The relationship between perceived stress with kidney biopsy—safety at nephrology gold standard

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BACKGROUND AND AIMS: Percutaneous renal biopsy is a fundamental technique for the diagnosis of numerous renal pathologies. However, it is an invasive technique that requires operator experience and is associated with adverse outcomes. Bleeding complications such as haematuria or perirenal hematoma are frequent, but generally self-limiting, and may rarely be severe to the point of culminating in hypovolemic shock or death. The objectives of this study are to identify the rate of adverse outcomes and potential predictors of adverse outcomes related to the procedure.

METHOD: A retrospective analysis of patients undergoing native kidney biopsy at a tertiary centre, between 2015 and 2019 was carried out, based on the demographic and clinical characteristics of the population, analyses (creatinine at admission, pre-procedure and post-procedure blood counts) and control at 24 h after biopsy and imaging methods (renal ultrasound 24 h after biopsy).

RESULTS: A total of 176 patients were selected, with a mean age of 48.1 ± 17.6 years. They were mostly Caucasian (80.1%) and there was a predominance of females (55.7%). Approximately 46.6% had arterial hypertension, although all had their blood pressure controlled at the time of the biopsy. Mean pre-biopsy creatinine value was 2.0 ± 1.7 mg/dL. Mean pre-biopsy haemoglobin value was 12.1 ± 2.0 g/dL and 24 h post-biopsy 11.8 ± 2.0 g/dL. There was an overall complication rate of 30.1%, corresponding to 5 cases of haematuria, 36 minor hematomas and 8 major hematomas. There were no deaths and there was no need for surgical intervention to control the bleeding. The only predictor of post-biopsy complications was age, with younger patients having fewer complications (43.9 ± 16.2 versus 50.0 ± 17.9, P = 0.036). There was no correlation between pre-biopsy creatinine or haemoglobin values and the occurrence of complications, nor was there a greater number of complications in hypertensive patients.

CONCLUSION: Although bleeding complications were relatively frequent in this sample, serious events were rare, as this reinforces the safety of this procedure (which provides valuable information about the prognosis and decision of the therapy to be instituted). The presence of arterial hypertension and the pre-biopsy creatininemia value did not increase the risk of complications related to the procedure.

CONCLUSION: Lupus disease is more aggressive in men and is characterized by a higher rate of complications, including kidney damage. In our study, we were able to deduce that LN in the black race has a bad prognosis.

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THE RELATIONSHIP BETWEEN PERCEIVED STRESS WITH ANXIETY, DEPRESSION, SLEEP QUALITY, INSOMNIA AND DRUG ADHERENCE IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS DURING THE COVID-19 PANDEMIC

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BACKGROUND AND AIMS: Sleep disorders, depression and anxiety are commonly reported in patients with systemic lupus erythematosus (SLE). Public health emergencies such as pandemics can also increase these psychosocial distresses. Early diagnosis and treatment of these disorders will substantially affect patients’ quality of life and medication adherence. The aim of this study was to evaluate both medication non-adherence and the incidence of perceived stress, anxiety, depression, sleep quality and insomnia during the COVID-19 pandemic in patients with SLE.

METHOD: This was a cross-sectional, descriptive survey study. A total of 211 participants, including 160 SLE patients aged 18 years and older and 51 healthy volunteers who were similar in age and gender, were included. A questionnaire of socio-demographics and COVID-19 status, Medication Compliance Reporting Scale (MARS-5), Perceived Stress Scale (PSS), Hospital Anxiety and Depression Scale (HAD-A and HAD-D), Pittsburgh Sleep Quality Index (PSQI) and Insomnia Severity Index (ISI) scales was assessed. The participants were interviewed face to face, and the answers were recorded by the researcher.

RESULTS: The mean age of the patients was 41.85 ± 12.97 years and 142 (88.7%) of the patients were female. There was no significant difference between the patient and control groups in terms of the history of COVID-19 infection, symptoms and hospitalization. Fifty-nine (36.9%) patients had high perceived stress, 16 (10.0%) had...
anxiety, 45 (28.1%) had depression, 77 (48.1%) had poor sleep quality and 62 (38.8%) patients had insomnia. PSS (23.64 ± 7.86 versus 19.73 ± 4.80, \( P = .001 \)), HAD-D (5.60 ± 3.40 versus 4.08 ± 2.21, \( P = .003 \)), PSQI (6.31 ± 3.62 versus 4.43 ± 2.20, \( P = .001 \)) and ISI (6.81 ± 4.98 versus 4.53 ± 2.83, \( P = .002 \)) scores were significantly higher in the patient group than controls. Patients with PSS score ≥ 25 were categorized as patients with a high PSS score. Presence of anxiety, depression, poor sleep quality and insomnia were significantly higher in patients with a high PSS score.

Medication non-adherence was detected in 79 (49.4%) of the patients. Interestingly, sleep quality and insomnia were significantly higher in patients with a high PSS score. Depressed patients had higher levels of anxiety, depression, poor sleep quality and insomnia than those without. It needs to be determined whether these findings will have an impact on patient outcomes during long-term follow-up.

### Table 1. Comparison of baseline characteristics and clinical data of the patients according to PSS score

| Variable            | High PSS (n:59) | Low PSS (n:101) | \( P \) value |
|---------------------|----------------|----------------|--------------|
| Age, years          | 41.14 ± 12.45  | 43.07 ± 13.83  | .379         |
| Female gender, n (%)| 52 (88.1%)     | 90 (89.1%)     | 1.000        |
| Smoking, n (%)      | 6 (10.2%)      | 14 (13.9%)     | .623         |
| Alcohol, n (%)      | 0 (0.0%)       | 2 (2.0%)       | .532         |
| Marital status, married, n (%) | 54 (91.5%) | 81 (80.2%) | .071        |
| History of Covid-19, n (%) | 16 (27.1%) | 15 (14.9%) | .065        |
| Hospitalization, n (%) | 5 (8.5%)     | 2 (2.0%)       | .102         |
| HAD-D score         | 8.32 ± 3.05    | 4.01 ± 2.45    | <.001        |
| HAD-A score         | 8.27 ± 2.52    | 5.31 ± 2.48    | <.001        |
| PSQI score          | 8.27 ± 3.82    | 5.17 ± 2.96    | <.001        |
| ISI score           | 9.88 ± 4.93    | 5.01 ± 4.06    | <.001        |
| MARS-5 score        | 22.80 ± 2.42   | 22.90 ± 2.11   | .772         |
| Presence of depression, n (%) | 37 (62.7%) | 8 (7.9%) | <.001 |
| Presence of anxiety, n (%) | 12 (20.3%) | 4 (4.0%) | .001 |
| Poor sleep quality, n (%) | 45 (76.3%) | 32 (31.7%) | <.001 |
| Insomnia, n (%)     | 41 (69.5%)     | 21 (20.8%)     | <.001        |

### CONCLUSION:

Our study suggests that the use of antplatelet agents within 5 days from procedure does not increase the bleeding risk, so it should be safe to continue the therapy in patients at risk for CV events. However, this is a weak evidence that needs prospective studies to be validated. Our data also suggest that 16-G biopsy needle may be safely used to obtain enough tissue for histologic diagnosis.