

RENAL INVOLVEMENT IN GRAVES' DISEASE PATIENTS TREATED WITH BENZYLTHIOURACIL.

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INTRODUCTION

Renal complications in Graves' disease are rare and may be related either to the disease itself or secondary to antithyroid drugs. Vasculitis with antineutrophilic cytoplasmic antibodies (ANCA) has been rarely reported in patients treated with anti-thyroid drugs, especially propylthiouracil. Recently, this rare and severe complication has been observed in few cases of patients treated with benzylthiouracil.

Herein we report 7 cases of renal damage in graves 'disease patients treated with Benzylthiouracil.

METHODS :

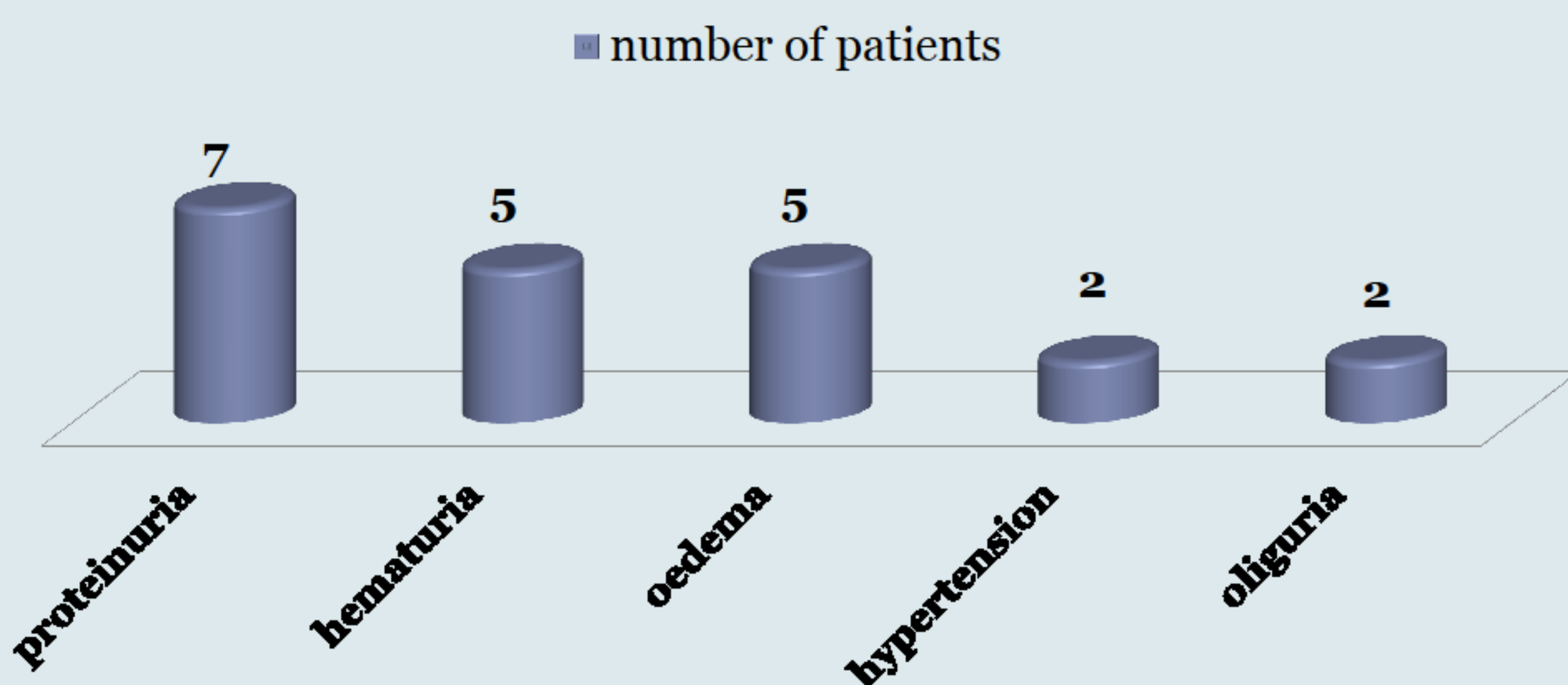
- it's a retrospective study
- 7 Cases of Renal damage in patients with Graves' disease
- 7 women
- Treated with Benzylthiouracil (BTU)
- Clinical and biological features were collected

