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Feasible Apitherapeutic Effects on Alleviating Symptoms of Some Diseases in Male Albino Rats

A THESIS SUBMITTED FOR Ph.D. FOR TEACHER PREPARATION IN SCIENCES (ZOOLOGY)

BY

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ABSTRACT

The present study was carried out to investigate effects of honeybee products (bee honey, royal jelly and bee venom) on the treatment of symptoms of some diseases (renal stress, arthritis, anemia and testosterone deficiency) for male albino rats.

One hundred and seventy-five male albino rats were divided into five groups - one control group and four diseased groups. The first group (Renal stress) was given a hypertonic saline solution (NaCl 2%) as a source of drinking water and the second group (diseased with osteoarthritis) which injected by monosodium-iodoacetate. The third group (anaemia) was injected with phenylhydrazine in the peritoneal cavity for two weeks, and finally the fourth group (testosterone deficiency) induced by injecting Aluminum chloride into the peritoneal cavity for four weeks.

Some biochemical parameters were examined as follows: blood picture, liver and kidney functions, total lipid profile, rheumatoid factor, C-reactive protein, blood testosterone and blood pressure.

Then, the groups were treated with bee products (bee honey, royal jelly and bee venom) and reanalyzed after treated with the products used.

The number of erythrocytes decreased in the four groups, especially the third group with anaemia, while in groups which treated with honey, royal jelly and venom, the number of white blood cells increased, especially in the arthritic group.

Aldosterone, sodium and calcium were significantly increased in the second group with renal stress. Also, high blood pressure and urea, total lipid, showed an increase in total cholesterol: triglycerides, enzyme aminotransferase (ALT) and alkaline phosphatase (ALP), bilirubin, glucose and creatinine and albumin deficiency, in the renal stress group.

The second group with osteoarthritis showed a significant increase in rheumatoid factor and C-reactive protein, while after treatment with honey, royal jelly and venom, the most effective in restoring the normal rate of rheumatoid factor and C-reactive protein was bee venom.

Third group with anaemia recorded red blood corpuscles decreased significantly and high urea and uric acid in the blood, and the royal jelly was more effective in restoring normal ratio in comparison with the control group.

ABSTRACT

The fourth group with testosterone deficiency decreased the rate of the testosterone hormone significantly and was restored normal compared with the control group after treated by royal jelly.

Key words: Bee honey, Royal jelly, Venom, Arthritis, Anaemia, testosterone deficiency, Renal stress.

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