5th Pathology and Infectious Disease Conference

December 12-13, 2022 Prague, Czech Republic

Journal of Medical & Surgical Pathology **ISSN: 2472-4971**

Mechanoreceptors in collateral knee ligaments

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Abstract (Word limit 600)

The mechanoreceptors in the collateral ligaments of the knee joint in rat hindlimbs were studied. In group II (*n*=10) the femoral and obturator nerves were sectioned. In both groups III and V (*n*=20) the sciatic nerve was sectioned. In group V (*n*=10) the sectioned sciatic nerve was sutured 4 weeks after sectioning. In group IV (*n*=10) all three nerves were sectioned. Group I (*n*=10) served as control. After 4 months all animals were killed. The ligaments of the knee joint were preserved and stained with gold chloride, paraffin-embedded and cut in sagittal serial sections. The results showed that 4 months after partial or total denervation of the limb, there was necrosis and a decrease in the number of mechanoreceptors, which was dependent upon the severity and site of the lesion. After suture of the sciatic nerve the increase in mechanoreceptors suggested a regenerative process.

Biography (Word limit 200)

Contreras –Rodríguez has completed his studies in Unit of Histology and Biopathology Laboratory, School of Medicine, Universidad Autonoma, Madrid, Spain,ES Unit of Histology, Department of Morphology, Faculty of Medicine, Autonomous University of Madrid, c/ Arzobispo Morcillo s/n, E-28029 -Madrid, Spain. Research interests are pathological studies.

About Institution (Word limit 200)

The Autonomous University of Barcelona (Catalan: Universitat Autònoma de Barcelona; IPA: [uniβərsiˈtat əwˈtɔnumə ðə βərsəˈlonə], Spanish: Universidad Autónoma de Barcelona; UAB), is a public university mostly located in Cerdanyola del Vallès, near the city of Barcelona in Catalonia, Spain. As of 2012, the university consists of 57 departments in the experimental, life, social and human sciences, spread among 13 faculties/schools. All these centers together award a total of 85 qualifications in the form of first degrees, diplomas, and engineering degrees.

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Journal of Medical & Surgical Pathology ISSN: 2472-4971

Importance of Research (Word limit 200)

Mechanoreceptors work as transducers, converting physical energy expressed as tension into nervous. They play an important role in the control of movement, and provide information to the central nervoussystem when a joint is injured. The morphology anddistribution of mechanoreceptors in the joint capsulebeen described in humans, and in animals. The presence of mechanoreceptors after ligament transection, in autologous tendon grafts, and in regenerated menisci have also been described. Zelena and Zarachova have shown reinnervation of the Pacini corpuscles after sciatic nerve damage in rats.

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