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A novel measurement technique to assess shoulder balance of 40 patients who have previously had Lenke Type 1 Adolescent Idiopathic Scoliosis Correction Surgery.

The achievement of shoulder balance is one of the most important measures of successful scoliosis surgery. Current measurement techniques are not suitable to clinical practice in relation to radiographic images of the spine. Most radiographic images of the spine do not capture the lateral end of the clavicle, which is an important measuring point for these measurements. Our technique measures the angle of intersection of the clavicle at the lateral thoracic margin in comparison to the intersection of the medial clavicle and Central Sacral Vertical Line (CVSL). We conducted a pilot study by doing 120 measurements of CVSL - Clavicle angles (C-C angle) in 20 patients with Lenke Type 1 Adolescent Idiopathic Scoliosis. C-C angles were measured bilaterally pre-operatively, post-operatively, and 1 year after Scoliosis Correction Surgery. Results showed mean right and left C-C angles decreased from pre to post-surgery and then increased one year after surgery. This study shows that the C-C angle can be reliably used in test-retest trials and used to assess shoulder balance after Scoliosis surgery. With this in mind, we are currently in the process of recording 40 patients and measuring these against "relative shoulder height" to improve reliability and see if there is a correlation. The overall aim would be for this technique to be accepted as a gold standard measuring technique. This way a Spinal Surgeon would be able to have a greater understanding of the effectiveness of the Scoliosis Correction Surgery that was performed.

Biography

Antony Michael is a Senior Consultant Orthopaedic Spine Surgeon at the Neuro Spinal Hospital in Dubai, with 28 years experience, the last 20 years in the United Kingdom. He obtained his CCT (T&O) from the UK in August 2010, FRCS (T&O), and FRCS Ed. He has completed a Master's degree in the Surgery of Trauma and obtained the M.Med. Sci. (Trauma Surgery) at the University of Birmingham. He was awarded the prestigious William Gissane Memorial prize (Gold Medal). Before this, he completed the National Board training in Trauma and Orthopaedics from India.

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