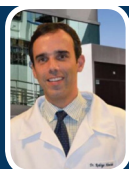


Keynote Forum



12th International Conference on **ARTHROPLASTY**

June 24-25, 2019 | Rome, Italy



Rodrigo Almeida dos Santos

Faculty of Medicine of Barbacena, Brazil

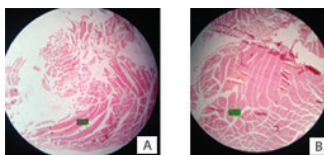
Histological effect of shock waves on the quadriceps musculature of wistar rats

Statement of the Problem: The extracorporeal shockwave therapy (ESWT) was introduced in medical practice in the early 1990s as a derivation of urological lithotripsy. In the United States, the use of shockwaves in the musculoskeletal system was approved in 2001 and its similar application in Brazil in 1998. It has now been applied to treat several pathologies such as epicondylitis, patellar tendonitis, tendinosis, calcareous shoulder tendonitis, delay of consolidation, pseudarthrosis of fractures, bursitis of the great trochanter, plantar fasciitis.

Methodology & Theoretical Orientation: The present study had evaluated the posterior musculature of the right thigh of 12 rats after being subjected to the application of shockwaves with a radial device of Electro Medical System (EMS) - the Swiss Dolorclast Smart 20 and compared with the same muscle group on the left side, which was not submitted to shockwaves. The methodology was developed with supervision from the Federal University of Minas Gerais. A group of 12 male Wistar rats were subjected to three sessions of ESWT on the left hind paws using the EVO-BLUE. After seven days, the animals were euthanized, and the quadriceps muscles were sent for histological analysis. We performed the experiment in the biotery of the College of Medicine of Barbacena - MG, and all 12 animals were submitted to shockwaves under intraperitoneal anaesthesia. We submitted 3 applications with weekly interval according to protocol of the model of the device and in the fourth week, under the same type of anaesthesia, the rats were euthanized and referred for comparative histopathological analysis of the limbs.

Findings: We observed a slight edema in the muscle tissue and inflammatory infiltrate on the right thigh (submitted to radial shockwaves) in relation to the contralateral side.

Conclusion & Significance: Which demonstrates the safety and restorative capacity in the musculature of the method employed.



Comparison between histopathological findings of the right paw (image A) and the left paw (image B)

Biography

Rodrigo Santos is a scientific director at the Institute of Traumatology and Orthopedics of Barbacena, Brazil. He is also the head of the orthopedic department of Santa Casa de Barbacena Minas Gerais and an expert member of the Brazilian Society of Orthopedics and Traumatology. He obtained his bachelor's from the College of Medicine of Barbacena in 1996. He accomplished his master's degree in medicine by the Federal University of Minas Gerais, Brazil. Presently, he is a professor in the Department of Orthopedics and Traumatology at the Faculty of Medicine of Barbacena, Brazil.

rodrigosalmeida10@gmail.com

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Haytham Abdelazim

Ain Shams University, Egypt

Single stage total hip arthroplasty in adult patients with developmental hip dysplasia (Crowe type III, IV)

Statement of the Problem: Total hip replacement in patients with a dysplastic hip is challenging. The normal anatomy about the hip joint is distorted in the presence of congenital hip dislocation and proximal migration of the femur. It is a technically demanding procedure in which several problems and complications can be encountered. Restoring the anatomic center of hip rotation may require femoral osteotomy.

Methodology & Theoretical Orientation: The aim of this study was to determine the rate of union, complications and functional results in a series of patients with Crowe III and IV dysplastic hips who underwent single stage THA with or without simultaneous subtrochanteric femoral shortening osteotomy. A retrospective study was designed in a series of 20 patients (20hips). Patients were reviewed clinically and radiographically with a minimum follow-up of one year. Harris Hip Score (HHS) was recorded pre-operatively and at six weeks, six months and 12 months postoperatively.

Results: Hip center was restored at the anatomic center in 95% and near anatomic center in 5% of cases, subtrochanteric femoral osteotomy was needed in 11 cases (55%), intraoperative femoral cracks were encountered in 3 cases (15%), union occurred in all cases with subtrochanteric shortening (100%) Mean HHS improved from 36.31 preoperatively to 87.13 at 6 months and 88.60 at 12 months. Infection and dislocation occurred in 1 case (5%) and sciatic nerve injury occurred in 1 case (5%). No cases required revision till last follow up and no patients encountered postoperative DVT or aseptic loosening.

Conclusion & Significance: Single stage THA for dysplastic hip Crowe III or IV is technically demanding and proved to be safe and effective with or without subtrochanteric femoral shortening osteotomy with restoration of anatomic hip center.



Figure (1) Postoperative plain x-ray of a case with subtrochanteric shortening.

Biography

Haytham Abdelazim is an assistant professor of orthopedic surgery in Ain Shams University Faculty of Medicine. He has expertise in joint replacement surgeries. He has years of experience in research, teaching, and administration both in hospital and education institutions.

haytham_azim@yahoo.com