Title: ANTIOXIDANT EFFECTS OF TRIPHALA, BRAHMI AND TRIPHALA-BRAHMI COMBINATION IN BLOOD AND SEMINAL PLASMA OF HIGH GLUCOSE FED RATS
Objective: The objective of this study is to evaluate the antioxidant effects of triphala (T), brahmi (B) and triphala-brahmi(TB) combination in blood and seminal plasma of high glucose fed rats. These are traditional herbal medicine, being triphala an Ayurvedic preparation composed of equal parts of three herbal fruits viz; Amla (Embilica officinalis), Harada (Terminalia Chebula) and Bihara(Terminalia Belerica).

Design: Experimental study using rat model

Materials and Methods: Adult rats (180 – 220g) were divided into 8 groups containing 6 rats in each group. Group I-control group, Group II- Glucose Control , Group III -B Control, Group IV - T Control, Group V -TB Control, Group VI -B + Glucose, Group VII -T + Glucose, Group VIII - T + B + Glucose. The B/ T dose was 3.6mg/100g body weight/day. After 30 days feeding the weights of the rats were taken and deprived of food overnight. The next day the rats were sacrificed. Blood samples and seminal vesicle fluid were analysed for Catalase, Glucose-6-phosphate dehydrogenase, Glutathione peroxidase and sorbitol dehydrogenase in seminal vesicle fluid by spectrophometric method.

Results: A decrease in the activity of glucose-6-phosphate dehydrogenase was observed in the RBC and semen of rats after administration of B, T and BT combination. B is more effective in decreasing the enzyme glucose-6-phosphate dehydrogenase. B and T separately are more effective than BT combination for lowering the glucose-6-phosphate dehydrogenase activity. Increased activity of catalase enzyme (p= <0.001) was observed in RBC and semen of rats after administration of B, T, TB combination. Combination of TB and B separately is more effective in boosting the antioxidant system. After administration of B, T, TB combination, the activity of sorbitol dehydrogenase decreased. B is more effective in decreasing activity of the sorbitol dehydrogenase.

Conclusions: The results shows that the effect of T, B, TB combination is effective in improving anti-oxidant system, stimulating blood circulation and also affect on semen. After the administration of T, B and TB combination, an antioxidant system may be improved and toxic intermediates may be mobilized by increasing blood flow. B has greater antioxidant activity compared to T. Combination of BT is more effective than B and T separately. These results are very encouraging and indicate these herbs should now be studied extensively to confirm these result and reveal other potential therapeutic effects.

Support: None.

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