Sistema renina-angiotensina e TGF-ß nelle glomerulonefriti: un'interazione non ancora chiara

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Renin-angiotensin system and TGF-ß in glomerulonephritis: the relationship is still unclear

Overactivation of the renin-angiotensin system occurs in a number of nephropathies, including the early stages of glomerulonephritis. Such activation plays a part in the progression of chronic glomerulonephritis towards glomerular and interstitial sclerosis, probably also through the activation of the TGF-β loop. However, uncertainty exists concerning the role of angiotensin II in the early inflammatory nephropathies and the significance of its interaction with TGF-β in this context. Experimental data suggests that angiotensin II has pro-inflammatory activities, among which the triggering of monocyte-macrophage chemo-attraction. On the other hand, angiotensin II activities exerted through its type I and II receptors are finely balanced, the latter being the receptor responsible for anti-inflammatory and antisclerogenic actions which contrast the effects of the angiotensin II-dependent stimulation of type I receptors. In this scenario, TGF-β, which also has antiproliferative and anti-inflammatory effects, might play an anti-inflammatory role. Thus it would contribute to the control of the proinflammatory actions exerted by angiotensin II rather than being a sclerogenetic growth factor. (Giorn It Nefrol 2001; 18: 657-65)

KEY WORDS: Angiotensin II, Angiotensin II receptors, Diabetic nephropathy, D/I ACE polymorphism, Glomerulonephritis, Glomerulosclerosis, MCP-1, Monocyte-macrophage, Renin, TGF-ß

PAROLE CHIAVE: Angiotensina II, Glomerulonefriti, Glomerulosclerosi, MCP-1, Monociti-macrofagi, Nefropatia diabetica, Polimorfismo D/I dell'ACE, Recettori dell'angiotensina II, Renina, TGF-ß