RESULTATS:

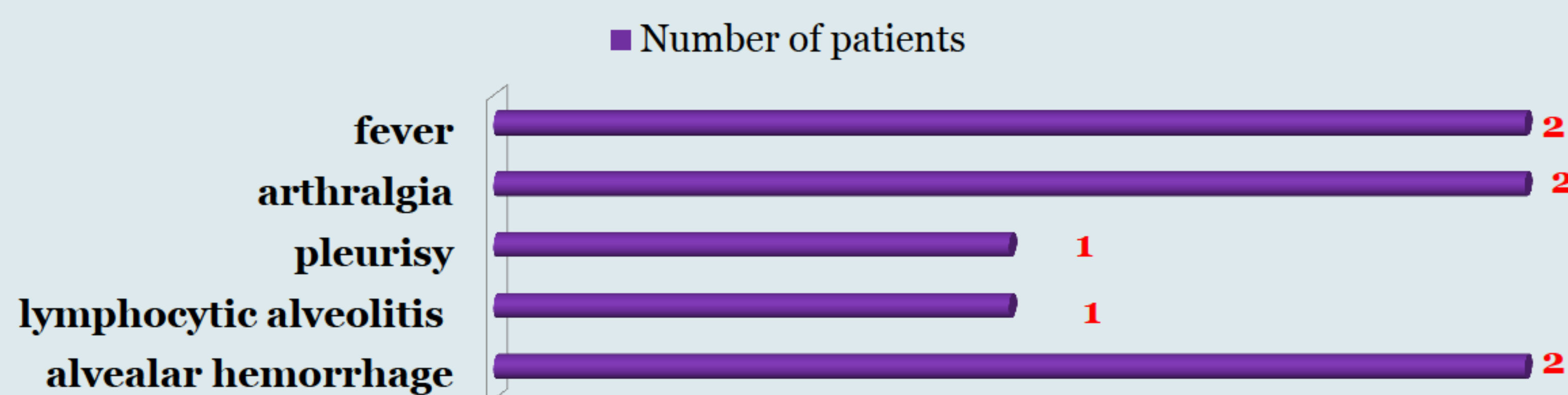
Patients clinical features:

| | Mean | Extremes |
|--|---------------|----------|
| Age (years) | 37.86 ± 14.25 | 19-61 |
| BTU long treatment duration (months) | 42,14 | 6-12 |
| Date of renal involvement occurrence /BTU onset (months) | 45,85 | 6-144 |

