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**ANALYSIS OF MYOSIN-ATPASE ACTIVITY AND SATELLITE'S CELL ACTIVATION
IN SOLEUS MUSCLE AFTER SURGICAL DENERVATION OF WISTAR RAT**

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Skeletal muscle denervation compounds a group of affection of locomotor system capable to promote important physical disabilities. We studied the effects of muscle denervation on different fiber types, morphology of satellite cell and microvascular supply in soleus muscle of Wistar rats after surgical neural damage through sciatic nerve section. After fifteen days of hindlimb palsy, the soleus muscle atrophy was studied through the analysis of muscular weight and transverse sectional area of muscle fibers. Following, we analyzed the different fiber types using histochemical analyses for myosin-ATPase reaction to appoint changes in contractile behavior of soleus muscle. The morphology of satellite's cells was studied using electron transmission microscopy images and the microvasculature of the tissue was analyzed obtained histological reactions for toluidine blue to study the rate of capillar-fiber. We observed that the soleus muscle showed reduction of 36% of mass as well as 50% of reduction in the cross sectional area in the experimental group after fifteen days of sciatic nerve damage, indicating muscle hypotrophy. Also, we verified an increase in the fast-twitch (type IIb) and undifferentiated fiber types revealing alteration in the muscle contractile behavior. The electron transmission microscopy revealed disarrangement of the skeletal muscle tissue with the one sided prolongations of satellite cell, showing its migratory potential and capacity to regenerating the lesion's tissue. We compared all this results with the capillary-fiber rates finding 35% less capillary per muscle fiber in control animals that in the experimental animals. We conclude that keep up with the change in the muscle contraction pattern this study showed a microvascularization adjustment consistent with the histochemical modification of soleus muscle during atrophy process.

BIOGRAPHY

Sabrina Degaspari is formed in physical therapy and pharmacology, has completed her master degree in morphology, concentration area anatomy at Sao Paulo University and PhD in biosciences, concentration area neuropharmacology at Sao Paulo University. She teaches at Centro Universitario Lusiada and Santa Cecilia University and attends as a physiotherapist at Corpo e Agua clinic.

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