Clinical review: Hyperandrogenism and polycystic ovary syndrome in women with type 1 diabetes mellitus

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Context: At present, women with type 1 diabetes (DM1) are being treated with supraphysiological doses of exogenous insulin with the aim of providing a strict metabolic control, thereby avoiding the long-term complications of this disease. We hypothesized that PCOS would be especially prevalent in DM1, as might happen in any condition in which the ovary and the adrenals are exposed to excessive insulin concentrations. As will be seen in the present review, androgen excess and PCOS are very frequent complaints in women with DM1, yet nowadays hyperandrogenism is seldom diagnosed in these patients. Evidence Acquisition: We conducted a systematic review of all the published studies addressing hyperandrogenic symptoms in women with DM1, identified through the Entrez-PubMed search engine, followed by a comprehensive review of the pathophysiology and clinical and laboratory features of PCOS in women with DM1. Evidence Synthesis: The prevalence of PCOS in adult women with DM1 is 12-18, 40, and 3