

عنوان مقاله:

Low-power Density Radiations Emitted from Common Wi-Fi Routers Influence Sperm Concentration and Sperm Histomorphometric Parameters: A New Horizon on Male Infertility Treatment

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خلاصه مقاله:

Background: Male infertility is defined as an inability to impregnate a fertile female; it is a widespread problem which is usually caused by some male factors such as low quantity and quality of sperm, specifically oligospermia and azoospermia. Objective: This study aimed to evaluate the bio-positive effects of low power density Wi-Fi radiation on the reproductive system of infertile and healthy mice. Materials and Methods: In this experimental study, thirty adult male Balb/c mice were randomly divided into 5 groups. Groups oligospermic-sham (OS), oligospermic-exposure 1 (OE1) and oligospermic-exposure 2 (OE2) received Busulfan, 10 mg/kg, intraperitoneally, but the control-sham (CS) and control-exposure (CE) groups left without Busulfan therapy. Groups CE, OE1 and OE2 were exposed to 2.4 GHz Wi-Fi radiation while, the CS and OS were sham exposed to Wi-Fi radiation without energizing the Wi-Fi router. The right and left testes and right epididymis were dissected out and histopathological, histomorphologic changes and the quality of the sperms were analyzed. Results: Low power density Wi-Fi radiation significantly increased sperm concentration in the CE group compared to that in CS, while enhancement of spermatid cells was not significant. Sperm concentration in OE2 was more than that in OE1 as the spermatid cells enhanced. Conclusion: Findings revealed that radiation hormesis induced by low power density Wi-Fi radiation have biological beneficial effects on

کلمات کلیدی:

Electromagnetic Field, Microwave, Wi-Fi Router, Busulfan, Oligospermia

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