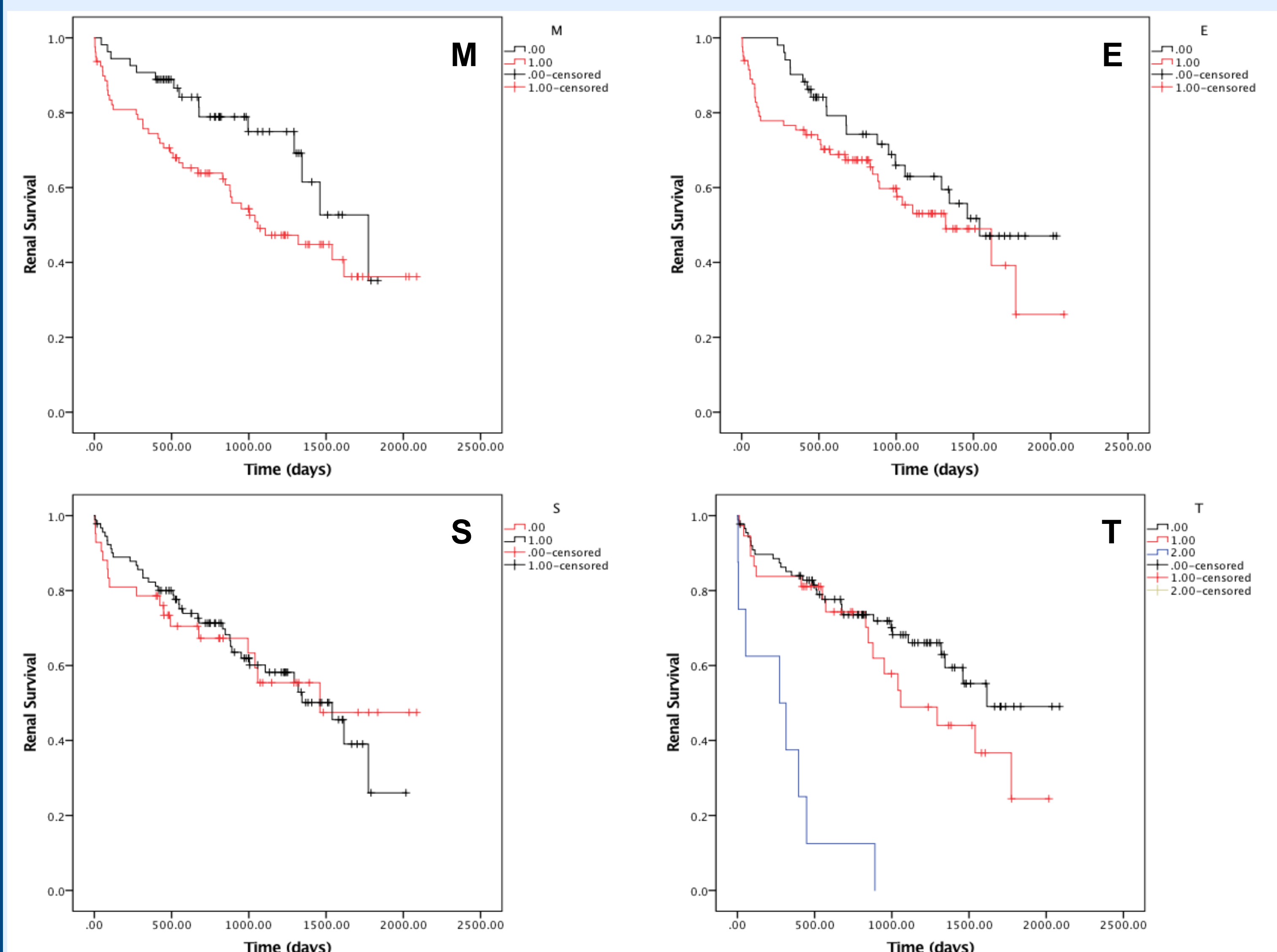
- No difference in age or baseline sCr
- No difference in MEST score
- Patients with HSP
 - higher baseline urine protein:creatinine ratio 335 vs. 224 mg/mmol; $p=0.04$
 - more likely to have >25% crescents on biopsy ($p=0.04$)
- No difference in primary outcome.

Immunosuppression

- 19 patients received immunosuppression for renal disease during follow-up
- These patients were more likely to have:
 - >25% crescents ($p<0.001$)
 - Clinical HSP ($p<0.003$),
 - Mesangial (M) hypercellularity ($p=0.02$)
 - Endocapillary (E) hypercellularity. ($p=0.005$)

MEST and Renal outcome

- Median follow-up of 2.2 years
- 47 patients (35%) reached the primary outcome of RRT or doubling of sCr at a median time of 413 days.
- M and T were predictive of outcome by Kaplan Meier analysis, ($p=0.007$, $p<0.001$ respectively), but E and S were not.
- On multivariate analysis, baseline renal function and M were the only independent associations with renal outcome even after excluding patients who received immunosuppression or had HSP.



Crescents

- 41 patients had at least 1 active crescent and 9 had active crescents in more than 25% of glomeruli
- There was no significant association with outcome ($p=0.06$).
- Excluding patients who received immunosuppression or had HSP did not affect the significance of the pathology findings.

Conclusions

Beyond mesangial hypercellularity, the Oxford classification added minimal prognostic value to baseline serum creatinine. The presence of crescents was also not an independent risk factor, albeit treatment bias could not be fully excluded. Renal outcomes in patients with IgAN and HSP did not differ. Large multicentre studies are needed to refine the clinical application of the information obtained from renal biopsy in patients with IgAN.

Correspondence address

Alastair.rankin@nhs.net

