The measurement of alternative androgens in the investigation of PCOS

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The diagnosis of PCOS requires confirmation of ovarian dysfunction: Irregular or anovulatory cycles or polycystic morphology on scanning and androgen excess. The latest guidelines recommend that hyper-androgenemia should be evaluated biochemically in all women suspected of having PCOS and particularly in adolescents. There is currently no consensus on what is the best androgen to measure or the upper cutoff consistent with PCOS but it is generally accepted that testosterone is the best single measurement of choice for the investigation of female hyperandrogenism. However, total testosterone is not invariably elevated in patients with PCOS. Developments in liquid chromatography tandem mass spectrometry now enable the accurate measurement of steroid panels in routine laboratories, free from assay interference and allow the reporting of other clinically useful androgens. This talk will focus on the simultaneous measurement of testosterone, androstenedione, DHEA, DHT, DHEAS and 17 OHP and their potential use in the investigation of PCOS. Mention will also be given to the possible use of salivary androgen assays in the investigation of PCOS.

Biography

Brian Keevil is a Consultant Clinical Scientist and Head of the Clinical Biochemistry Department at the University Hospital of South Manchester. He is an Honorary Professor in Clinical Biochemistry at the University of Manchester and a Member of the Editorial Board of the Annuals of Clinical Biochemistry. He has developed an interest in steroid analysis using liquid chromatography mass spectrometry (LC-MS/MS) over the past 15 years with a particular emphasis on developing an LC-MS/MS service in a routine clinical laboratory. He has developed over 30 routine analytical methods and has published over 130 papers mainly on the clinical applications of LC-MS/MS.