EFFICACY AND SAFETY OF PERCUTANEOUS TESTICULAR ASPIRATION IN EVALUATION OF AZOOSPERMIC OR SEVERE OLIGOSPERMIC PATIENTS

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The histopathological study of the testis is used in the evaluation of infertile men with azoospermia or severe oligospermia. We evaluated needle aspiration of the testis as a method to obtain testicular tissue in these patients. Twenty-four patients with azoospermia or severe oligospermia were included in our prospective study. Follicle-stimulating hormone (FSH) level and an ultrasound of the testicles were performed in all patients. All patients underwent bilateral testicular aspiration with a 21G needle. Forty of the 48 testicular aspirations yielded tissue fragments, macroscopically represented by filiform cylinders. Thirty-six of these resulted in 5 or more transversal sections of seminiferous tubules (19.9 ± 12.8), with a specimen quality adequate for histopathological purposes. Of these 36, maturation arrest at the spermatocyte level was detected in 55.6%, germ cell aplasia in 19.4%, normal spermatogenesis with signs of obstruction in 22.2% and atrophy of the seminiferous tubules in 2.8%. In the same 36 samples, spermatozoa was found in 6% of the transversal sections of seminiferous tubules in cases of maturation arrest at the spermatocyte level, and 91.3% in the specimens with diagnosis of normal spermatogenesis with obstruction signs. No differences were seen in the mean testicular volume (P = 0.239) or FSH levels (P = 0.263) between patients with a sample adequate and inadequate for examination. The only clinical complication was ecchymosis of the scrotal skin in 3 cases. The ultrasound performed 7 and 14 days after the procedure revealed minimal hydrocele in 8.3%, hyperechogenic spots in 4.2% and hypoechogenic area with 7mm on the longest axis in 2.1%. This technique was associated with low morbidity and all samples macroscopically represented by filiform cylinders resulted in the presence of seminiferous tubules. Testicular volume or FSH levels did not constitute predictive factors for obtaining adequate testicular tissue samples.