Validation of the Scottish Renal Biopsy Registry histological coding to facilitate rapid epidemiological surveillance.

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Background: The Scottish Renal Biopsy Registry started collecting data on renal biopsies prospectively in 2005. The renal pathologists on the steering group agreed a diagnostic coding system for renal biopsy reports (http://www.srr.scot.nhs.uk/About/Guide.htm). In Glasgow all biopsies have been reported using this coding system since approximately 2008 and all of these text reports have been available on the West of Scotland Electronic Renal Patient Record (SERPR) since its implementation in June 2010.

Aims: To validate the diagnostic coding system against the text histopathology report and against the clinical diagnosis to determine if the information contained within the code is accurate and sufficient to reflect the histological diagnosis.

Methods: The text of the pathology report was extracted from SERPR for 192 consecutive renal biopsies performed between 05/01/11 and 05/01/12. The diagnosis code was extracted and matched to the text diagnostic term automatically. Each diagnostic term was compared with the text report to determine the accuracy.

Results: In 163 (85%) cases the coded diagnostic term was felt to accurately reflect the biopsy report. In 9 (5%) cases the term was accurate but imprecise e.g. ‘mesangial proliferative glomerulonephritis’ instead of ‘IgA nephropathy’. In 13 (7%) cases the diagnostic term was definitely different from the histological diagnosis. In 4 cases no coded term was available to adequately convey the histological diagnosis. The sensitivity and specificity of reporting the diagnostic code respectively for the 5 commonest histological diagnoses were: IgA nephropathy/HSP nephritis (n=22): 92%, 99%, interstitial nephritis (n=22): 100%, 100%, membranous nephropathy (n=17):100%, 100%, minimal change disease (n=14): 93%, 100%, focal segmental glomerulosclerosis (n=14): 92%, 99%.

Conclusions: Reporting diagnostic codes in the text of renal biopsy reports now enables rapid surveillance of the incidence of the common histological diagnoses. This will be useful for epidemiology but not for individual patient management. Using this method the histological diagnosis of all biopsies over a specified time period can be determined in a few minutes.