THE EFFECT OF ADDING DIFFERENT LEVELS OF AQUEOUS EXTRACT OF PANAX GINSENG IN THE EXTENDER ON SPERM MOTILITY AFŞHARI RAMS AT 5 ° C

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INTRODUCTION

Panax ginseng, a member of the Araliaceae family, At least 2000 years, P. ginseng, known as Korean ginseng, has been evaluated as a medicinal plant in traditional oriental medicine (Yun, 2001). Since the beginning of the 20th century, the constituents of ginseng root have been investigated and several classes of compounds have been isolated such as triterpene saponins; essential oil-containing polyacetylenes and sesquiterpenes; polysaccharides; peptidoglycans; nitrogen-containing compounds; and various ubiquitous compounds such as fatty acids, carbohydrates, and phenolic compounds (Tang et al, 1992). Sperm survived for a short time in undiluted semen, and semen slow cooling to a temperature of 5°C will cause the death of many spermatozoa. Thus, extender is suitable which sperm parameters preserved during cooling and freezing. The aim of this study was to investigate the effect of Panax Ginseng extract in extender on sperm motility of Afşhari ram.

MATERIALS AND METHODS

In this study, 4 Afşhari rams with a mean of 5 ± 50 kg weight and 3 to 4 years, sperm was collected by electrical ejaculation. After extraction of the medicinal plant at a concentration of 1%, 3% and 5%, each concentration was added to the sperm extender as separately and one group were considered as a control. Sperm motility was evaluated at zero time (immediately post ejaculation) and 24 hours post ejaculation by CASA software.

RESULTS AND DISCUSSION

The results of this study shows that levels of 3% and 1% Panax Ginseng extract was significantly increased (p<0.05) compare to control and other treatment groups at time zero and 24 hour post ejaculation, respectively. On the other hand, ginseng enhances the nitric oxide (NO) synthesis in the endothelium, and nitric oxide has a protective role as an antioxidant Indeed, ginsenosides have contain L-arginine that it is the source of NO and a constitutive NO synthase appears to be involved in sperm motility, metabolism, capacitation, and acrosome reaction (Kim et al, 2009). Therefore, the addition of Panax Ginseng extract in extender was advisable to improve sperm parameters in rams.

Keywords: Ram Sperm, Panax Ginseng, Extender, Motility.

REFERENCES