عنوان مقاله:

Bilateral Epididymal Lipectomy Disturbs Mouse Germline Maintenance

محل انتشار:

سومین کنگره بین‌المللی تولیدمثل (سال: 1396)

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خلاصه مقاله:

Background: Epididymal white adipose tissue as a repro-supporter structure may regulate Sertoli cells secretory activities. The main goal of current study was to examine the effects of bilateral epididymal white adipose tissue lipectomy (EWATx) on mouse spermatogonial stem cells (SSCs) self-renewal through evaluation glial cell line-derived neurotropic factor (GDNF) expression in testicular tissue.Methods: Eighteen adult male mice were randomly categorized into three equal groups. Following anaesthesia, one group of mice received EWATx through careful removal of epididymal white adipose tissue pads without damaging the testicular blood supply or nerves. Sham surgery in control-sham mice was consisted of visualization of the pads without isolation/removal. Control animals only received ceftriaxone (100 mg/kg) intraperitoneally at the day of surgical procedures in other groups. The mRNA expression of GDNF was analyzed by reverse transcription polymerase chain reaction (RT-PCR) after 35 days.Result: Bilateral epididymal white adipose tissue lipectomy resulted in a significant decline in GDNF expression compared to control and control-sham groups.Conclusion: Our findings highlighted the crucial role of epididymal white adipose tissue in mouse SSCs self-renewal and maintenance.

کلمات کلیدی:

Glial Cell Line-derived Neurotrophic Factor, Lipectomy, Mice, Spermatogonial Stem Cell, Epididymis