INFLUENCE OF CASEARIA ESCULENTA ROOT EXTRACT ON PROTEIN METABOLISM AND MARKER ENZYMES IN STREPTOZOTOCIN-INDUCED DIABETIC RATS

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The present study investigated the possible protective effects of Casearia esculenta root extract on certain biochemical markers in streptozotocin (STZ)-induced diabetes in rats. STZ treatment (50 mg/kg, ip) caused a hyperglycemic state, that led to various physiological and biochemical alterations. Blood levels of glucose, urea, uric acid and creatinine, plasma levels of albumin and albumin/globulin ratio and the activities of diagnostic marker enzymes aspartate aminotransferase (AST), alanine aminotransferase (ALT), alkaline phosphatase (ALP) and γ-glutamyltranspeptidase (γ-GT) in plasma, liver and kidney were markedly altered in STZ diabetic rats. Oral administration of C. esculenta (200 and 300 mg/kg) for 45 days restored all these biochemical parameters to near normal levels. Thus, the present results have shown that C. esculenta root extract has the antihyperglycemic effect and consequently may alleviate liver and renal damage associated with STZ-induced diabetes in rats.

Key words: Casearia esculenta, diabetes mellitus, protein metabolism, streptozotocin

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