THE EFFECTS OF *Punica granatum* JUICE ON SPERM'S QUALITY IN OBESE RATS

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ABSTRACT

THE EFFECTS OF *Punica granatum* JUICE ON SPERM'S QUALITY IN OBESE RATS

Pomegranate has always been known to have medicinal benefits to human. Studies have proves that every part of pomegranate tress; its leaf, flowers and fruit contain antioxidant properties that help to prevent and cure different type of disease. However, the most well-known benefits of pomegranate are its ability to help in increasing sperm quality and enhancing weight loss. Thus, the aim of this study was to investigate the effect of pomegranate juice on the sperm motility, viability, morphology and sperm count in normal and obese rats and also to determine anti-obesity properties of pomegranate juice on body weight. The rats were divided into three groups; treatment group, normal group and obesity group with n=5. Pomegranate juice was given to treatment group for 21 days by oral gavage (1ml/100g of body weight). The rats were sacrificed on day 23rd to perform sperm motility, viability, sperm count and morphology. The relative body weight were calculated and results showed that there are significant decrease ($P<0.01$) in treatment group. Treatment group showed the highest sperm viability percentage (85.2±5.97) and the lowest in non-viable sperm (14.8±0.7) with $P > 0.05$. The percentage of normal sperm morphology of treatment group are (50.4±5.64) showed significant different of $P < 0.05$ with normal group sperm morphology and lastly the sperm count of treatment group are also higher in treatment group (9.8±5.86) as compared to obesity and normal group. This proves that consumption of pomegranate juice did help in increasing sperm quality in male rats and also help in weight loss.