Renal involvement signs



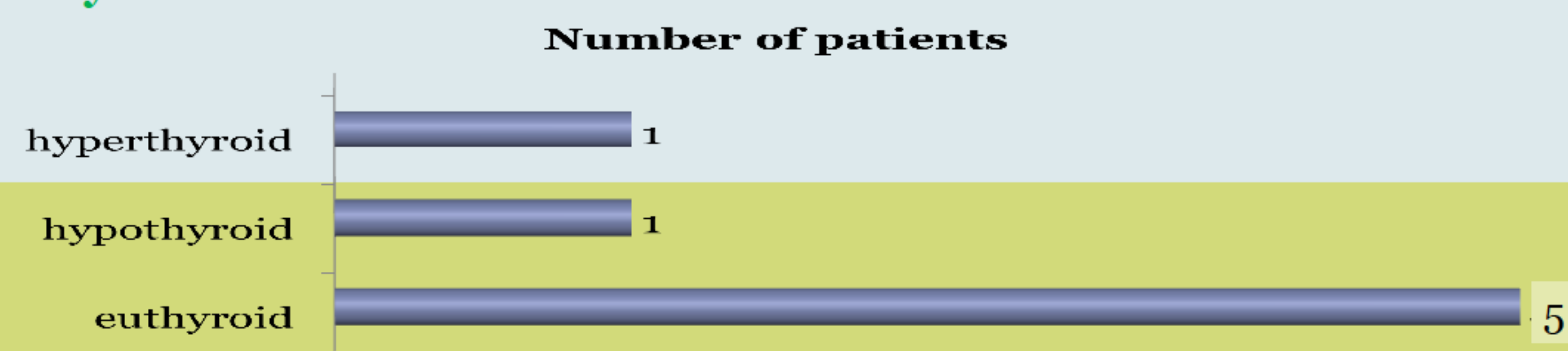
Extra-renal manifestations



Laboratory tests

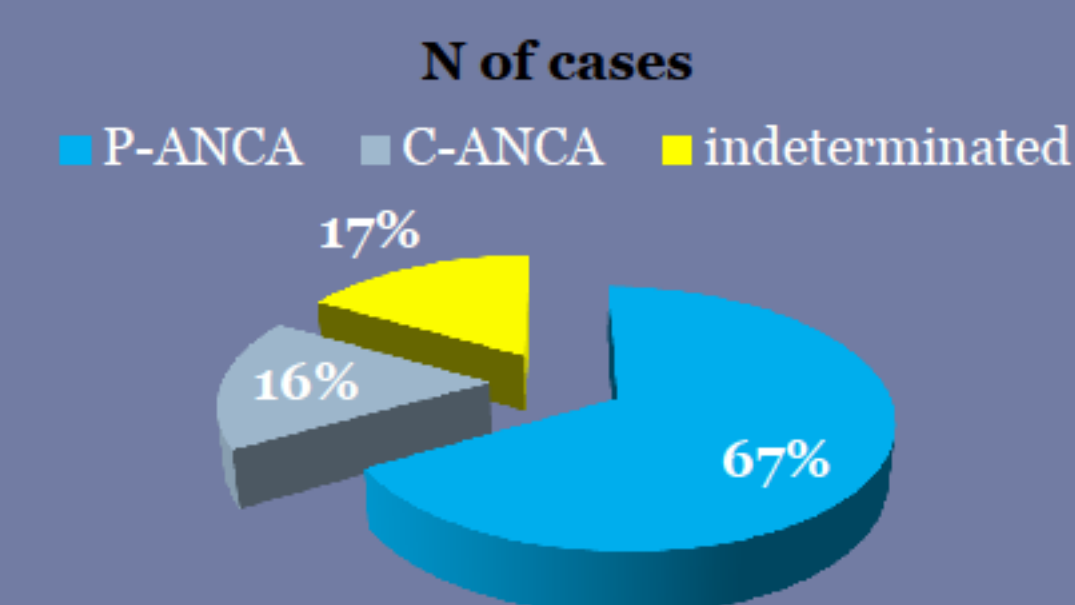
| | Mean | Extremes |
|-------------------------------|--------|----------|
| Proteinuria(g/24h) | 4,68 | 1,4-11,5 |
| Serum Creatinine(umol/l) | 802,67 | 304-1150 |
| Creatinine clearance (ml/min) | 8,8 | 4-19 |

