

**Palm pollen as Growth and Metabolic Enhancer
During the Course of Murine Intestinal Eimeriosis**
حبوب لقاح النخيل كمحسن للنمو والايض خلال عدوى الفئران بالإيميريا
المعوية

عنوان البحث

Abstract

- The current study was designed to evaluate the antagonistic effect of palm pollen extract (PPE) against *Eimeria papillata*-induced growth depression and metabolic disturbance in laboratory mice.
- Swiss albino mice were randomly divided into three groups. The first group represents control non-infected animals. Second and third groups were orally infected with 1.5×10^3 sporulated *E. papillata* oocysts. The 3rd group was treated with a daily dose (150 mg/kg) of PPE for five successive days. All animals were sacrificed on day 5 p.i., and samples were collected.
- Control non-infected mice had an average gain in their weights by about 18%, while infected mice lost their weights by about 7%. Upon treatment of infected mice with PPE, there was an average weight gain of about 5%. A state of disturbance in nutrient levels and systemic inflammatory response had been induced as a result of *E. papillata* infection. Blood glucose level and total proteins were elevated with concurrent decrease of carbohydrate and protein content in jejunum tissue. Also, infection caused hyperlipidemic status and disturbance in metal ion concentrations. Moreover, plasma enzymatic activities of lactate dehydrogenase, alanine transaminase and alkaline phosphatase were significantly elevated as a consequence of *E. papillata* infection. PPE could effectively restore carbohydrate, proteins, lipids and metal ions near to their normal values with diminishing the activity of the mentioned enzymatic biomarkers of inflammation. Finally, palm pollens can be used as an excellent food supplement to ameliorate the induced metabolic disturbance and growth depression associated with the intestinal coccidial infections.