

The conversion of dehydroepiandrosterone into androst-5-ene-3 β , 17 β -diol (androstenediol) is increased in endometria from untreated women with polycystic ovarian syndrome

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The changes in endometrial homeostasis found in women with polycystic ovarian syndrome (PCOS) could be associated with alterations in the intracrine metabolism of steroid hormones. The uptake of dehydroepiandrosterone-sulphate (DHEA-S), precursor of the intracrine pathway, is achieved by transporters, such as organic anion transporter polypeptides (OATPs), and molecules with oestrogenic activity, such as androst-5-ene-3 β ,17 β -diol (androstenediol), can be generated. We aimed to determine androstenediol generation and the expression of OATPs in human endometria throughout the menstrual cycle and in endometria from PCOS women. Endometrial samples were obtained from control women in the proliferative phase (control endometria (CEp), n = 7), secretory phase (CEs, n = 7), and from PCOS patients (PCOSEp, n = 7). The mRNA levels of OATP-B, OATP-D and OATP-E were measured by reverse transcriptase polymerase chain reaction (RT-PCR) and protein levels of OATP-E by immunofluorescence; 3 β -hydroxyst