

Correlation between fluorescence in situ hybridization and testicular biopsy for the prediction of spermatogenesis in 37 patients with nonobstructive azoospermia

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摘要

Abstract

OBJECTIVES: We applied interphase fluorescence in situ hybridization (FISH) to testis sections to examine the evidence of spermatogenesis in patients with nonobstructive azoospermia. This technique was evaluated and compared with conventional testicular histopathologic findings for the possibility of additional clinical applications. **METHODS:** Thirty-seven consecutive patients with nonobstructive azoospermia were carefully evaluated clinically. Testes were biopsied for both sperm extraction and histopathologic examination. FISH staining was performed with a CEP 18 SpectrumAqua/CEP X SpectrumGreen/CEP Y SpectrumOrange probe. **RESULTS:** Eight of 11 cases (sensitivity 73%) that were found to have spermatids on the histopathologic slides also were proven to produce haploid cells by FISH staining. On the other hand, 21 of the 26 cases (specificity 81%) for which no spermatids could be found on the histopathologic slides also had only diploid cells by FISH staining. On the basis of the good correlation between the FISH staining and conventional histopathologic findings, we could confirm the diagnosis of spermatogenesis using both methods. **CONCLUSIONS:** FISH staining of testicular sections allows more reliable prediction of spermatogenesis and provides benefits for a patient's decision regarding fertility counseling