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Study of the Anti-Diabetic Activity of the Common Fig in the Region of the El Amra (Ain Defla), Algeria

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Abstract : Figs are so much consumed in the Mediterranean region; they present a high nutritional value and also multiple therapeutic virtues. Our work contributes to the study of the antidiabetic activity of the common fig of the region of El Amra (AinDefla) Algeria. To do this, 20 Wistar rats female, divided into 4 lots, were used: Lot 1: 5 normal controls; Lot 2: 5 normal controls treated with dry fig juice at 20%; Lot 3: 5 diabetic controls; Lot 4: 5 diabetic controls treated with dry fig juice at 20%. The rats are rendered diabetic by intra-peritoneal injection of a streptozotocin solution. The blood glucose is measured after 1 hour, 2 hours, 3 hours and after 4 hours of the administration of the fig juice; it's measured also on the 5th day, 8th day and 9th day of the beginning of the experiment. The determination of cholesterol and triglycerides blood is carried out at the beginning and the end of the study. On the 9th day, we recorded a very significant decrease of the blood sugar level of diabetic rats treated with dry fig juice. This blood glucose level normalized for 3 rats/5rats, we also recorded a decrease, but not significant, of cholesterol and triglycerides blood levels. In the short term (for 4 hours), an increase of blood sugar level, one hour after administration, for normal and diabetic rats. This increase is probably due to the high level of sugar content in the preparation. The blood glucose level is then corrected, four hours later. This may be the result of anti hyperglycemic effect of the active ingredients contained in the figs.

Keywords : antidiabetic, figs, hypoglycemia, streptozotocin
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