

Aqueous extract of Brazilian berry (*Myrciariajaboticaba*) peel attenuates TNBS-induced colitis in rats

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Keywords: Jaboticaba; Microbiota; Infusion.

Natural compounds could be a complementary alternative to inflammatory bowel diseases (IBD) management. This study determined the effects of the aqueous extract of *Myrciaria jaboticaba* peel (EJP) (50 g L⁻¹) in induced-colitis by 2, 4, 6-trinitrobenzenesulfonic acid. Wistar rats were randomized into five groups: HC – healthy control; CC – colitis control; DC – drug control; SJ – short-term treatment; LJ – long-term treatment. The EJP reduced body weight loss, stool consistency score and spleen enlargement. Gut microbiota was modulated through increased *Lactobacillus* and *Bifidobacteria* counts after EJP treatment. Short-chain fatty acids were also higher than DC group. The antioxidant action was greater than CC or DC controls assessing the enzymes activities. Myeloperoxidase activity (LJ), Inducible nitric oxide synthase (LJ/SJ) and Intercellular adhesion molecule (SJ) levels were lower to CC group. EJP decreased histological scoring, mucosal thickness and preserved the crypts and histological structure. The results demonstrated that aqueous extract of jaboticaba peel used as infusion and taken as beverage ameliorates the severity of experimental colitis. The benefits were attributed to its anti-inflammatory effects and capacity of inhibiting oxidative stress, modulate colonic microbiota and preserve healthy mucosa. The anti-splenomegaly effect showed by EJP was relevant, which is further evidence of immunologic attributes in the combat of colitis-induced systemic inflammation. Jaboticaba extract showed better action in the microbiota and SFCA production than mesalazine, which is widely used in IBD management. Therefore, EJP showed beneficial effects and could be prospectively used as an adjuvant in the IBD treatment.

Financial support: Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) # 204088/2014-3, #142493/2013-9, # 305099/2011/6; # 310111/2016-4; # 454791/2014-3; # 300533/2013-6 and #301108/2016-1. Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP) #2015/50333-1, 2018/11069-5.