

# 3<sup>rd</sup> International Conference on Surgery and Anesthesia

November 17-19, 2014 Chicago, USA

## Ankylosing spondylitis: Are we underestimating the benefits of spinal surgery?

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**Introduction:** Ankylosing Spondylitis (AS) is a disabling, incurable, inflammatory condition of the axial skeleton. Management is largely pharmacological with analgesia, and immune-modulation. Here, we present a case where pedicle subtraction osteotomy surgery brought huge benefit to a patient with severely disabling and refractory AS. However, currently only a minority of patients undergo surgery for disability from flexion deformity. We argue that spinal surgery should be used more often.

**Case:** A 58 year old male presented with a five year history of worsening cervical pain and pronounced cervicothoracic kyphosis secondary to AS. He had been unresponsive to the third-line drug (Adalimumab) and his increasing deformity was preventing normal horizontal gaze. Pedicle subtraction osteotomy at C7, with posterior instrumentation from C2 to T5, restored more than 50 degrees of deformity, as well as both sagittal balance and horizontal gaze.

**Discussion:** There is increasing evidence that surgical correction is highly effective for the correction of kyphotic deformity in AS. For instance, one literature review of cases from 1997 to 2006 showed that surgery has a 100% success in restoring horizontal gaze due to cervical or cervicothoracic kyphosis, with improved quality of life and a low reported risk of post-operative adverse events such as permanent neurologic injury, deep wound infections and death. However, despite current evidence, spinal surgery for AS patients is not widespread. We use this case and current evidence to argue that spinal surgery should be employed more often and we aim to increase doctors' awareness of its benefits.

### Biography

Samantha Low graduated with first class honours in biomedical materials engineering before embarking on a fast track medicine course, graduating with distinctions in clinical medicine and science in 2011. She started out as a surgical resident and completed her surgical membership exam before deciding to switch careers. She is currently a year 1 radiology resident and is keen to expand her research portfolio with a PhD in the near future.

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