

P450-aromatase activity and expression in human testicular tissues with severe spermatogenic failure

Lardone, M. C.

Castillo, P.

Valdevenito, R.

Ebensperger, M.

Ronco, A. M.

Pommer, R.

Piottante, A.

Castro, A.

There is evidence that impaired spermatogenesis is associated with an imbalance in the oestradiol/testosterone ratio and with Leydig cell (LC) dysfunction. In testis, P450-aromatase, encoded by CYP19, is responsible for the conversion of testosterone to oestradiol. The aims of this study were to quantify CYP19 mRNA expression, aromatase activity and protein localization, and to measure the oestradiol to testosterone ratio in testicular tissues of men with spermatogenic impairment. Twenty-four men with complete Sertoli cell-only syndrome (SCOS), 14 with focal SCOS, 14 with maturation arrest (MA), 8 with mixed atrophy and 30 controls with normal spermatogenesis were subjected to testicular biopsy. All subjects underwent a physical examination, cytogenetic and serum hormonal studies. Testicular CYP19 mRNA was quantified using real time RT-PCR. Testicular aromatase activity was measured using the 3H 20 assay and protein expression was evaluated using immunohistochemistry. In cases, serum t