ABSTRACT
The objective of this study was to investigate the effect of *Momordica charantia* seed and fruit extract administrated via peritoneal route for 4 weeks on spermatogenesis in male Wistar rats. Spermatogenetic indices included percent male fertility, daily sperm production, caudal epididymal count, percent sperm motile, percent live sperm and histological architecture. This study was allocated into three treatments as following: 1) the DMSO (control group) 2) 200 mgDM/head/day of *M. charantia* seed extract dissolved in DMSO and 3) 200 mgDM/head/day of *M. charantia* seed extract dissolved in DMSO. Each group was contained 5 Wistar rats. The experimental design was completely randomized design (CRD). The data collected was analyzed by ANOVA. And the difference among means was compared by means of Duncan’s new multiple range test. It was demonstrated that *M. charantia* at concentration of both 200 mgDM/head/day of fruit and seed extracts could significantly reduced male fertility to 62.83 and 53.3 percent, respectively as compared to the control froup. Additionally, there were evidences that both 200 mgDM/head/day of *M. charantia* fruit and seed extracts significantly lowered caudal epididymal sperm counts, daily sperm production, dead live sperm percent and motile percent when compared to control group. With the histological investigation, an incomplete spermatozoa developmental process in seminiferous tubules and also epididymal sperm reduction were monitored especially in male Wistar provided 200 mgDM/head/day of *M. charantia* of fruit extract. Therefore, the seed extract of *M. charantia* can be alternatively applicable as male herbal contraceptive.