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Pathological findings in kidneys of acromegalic patients

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Introduction

Acromegaly is an endocrinopathy that affects many different organ systems and leads to multiple comorbidities. Data on morphologic pathology of kidneys in acromegaly is scarce.

Methods

We investigated 36 acromegalic patients (20 male, 16 female, mean age 57.4±12.5 years) presenting in our outpatient clinic. We evaluated each patient's kidneys by ultrasound, measuring organ dimensions and volume as well as noting any pathologic findings.

Results

With latest recommendations on criteria for cure acromegaly was considered biochemically controlled in 19 patients (53%). 8 patients were partially controlled (IGF-I within 30% of the upper limit of normal) and 9 patients biochemically active. Mean duration of disease was 16.6±10.4 years.

Renomegaly was found in 3 patients (8%). A total of 33 simple cysts were found in 14 patients (39%). 3 of those patients had simple cysts in both kidneys. 3 patients (8%) presented with complex renal masses of which one turned out to be an early stage renal cell carcinoma (pT1N0M0). Microscopic nephrocalcinosis was detected in 6 patients (17%), and kidney stones in two patients (6%). Furthermore, we found bilateral obstructive uropathy and one duplex kidney in one patient each. Overall, 24 patients (67%) presented with pathological or anomalous findings.

Fig. 1: The figure shows a CT scan (slice in coronal plane) of the abdomen of one of our patients. He presented with multiple simple as well as complex cysts. Under suspicion of a renal cell carcinoma surgery was performed. Histologic examination confirmed an RCC, classified as pT1N0M0.

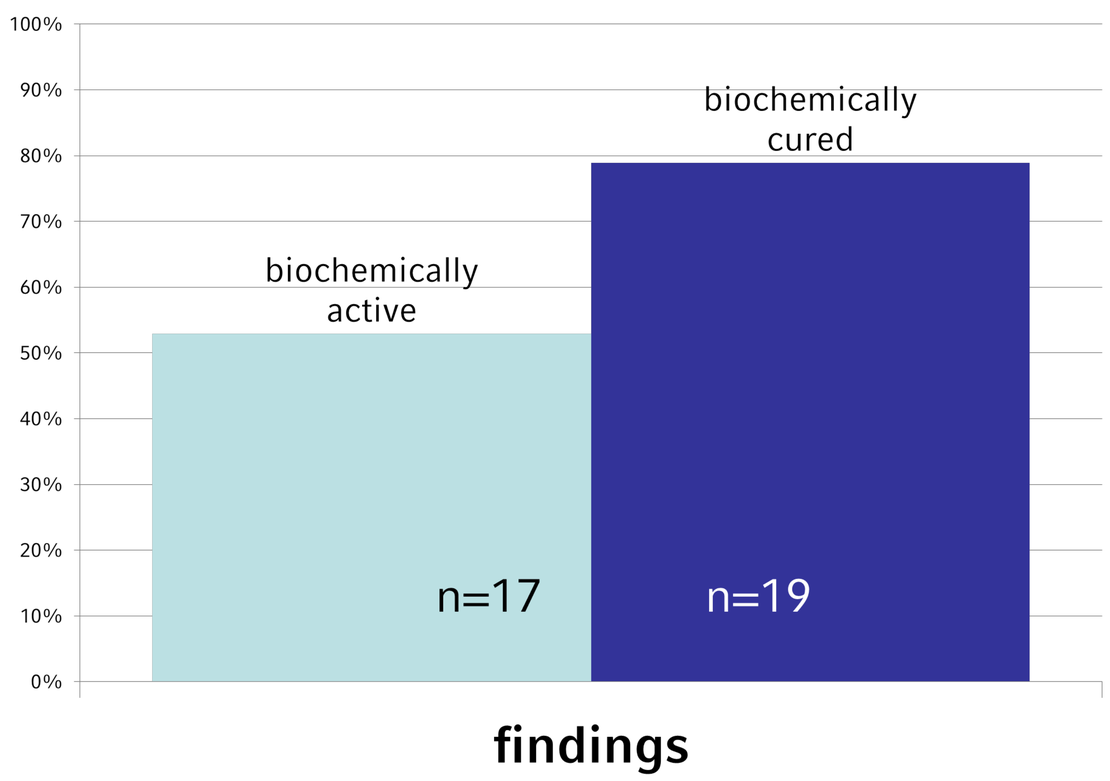

Fig. 2: Pathological and anomalous findings were discovered in a total of 24 patients. Patients considered [biochemically] cured had more findings than biochemically active patients.

Conclusion

We found a high prevalence of pathological ultrasonographic findings in a sample of 36 acromegalic patients. Biochemically cured patients did not yield less findings. Simple and complex renal cysts and nephrocalcinosis were more frequent than described in the literature for non-acromegalic patients. Further research is needed to better quantify our findings and to allow for sub-group analysis.