

萎縮ヒラメ筋の回復期におけるクレンブテロール投与の影響

Effects of clenbuterol administration on the atrophied soleus muscle during recovery period

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[Abstract]

Using immunohistochemical method, we investigated whether daily administration of clenbuterol (CLE; 1mg/kg body weight per day) accelerate the regrowth of casted-immobilization(IMM)-induced atrophy of soleus muscle fibers. Adult male Sprague-Dawley rats were assigned to control(CON), IMM, IMM+normal recovery control(RCON) and IMM+normal recovery with CLE-administration(RCLE) groups. IMM were maintained for 9 days, and the period of recovery was for 7 days. 9 days of hindlimb IMM induced muscle atrophy with decrease of fiber area. After 7days of recovery period, the muscle weights in the RCON and RCLE groups were higher than those in the IMM group. The cross-sectional area of type I fibers was higher in RCLE group than in the IMM group. Nucleus number of type I fibers in the RCON and RCLE groups was lower than in the CON group. Nuclear domain size of type I and type II fibers in the RCON and RCLE groups was higher than in the IMM group. These results suggest that CLE accelerate the regrowth of atrophied soleus fiber without the increase of nucleus.

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