Supplementary material to article by J. Orgaz-Molina et al. "Association of 25-hydroxyvitamin D with Metabolic Syndrome in Patients with Psoriasis: A Case-control Study"



Fig. S2. Pathogenic mechanisms that may explain the association between metabolic syndrome (MeS) and vitamin D deficiency in psoriatic patients. RAAS: "renin-angiotensin-aldosterone system". MeS criteria in bold: waist circumference, high blood pressure, triglycerides, glucose, and high density lipoprotein (HDL). Inverse relationship between vitamin D and waist circumference (adipose tissue): vitamin D influences the inhibition of pre-adipocyte differentiation. Waist circumference is an essential component of MeS and is correlated with a higher level of triglycerides, free fatty acids and insulin resistance. Vitamin D influences the lipolysis of triglycerides by inhibiting the secretion of pro-inflammatory cytokines (interleukin (IL)-6 and tumour necrosis factor alpha (TNF- α). Moreover, various authors have reported that vitamin D exerts an influence on pancreatic β -cells and the renin-angiotensin-aldosterone system. Finally, a positive relationship has been documented between vitamin D and high-density lipoprotein cholesterol (HDL-C).