TINU syndrome in a 14-year old boy

Síndrome Tinu em um jovem de 14 anos de idade

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Submitted on: 04/16/2017.
Approved on: 04/20/2017.

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DOI: 10.5935/0101-2800.20170088

Dr. Pinheiro *et al.*[1] gave an excellent overview of tubulointerstitial nephritis and uveitis (TINU) syndrome in an adult patient, where uveitis preceded nephritis. As clearly pointed out, the onset of TINU can occur in children and adults in the course of an acute tubulointerstital nephritis. We would like to present our observation of TINU in an adolescent boy with chronic renal inflammation. 14 -year old boy treated for acute anterior uveitis was admitted to our department because of increased serum creatinine level.

On admission, physical examination was normal with uveitis in remission being the only abnormal finding. Only mild visual impairment of the right eye persisted. He had no other clinical symptoms except for polyuria (4000 ml/day) and associated polydipsia. Laboratory tests confirmed increased serum creatinine level (189 µmol/L;glomerular filtration rate, GFR, 0.89 mL/sec/1.73m^2), other biochemical parameters (serum levels of sodium, potassium, chloride, calcium, magnesium) were within normal reference ranges.

Urinalysis revealed normoglycemic glycosuria, non-nephrotic glomerulo-tubular proteinuria and high levels of β-2 microglobulin (14.7 mg/L; normal < 0.37 mg/L). Renal biopsy revealed tubulointerstitial nephritis, with chronic inflammatory changes and tubular atrophy. In order to complete the diagnostic work-up of TINU, we excluded infection, systemic and autoimmune causes.

Because of persistent impairment of renal function we opted for oral corticosteroids for 12 weeks (prednisone; initial daily dose 60 mg, i.e. 1 mg/kg/day; gradually decreasing the dose to 20 mg per every other day). This resulted in renal function improvement (S-creatinine 76 µmol/L; GFR 2.12 mL/sec/1.73m^2). However, after tapering of corticosteroids the boy had recurrence of uveitis and nephritis with decreased renal function (S-creatinine 112 µmol/L; GFR 1.44 mL/sec/1.73m^2).

Further treatment with topic and oral corticosteroids (for a total of 21 weeks; initial dose prednisone 40 mg/day; gradually decreased to 2.5 mg every other day) alleviated uveitis, but renal functions were improving slowly (S-creatinine 108 µmol/L; GFR 1.49 mL/sec/1.73m^2 after 21 weeks). After one year after the onset of therapy, the S-creatinine dropped to 98 µmol/L (GFR 1.66 ml/sec/1.73m^2), β-2 microglobulin was below 0.3 mg/L.

Tubulointerstitial nephritis and uveitis syndrome (TINU) is a rare immunological disorder occuring in less than 2% of cases of uveitis. Diagnosis requires the presence of both tubulointerstitial nephritis and uveitis. The most common signs and symptoms of uveitis include photophobia, eye pain and redness, eyelid edema and progressive loss of vision.

Renal impairment is characterized by abnormal renal function and abnormal urinalysis, symptoms of systemic illness, including fever, fatigue and weight loss. Symptoms of uveitis and nephritis in TINU are not always present at the same time.[1-5] Uveitis may precede (21%), occur concurrently (15%) or succeed (65%) nephritis.[1] In contrast to the observation of Pinheiro *et al.*,[1] tubulointerstitial nephritis in our patient most probably preceded the manifestation of uveitis by several months.

In conclusion, TINU is undoubtly an underdiagnosed disorder and must be actively searched in either patients with uveitis or tubulointerstitial nephritis. Appropriate diagnosis and management of TINU syndrome usually requires a multispecialty approach.[1,4]

References

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