

EVALUATION OF KIDNEY BIOPSY AND ASSOCIATED COMPLICATIONS: SINGLE CENTER EXPERIENCE OF SIX YEARS

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OBJECTIVES

Kidney biopsy is a very important diagnostic tool for the diagnosis of various of nephrological diseases. We examined the complications and adequacy of kidney biopsies performed in a nephrology department of a tertiary care center.

METHODS

All data were retrieved from patients' files and hospital database retrospectively. We only evaluated biopsies performed under real-time ultrasound guidance during a period of 6 years. Adequacy of biopsies was determined by the number of glomeruli that was described in pathology reports. Major complication was described as bleeding requiring blood transfusion and minor complication was described as bleeding not requiring blood transfusion.

Table 1 Laboratory evaluation and preprocedure parameters of patients.

	Mean ± SD (n=597)	(Min-max)
INR	1±0.4	0.7-1.84
aPTT (seconds)	33.8±4.6	17-56
Platelets (n/μL)	267000±93000	40000-909000
Hemoglobine (g/dL)	11.5±2	6.6-17.5
Creatinine (mg/dL)	1.9±1.23	0.4-13.2
Albumin (g/dL)	2.9 ±0.9	0.4-4.9

Table 2 The distribution of major and minor complications

Major complications	N	%
Transfusion requiring hematoma	9	1.5
Transfusion requiring macroscopic hematuria	4	0.66
Decrease in hematocrit levels (requiring transfusion)	6	1
Transient increase in creatinine level	2	0.33
Total	21	3.5
Minor complications	N	%
Hematoma not requiring transfusion	4	0.67
Macroscopic hematuria not requiring transfusion	5	0.83
Decrease in hematocrit levels (not requiring transfusion)	1	0.16
Pain	2	0.33
Total	12	2

RESULTS

A total of 597 biopsies (156 renal allograft biopsies and 441 native kidney biopsies) obtained from 578 patients (263 female, 315 male) were evaluated. Mean age of patients was 39±9 years. Laboratory evaluation and preprocedure parameters of patients are shown in Table 1. The mean number of glomeruli per biopsy was 22±11 and 18±10 in native and transplanted kidneys, respectively. The mean number of glomeruli in native kidney biopsies was significantly higher than in transplanted kidney biopsies (p<0.01). In more than 90% of patients 7 or more glomeruli were obtained. The major and minor complication rate was 3.5% and 2%, respectively. The distribution of major and minor complications is shown in Table 2. There was no kidney loss or death related with kidney biopsy. There was no significant association between complication and gender, age, serum levels of creatinine, native or transplanted kidney biopsy.

REFERENCES:

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CONCLUSIONS

Ultrasound guided kidney biopsy provide adequate tissue and is a safe procedure.

