

# **A comparative investigation applying Testicular Fine needle aspiration cytology and open testicular biopsy histology for diagnosis of azoospermia and severe oligospermia**

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## **Abstract**

The two most popular tests used to diagnose male infertility are open testicular biopsy histology and fine needle aspiration cytology (FNAC). This study's goal was to assess the cytological characteristics of 186 infertile males aged 24-63 years with testicular FNAC. Additionally, we looked into the relationship between men with oligospermia (severe) (sperm count 5 million/ml) and azoospermia via both cytological and histological diagnosis. With a 1.5-inch, 25-gauge needle, the testis was aspirated from three different locations (the upper, middle, and lower pole). Papanicolaou (Pap) stain or Giemsa stain were used to make smears on albumenized slides, which were then dried in the air and stained. A biopsy of the testicles was performed there, preserved in Bouins solution, processed as usual, and stained with H&E stain. According to our findings, 66.7% of patients had secondary maturation arrest, whereas 18.3% and 15.1% of patients had hypospermatogenesis and Sertoli cell only (SCO), respectively. The comparison's findings showed that both procedures were very similar to one another. Only 3 (1.6%) of the 28 normal FNAC instances had hypospermatogenesis with lymphocyte infiltration, according to biopsy histological examinations. The majority of SCO patients were over 50 years old. This important study finding revealed that FNAC is more effective than testicular histology for assessing male infertility.

## **Keywords**

Severe Oligospermia Fine needle aspiration cytology Biopsy Azoospermia