Long-term tocilizumab efficacy in a patient with psoriatic arthritis and AA amyloidosis

Sirs,

We have read with great interest the manuscript by Lane et al., describing the efficacy and safety of the humanised anti-interleukin (IL)-6 receptor antibody Tocilizumab (TCZ) in twenty adults with refractory chronic inflammatory conditions complicated, in fourteen cases, by AA amyloidosis (1). Six patients had unclassified inflammatory disorders, two hyper-immunoglobulin D and periodic fever syndrome, seven rheumatoid arthritis (RA), four systemic juvenile idiopathic arthritis and one localised Castleman’s disease. The authors reported that TCZ was effective in suppressing inflammation and that, in those patients with AA amyloidosis, TCZ therapy determined the regression of amyloid deposits.

The capability of TCZ in suppressing the hepatic acute phase response enables to speculate TCZ as one of the most viable treatment options in patients affected with chronic inflammatory diseases with already developed AA-amyloidosis or in subjects who are at high risk of developing it. Indeed, inhibiting the hepatic acute phase response may prevent the progressive amyloid deposition, thus dramatically improving the patients’ outcome. Nevertheless, data supporting TCZ use in the patients’ outcome.

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Fig. 1. a: Accumulation of amorphous, acellular, eosinophilic material in the mesangium of a glomerulus with nodular appearance. This material is also present within the wall of a small artery (Haematoxylin and Eosin, x 200); b: Congo red positive material (amyloid) within mesangial areas of a glomerulus with nodular appearance and within the wall of a small artery (Congo Red, x 200); c: Congo red positive material (amyloid) is also focially present within the tubular basement membranes (Congo Red, x 100); d: Congo red positive material (amyloid) within mesangial areas of a glomerulus with nodular appearance (Congo Red, x 200); e: immunofluorescence with antisera for AA protein shows deposits of AA protein in the mesangium and along the capillary walls (anti AA, x 200); f: immunofluorescence with antisera for AA protein shows deposits of AA protein in the wall of a small artery (anti AA, x 200).
factor (TNF)-α and IL-1 (2, 3). Reactive amyloidosis is a life-threatening long-term complication of systemic inflammatory disorders caused by abnormal deposition of SAA in various organs and causing a rapid deterioration of renal function that manifests with proteinuria and kidney failure.

PsA is rarely complicated by AA amyloidosis, since markers of inflammation are only slightly increased in most subjects. Despite treating with anti-TNF-α drugs, the patient we reported herein had persistently elevated acute phase reactants that might have favoured amyloidosis development. To the best of our knowledge, Moise et al. first described a case of amyloidosis complicating PsA in a 34-year-old man who died of renal failure (4). Subsequently, only a few subjects with PsA-related amyloidosis have been described (5, 6). More recently, a retrospective study has been focused on the frequency of amyloidosis in patients with spondyloarthropathies. The medical records of 1,125 patients with spondyloarthropathies were reviewed and 15 patients with a histological diagnosis of amyloidosis AA were identified; four out of 15 (26.7%) were affected with PsA (7).

The management of patients with reactive amyloidosis is challenging: the aim of vast majority of therapeutic aids are directed on reducing acute-phase proteins in order to control the underlying disease and to prevent renal function in patients with kidney involvement. In this regard, TNF-α inhibitors have proven to be a compelling therapeutic strategy for treating reactive amyloidosis complicating PsA by halting the inflammatory response, albeit their failure has been also described (8). Two recently reported case series, including patients with different rheumatologic disorders, have shown that also other biological drugs, especially those neutralising IL-6, might reduce AA-amyloid deposition in patients unresponsive to anti-TNF drugs, thus pointing out the usefulness of TCZ in countering amyloidosis development (1, 9). Until today, only a few case reports describing TCZ efficacy in the treatment of PsA-related amyloidosis have been previously published (10). In conclusion, our case corroborates the efficacy of IL-6 blocking in stemming the progression of renal disease in patients with PsA and reactive amyloidosis, in particular in those patients with sustained systemic inflammatory and refractory to conventional DMARDs and to TNF-α inhibitors. Looking into the future, these encouraging observations need to be confirmed by longitudinal controlled studies, specifically aimed at assessing TCZ long-term effects in the management of PsA-associated amyloidosis.

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References