Thyroid status

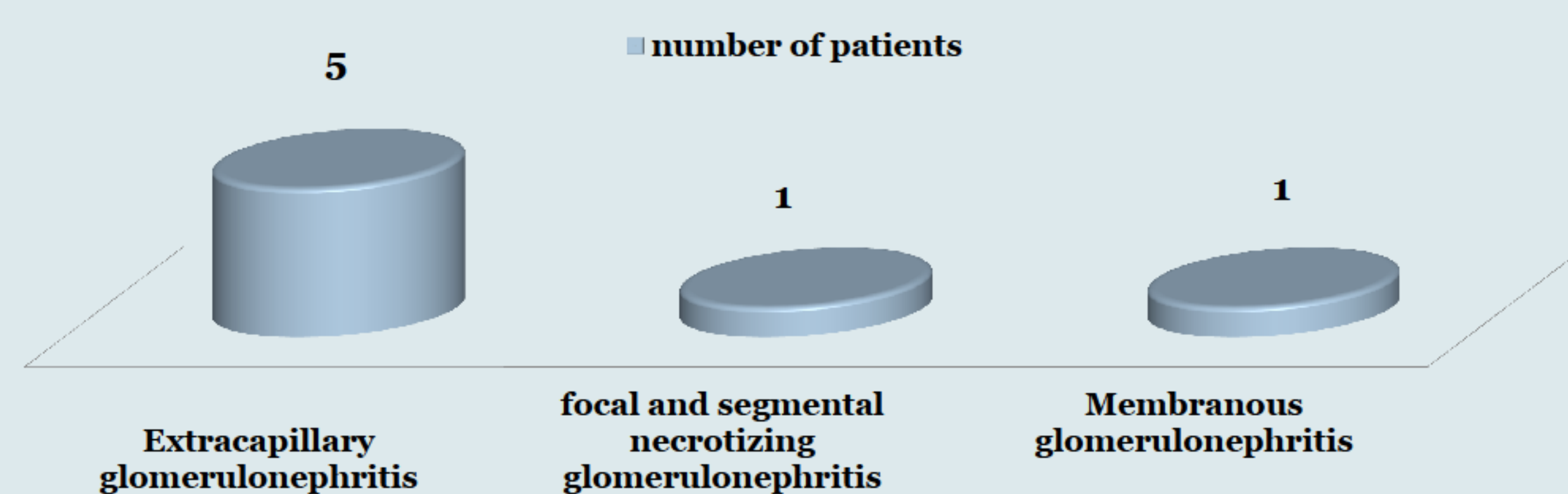


Immunology tests results

Anti-neutrophil cytoplasmic antibodies (ANCA) were positive in 6 patients and negative in one patient



Renal biopsy results



Treatment and outcome:

| Patient | Traitement | Evolution |
|---------|--|--|
| 1 | <ul style="list-style-type: none"> •Corticosteroid treatment •Immunosuppressive treatment •Hemodialysis | 3 years : • chronic hemodialysis • ANCA(-) |
| 2 | <ul style="list-style-type: none"> •Corticosteroid treatment •Immunosuppressive treatment | 6 months: • Normal renal function • Proteinuria=1g/24h • P-ANCA (+) |
| 3 | <ul style="list-style-type: none"> •BTU withdrawal •Corticosteroid treatment •Immunosuppressive treatment | 14 months: proteinuria=1g/24h 25 months : creatinine:=430µmol/l |
| 4 | <ul style="list-style-type: none"> •BTU withdrawal •Corticosteroid treatment •hemodialysis | Chronic hemodialysis |
| 5 | <ul style="list-style-type: none"> •Corticosteroid treatment •Immunosuppressive treatment •Hemodialysis | 4 months : died of sepsis |
| 6 | <ul style="list-style-type: none"> •BTU withdrawal •Corticosteroid treatment | 15 days : •Normal renal function • Proteinuria=0 |
| 7 | <ul style="list-style-type: none"> •BTU withdrawal •Corticosteroid treatment | 30 months: •Normal renal function •Proteinuria=0 |

Discussion

We reported 7 cases of renal damage in BTU treated patients:

- Six patients with ANCA associated glomerulonephritis
- One patient with membranous glomerulonephritis and negative immunology test results.

The majority of ANCA positive vasculitis have been reported in patients treated with PTU. In Tunisia, all cases of ANCA-positive vasculitis were secondary to BTU, which is the main antithyroid drug used in practice.

The presenting symptoms of antithyroid drug (ATD) induced ANCA vasculitis are variable including renal involvement, arthralgia, fever, skin involvement, respiratory tract involvement...

ANCA positivity seems to be correlated to duration of therapy, the risk is particularly important after 18 months of treatment.

The pathogenesis of ANCA mediated vasculitis is not well understood.

Treatment of ANCA positive vasculitis with renal involvement is controversial. In our patients, in addition to the withdrawal of BTU, corticosteroid treatment and/or immunosuppressive treatment were necessary.

Conclusion

The possibility of renal impairment in patients treated with BTU requires monitoring to detect urinary abnormalities in order to early initiate therapy and improve patient's outcome.

