Effect of the passion fruit peel on intake and body composition parameters of rats with ulcerative colitis induced by TNBS

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Ulcerative colitis, a type of inflammatory bowel disease, affects millions of people. Bioactive compounds, such as founded in the passion fruit (Passiflora edulis) and its peel, may help in the IBD control. The purpose of study was to evaluate the effect of diets added of P. edulis peel fiber on body weight, food intake and carcass composition of Wistar rats (77 life days, ±350 g) with induced colitis. The animals were divided in sham and colitis groups, subdivided in standard diet (AIN-93M) and peel diet (PD) groups. After one week of adaptation, the induction was performed by rectal injection of trinitrobenzenesulphonic acid. Body weight, diet and water consumption were monitored. After 7 days, animals were killed. Freeze-dried carcasses were used in proximate composition determinations. ANOVA and Tukey’s test were used for statistical analyses (p<0.05). The diet intake was decreased in Colitis Group + PD to Sham Group + PD, although there was no significant difference among the animals that consumed AIN-93M and those that ingested PD. Regarding the carcasses composition, animals with colitis showed a greater protein amounts and less lipids. Nevertheless, only the Colitis Group + PD (60.27 ± 4.20; 22.67 ± 0.33; percent of protein and lipid, respectively) significantly differed of standard groups. This result indicates that the rats fed peel had higher spending of the fat reserves during pathological process. It could be concluded that the acute consumption of passion fruit peel does not affect feed intake or body composition of Wistar rats with induced colitis.

Key-words: Food intake; carcass composition, passion fruit peel, colitis.