EVALUATION OF CARDIOVASCULAR PARAMETERS IN RATS SUBMITTED TO PROTEIN MALNUTRITION TREATED WITH L-ARGININE.

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Protein malnutrition is characterized as a deficit in supply or transport of nutrients that affects the normal functioning and development of the organism. Previous studies of the Laboratory of Cardiovascular Physiology showed that post-weaning protein malnutrition in rats is responsible for an increase in mean arterial pressure and heart rate. Thus, our study aims to evaluate the effects of dietary supplementation with L-Arginine in malnourished animals, since the amino acid L-Arginine is the precursor of nitric oxide, a vasodilator substance. Male Fisher rats were divided in two groups after weaning: the control group received diet containing 15% of protein and water ad libitum and malnourished group received diet containing 6% of protein and water, also ad libitum, both for 35 days. After this period, the malnourished group was divided into malnourished group, which continued to received diet with 6% of protein for 15 days, and malnourished group treated with L-arginine, which began to receive diet with 6% of protein and with 1.16% of L-arginine, also 15 days, while the control group continued to receive the diet with 15% of protein. During these 15 days, the animals were subjected to the technique of tail plethysmography each 5 days for acquisition of systolic blood pressure and heart rate. Our results showed that both animals of the malnourished group as the malnourished group treated with L-arginine showed systolic blood pressure and heart rate significantly increased when compared to animals of control group. In addition, when evaluating the serum concentration of nitric oxide, we observed that there wasn’t statistical difference among the 3 groups. The results showed that the increase in systolic blood pressure and heart rate observed in malnourished animals, possibly, isn’t dependent of pathway L-arginine-nitric oxide.

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