

Introduction

The swan neck deformities are severe and complex cervical spine deformities. As a result of the cervical spine changes associated with a swan neck deformity, the upper part of the sub-axial spine becomes kyphotic. The lower part of the sub-axial cervical spine subsequently compensates by becoming hyperlordotic. These changes occur in an attempt to keep the head balanced over the neck.

Purpose: to summarize the changes in the overall alignment of the cervical spine following anterior interbody segmental decompression and fusion for the correction of swan neck deformity.



STALIF C-Ti Cervical Integrated Interbody Fusion Cage - Centinel Spine, LLC., West Chester, PA

Methods

Patient 1: 56 year-old male with post -laminectomy syndrome with swan-neck deformity and residual myelopathy motor weakness.

Patient 2: 54 year-old female with cervical spondylitic myelopathy with kyphotic angulation.

Surgeries: C3-C7 Anterior cervical discectomy and fusion with lag screw instrumentation.


Radiographic analysis was performed by Medical Metrics, Inc. (MMI; Houston, TX) using the proprietary QMA® technology. The reproducibility of the measurements has been validated. QMA® is intended for investigational use only and any images or data generated by QMA® are not for use in clinical diagnosis or patient management. The purpose of the analysis was to evaluate the change in sagittal alignment of overall spine and individual operating and adjacent levels.

Global cervical alignment (C2-C7) and segmental lordosis were measured using neutral lateral X-rays.


Results

Surgeries were successful for both patients and they pleased with the results of surgery. The average magnitude of change in the lower cervical spine (C2-C7) was 19.4degrees. The average change in magnitude of segmental lordosis was 3.2 degrees per cervical level (C1-C7). Anterior cervical integrated interbody cages have been approved by the United States Food and Drug Administration (FDA) for single and multilevel fusion surgeries.

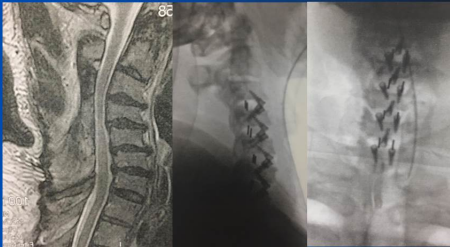
Case Example – Swan Neck Correction




- > 56 yo, male, Medically disabled, Oxycodone and morphine daily
- > **Symptoms:** Neck pain, Arm pain, numbness and weakness
- > **Diagnosis:** Multi-level cervical spondylosis, Spinal canal stenosis
- > **Surgical approach:** Anterior column reconstruction with restoration of sagittal balance



Case Example – Swan Neck Correction



54 year-old female with cervical spondylitic myelopathy with kyphotic angulation



Conclusions

This is the first report published for a series of patients with swan neck deformity, who had fusion procedure under the care of a single surgeon. Fusion using anterior cervical integrated interbody cages is an effective option for the surgical treatment of this complex swan neck deformity as evidenced by both the clinical and radiographic outcomes.

Learning Objectives

This is the first report published for a series of patients (n=2) with swan neck deformity, who had fusion procedure under the care of a single surgeon. Fusion using anterior cervical integrated interbody cages is an effective option for the surgical treatment of this complex swan neck deformity as evidenced by both the clinical and radiographic outcomes.