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P128. The expression of the Claudin family in the testis - a dynamic membrane behavior for sperm formation in patients with infertility

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Context: The cellular interaction in human spermatogenesis promotes the expression of different type of proteins, which includes the Claudin family. The presence of this family in the human testis has not been previously described.
Objective: To demonstrate the presence of the Claudin family (1,3,4 and 6) in the TESE (Testicular Sperm Extraction).
Methods, patients and interventions: Retroprospective study from January 2010 to July 2016. Forty-one patients were evaluated with azoospermia and infertility; genetic causes were excluded. Testicular biopsies were obtained by TESE. The immunohistochemical analysis of the biopsies was performed with monoclonal and polyclonal antibodies reactive to Claudin 1,3,4 and 6 in UNAM laboratories.
Outcome Measures: The evaluation was divided into two groups (with and without germ cells) to determine Claudin family expression at stroma and tubules.
Results: Forty-one testicular biopsies were analyzed from which twenty had the inclusion criteria; dividing into two groups: Group 1: seven patients with azoospermia, and Group 2: thirteen patients with the presence of spermatogenesis. The results showed that the expression of Claudin 1 was nuclear in the Sertoli cells and positive in sperm cells. In Group 2 Claudin 3 was a positive nuclear mark in Sertoli cells and germ cells, the expression of Claudin 4 was in the Sertoli cell basal membrane and with respect to Claudin 6, this one showed negative in this experiment. In the azoospermia group, Claudin 3 was negative mark, and the rest of Claudin family expression remained the same, regardless of the level of germ cell arrest.
Conclusions: The Claudin family has a positive expression in human testis. The interaction with the Sertoli cells implicate the presence of Claudin 3 and 4. We found that sperm cells has their own Claudin to interact with the Sertoli cells (Claudin 1).

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