

International Conference on

Spine and Spinal Disorders

June 30-July 02, 2016 Valencia, Spain



Pierpaolo Mura

Sapienza University of Rome, Italy

Cobalt Chromium Rods vs Titanium rods in the Correction of Serious Deformities in Adolescents

Comparison of the results obtained using rods in titanium and cobalt chromium in surgery of scoliosis in adolescents.

Objectives: The main objectives in the surgical treatment of idiopathic scoliosis are to correct the deformity on the coronal and sagittal planes and provide a stable fusion. The use of biomaterials is fundamental in order to achieve these objectives. The parameters which characterize biomaterials are: the charge of the enervation – the value of the tension at which the material begins to plastically deform; the rigidity – the capacity of a body to oppose itself to plastic deformation; and the flexion - the capacity of a body to oppose itself to the force of the flexion to which it is subjected.

Methods: Biomechanical tests show that the properties of cobalt chromium are superior when compared to titanium. In particular cobalt chromium is characterized by a higher charge of enervation, rigidity and flexion when compared to titanium.

Conclusion: Our experience highlights that, when compared to titanium, cobalt chromium is more capable of maintaining the equilibrium of the sagittal plane both in operating fields and radiographic checks. Excellent results can be obtained with a better correction of the deformity and a stable fusion.

Biography

Pier Paolo Mura is an Orthopedic Specialist in scoliosis and an expert in spinal surgery. He also serves as a Professor at La Sapienza University of Rome, Polo Pontino and Chair in Orthopedics contract. He is specialized in Orthopedics and Traumatology and diagnostic radiology. He is the Director of the Department of Orthopedics and Founder and Director of the Unit Complex Spine Surgery Center and Scoliosis Surgery Section. He is the Head of Unit of Orthopedics and Regional Delegate of the Italian Society of Spine Surgery GIS (Italian Scoliosis Group) as well as an active member of SRS (Scoliosis Research Society). He is also Scientific Director of the research project on biomaterials in spine surgery at the Science and Technology Park in Pula.

pierpaolomura1@gmail.com

Notes: