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P024 -Native Renal Biopsy Complications within a Renal & Transplant Unit

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Introduction

Native renal biopsies remain an important diagnostic test. However the benefits of performing such a test must be balanced against the known risks. Published meta-analysis studies provide a reference for complication rates which we use to inform and consent patients but it is not clear whether those complication rates reflect the complication rates in our unit.

Objectives

To determine the complication rates associated with native renal biopsies, if the grade of operator affected the complication rate and the proportion of renal biopsies with adequate tissue to make a diagnosis. Complications were divided into major and minor complications. Major complications were defined as those requiring a blood transfusion and haemorrhage requiring intervention including renal angiography and embolization and minor complications were defined as haematuria, pain and perinephric haematoma.

Method

A retrospective single centre study reviewing all native renal biopsies performed between August 2016 and August 2018. All data was collected from patient electronic records and included demographics, operator grade, number of passes, number of cores, adequacy of sample and complications.

Results

229 native renal biopsies were performed between August 2016 and August 2018. 68% were performed by a nephrology trainee, 20% by a consultant nephrologist and 2% by a consultant radiologist. Adequate renal tissue was obtained on all specimens.

3.9% of patients experienced a major complication and 8% of patients experienced minor complications. 9 patients required a CT scan. 2 patients underwent a successful embolization. 1 patient was readmitted due to a delayed bleed. There were no deaths from a native renal biopsy.

The overall complication rate for consultants, trainees (supervised), trainees (unsupervised) was 7.1%, 4.3% and 9.4% respectively. Both consultants and registrars had a similar rate of minor complications 8.5% and 8% respectively but unsupervised trainees had the highest major complication rate.

Patients undergoing renal biopsies performed by registrars were more likely to develop major complications (5%) than patients undergoing renal biopsies performed by consultants (3%).

Conclusions

The major complication rate for blood transfusion and embolization was higher than the quoted figure on our consent forms but similar to those reported by other centres. Despite the use of real time ultrasound scanning major complication rates are similar to rates identified in a local audit performed 2005. This finding is worthy of consideration. Possible explanations include a lower threshold to undertake invasive procedures (CT scanning and embolisation), reduced operator skill level or a changing patient demographic.

Consultant led procedures had a lower rate of major complications than those performed by registrars, but the interpretation of this statistic is difficult to assess because most consultant led biopsies were performed in a low risk day case group, whereas higher risk inpatient biopsies were usually performed by registrars.

Single centre studies in this area are important quality assurance measures. Interpretation of the results are difficult without reference to a standard. Following on from the 'Get It Right First Time' initiative it may be worth considering registering unit data on biopsy complications so that we share best practice and improve outcomes for our patients.