

CORA Paper Session •

Moderators Kishore Mulpuri, BC, and Nelson V. Greidanus, BC

CORA 1 -

Graft Tensioning in Anterior Cruciate Ligament Reconstruction: A Systematic Review of Randomised Controlled Trials

Shalinder Arneja, UBC, M. McConkey, K. Mulpuri, P. Chin, M. Gilbert, W. Regan, J. Leith

CORA 2 –

Inappropriate Referrals to Paediatric Orthopaedic Surgeons: How Can We Identify and Decrease Them?

Alberto Carli, McGill University, N.D. Oliel, R. Hamdy

CORA 3 –

Chondroitinase ABC and Acute Electrical Stimulation are Beneficial for Muscle Reinnervation After Sciatic Nerve Transection in Rats

Frédéric-Charles Cloutier, Université de Montreal, É. Beaumont, D. Rouleau, P. Beaumont, M. Atlan

CORA 4 –

Prospective Randomised Controlled Study Comparing a DBM-CASO₄ Composite Graft and Bone Marrow Aspirate with Autologous Iliac Crest Bone Graft in One-Level and Two-Level Lumbar and Lumbosacral Spinal Fusions

Alexandra Soroceanu, Dalhousie University, D. Alexander, W. Oxner, A. Kelly, D. Shakespeare

Purpose: The current gold standard for spinal arthrodesis, autologous bone graft harvested from the iliac crest, has several disadvantages including donor site morbidity, blood loss, delayed wound healing, and increased operative time. Our study explores a Demineralized Bone Matrix-Calcium Sulfate (DBM-CaSO₄) composite graft with autologous bone marrow aspirate (BMA), and compares it to autologous iliac crest bone graft in lumbar and lumbosacral spinal fusions. **Method:** A total of 80 patients were recruited for the study and randomised, via a computer-generated randomisation schedule, to autologous iliac crest bone graft (control) or DBM-CaSO₄ composite graft with BMA (study) groups. Patients were evaluated at three-months, six-months, 12-months and 24-months post-operatively with questionnaires to evaluate clinical outcome (Oswestry disability questionnaire (ODI), visual analogue pain scales (VAS), and validated SF-36) and with posteroanterior and lateral x-rays of the spine to evaluate radiological outcome. **Results:** At 24-months post-operatively, there were no statistical differences seen between the two groups based on the clinical outcomes measured. Average ODI values were 27.19 for the control group versus 22.68 for the study group ($p > 0.05$). The average back VAS pain for the control group was 3.50 versus 3.51 for the study group ($p > 0.05$). The SF-36 score was 89.22 for the control group versus 91.56 for the study group ($p > 0.05$). The average operative time was 115.7 minutes for the

control group versus 104.2 minutes for the study group ($p : 0.014$). Average calculated blood loss was 571.9 cc for the control group versus 438.2 cc for the study group ($p : 0.025$). The Lenke score was 1.92 for the control group versus 2.66 for the study group ($p : 0.004$). **Conclusion:** At two year follow-up, radiographic fusion was slightly higher in the ICBG. However, clinical outcomes were equivalent in both groups. Moreover, the DBM-CaSO₄ and BMA composite graft offered the advantages of decreased blood loss and shorter operative time. Therefore, the DBM-CaSO₄ and BMA composite graft represents a viable alternative to autologous iliac crest bone graft in carefully selected patients undergoing spinal arthrodesis.

CORA 5 –

The Association Between Passive Range of Motion and Early Clinical Outcomes Following Shoulder Rotator Cuff Repair Surgery

Justin Leblanc, University of Calgary, K. Pletsch, B. Lau, G. Redman, I. Lo, R. Boorman

CORA 6 –

Biomechanical Reconstruction of the Hip: 28mm THA versus Large Diameter Head THA versus Hip Resurfacing

Payam Farhadnia, Université de Montreal, M. Lavigne, Pascal-André Vendittoli

CORA 7 –

Generalized Ligamentous Laxity as a Predisposing Factor for Primary Anterior Shoulder Dislocation

Jaskarndip Chahal, University of Toronto, T. McCarthy, J. Leiter, D. Whelan

CORA 8 –

Quantification of Pronator Quadratus Contribution to Isometric Pronation Torque of the Forearm

Mark O. McConkey, UBC, T.D. Schwab, A. Travlos, T.R. Oxland, T. Goetz

CORA 9 –

The Role of Interleukin 6 During Knee Osteoarthritis After ACL Injury in Experimental Mice

Khaled Alshakman, McMaster University

CORA 10 –

The Effect of Hypoxia on Chondrocyte Phenotype in Scaffold Repair of Articular Cartilage Defects

Julian Sernik, University of Alberta, N. Jomha, K. Bagnall, C. Secretan, M. Lund

CORA 11 –

Ankle Arthroplasty and Ankle Arthrodesis - Prospective Gait Analysis Compared to Controls

Syndie Singer, University of Toronto, S. Klejman, E. Pinsker, R. Khan, T.R. Daniels

CORA 12 –

Improving Waiting Times and Resource Utilization in the Cast Clinic
Peter Lewkonia, University of Calgary, P. Duffy, T. Rohleder