

ANTIMÜLLERIAN HORMONE AND POLYCYSTIC OVARY SYNDROME: IS THERE A CUT-OFF POINT?

Israel Carmona^{1,2}, Eric Saucedo¹, María Rosa Moraga¹, Alberto Romeu¹

¹Reproductive Endocrinology, Imar Fertilidad, Spain

²International Doctoral School, Universidad Católica San Antonio de Murcia, Spain

Objective: To identify the predictive value of Antimüllerian Hormone in the Polycystic Ovary Syndrome diagnosis. **Design.** A descriptive, comparative, observational, prospective study of PCOS patients and controls. **Material and method:** All participants received a questionnaire and underwent a physical and transvaginal ultrasound examination. Blood samples were also collected for analysis of metabolic markers and hormones. PCOS was diagnosed according to Rotterdam criteria (1, 2) except for ovarian assessment where we used the most recent international consensus (3, 4). For data analysis we used SPSS software version 21 for OSX. We applied descriptive statistics and Anova for continuous variables and square chi test for categorical variables. We have constructed ROC curves to assess the reliability, sensibility and specificity of these tests. **Results:** A total of 267 women were included into the study. PCOS was diagnosed in 162 patients. There was statistical difference in: HOMA, 1.43 ± 1.06 , 2.09 ± 1.96 ; Total Testosterone (ng/mL), 0.31 ± 0.14 , 0.41 ± 0.19 ; and free Androgen index, 1.17 ± 1.30 , 1.69 ± 1.18 ; for control and PCOS group, respectively. FSH (mIU/mL), 6.55 ± 2.43 in controls and 5.30 ± 1.66 in PCOS patients ($p < 0.001$); LH (mIU/mL), 4.34 ± 2.12 controls, 6.36 ± 4.61 PCOS patients ($p < 0.001$). LH/FSH ratio was 0.71 ± 0.39 for control group and 1.25 ± 0.85 in PCOS group, $p = 0.001$. AMH also presented statistical difference: 4.06 ± 1.12 in controls and 7.01 ± 2.36 in PCOS patients ($p < 0.001$). None of the tests presented a predictive value when ROC curves and the Area under the Curve were analyzed. **Conclusion:** AMH, although it is a valuable test, it is not diagnostic of PCOS. Current laboratory techniques still lack both, sensibility and specificity, in order to establish this test as mandatory. New ultrasensitive technology is now in development (5) and this could lead us to international standard cut-off points in women with PCOS.