



# REVIEW OF A KYPHOSCOLIOSIS CASE

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[www.eSpine.com](http://www.eSpine.com)

# Patient History

## Patient history

- 14 year old female from Ecuador
- Diagnosed with mesenchymal syndrome and severe progressive kyphoscoliosis
- Neurologically intact
- Thoracic and lumbar pain
- Severe body distortion

## Pre-op workup

- Physical examination
- Genetic testing
- Pulmonary Function tests
- Imaging
  - X-rays
  - MRI
  - Computerized Tomography

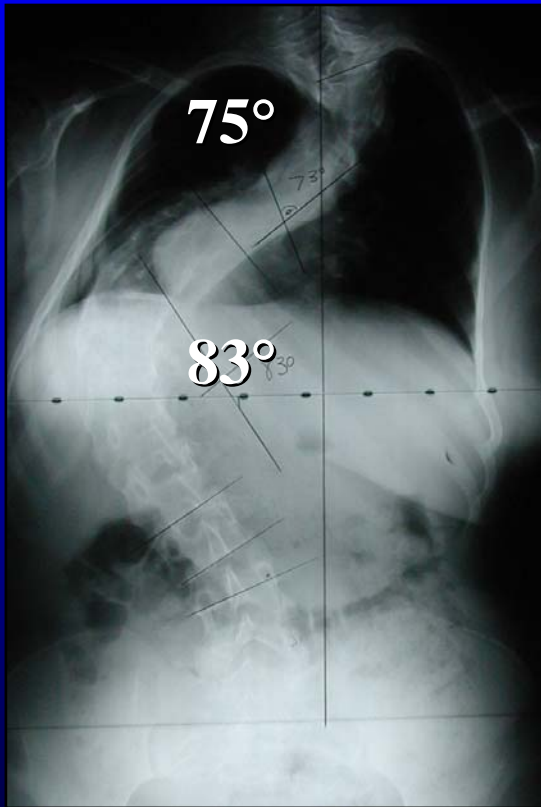
# Physical Examination



As seen in this photo, the patient suffers from severe deformity, kyphoscoliosis. We rarely see curvature of this magnitude in the United States due to early detection and bracing. Left untreated, the curves would continue to progress putting her at risk for cardiopulmonary compromise.

# Pre-Op Imaging

## 36x14 AP and Lateral Scoliosis series

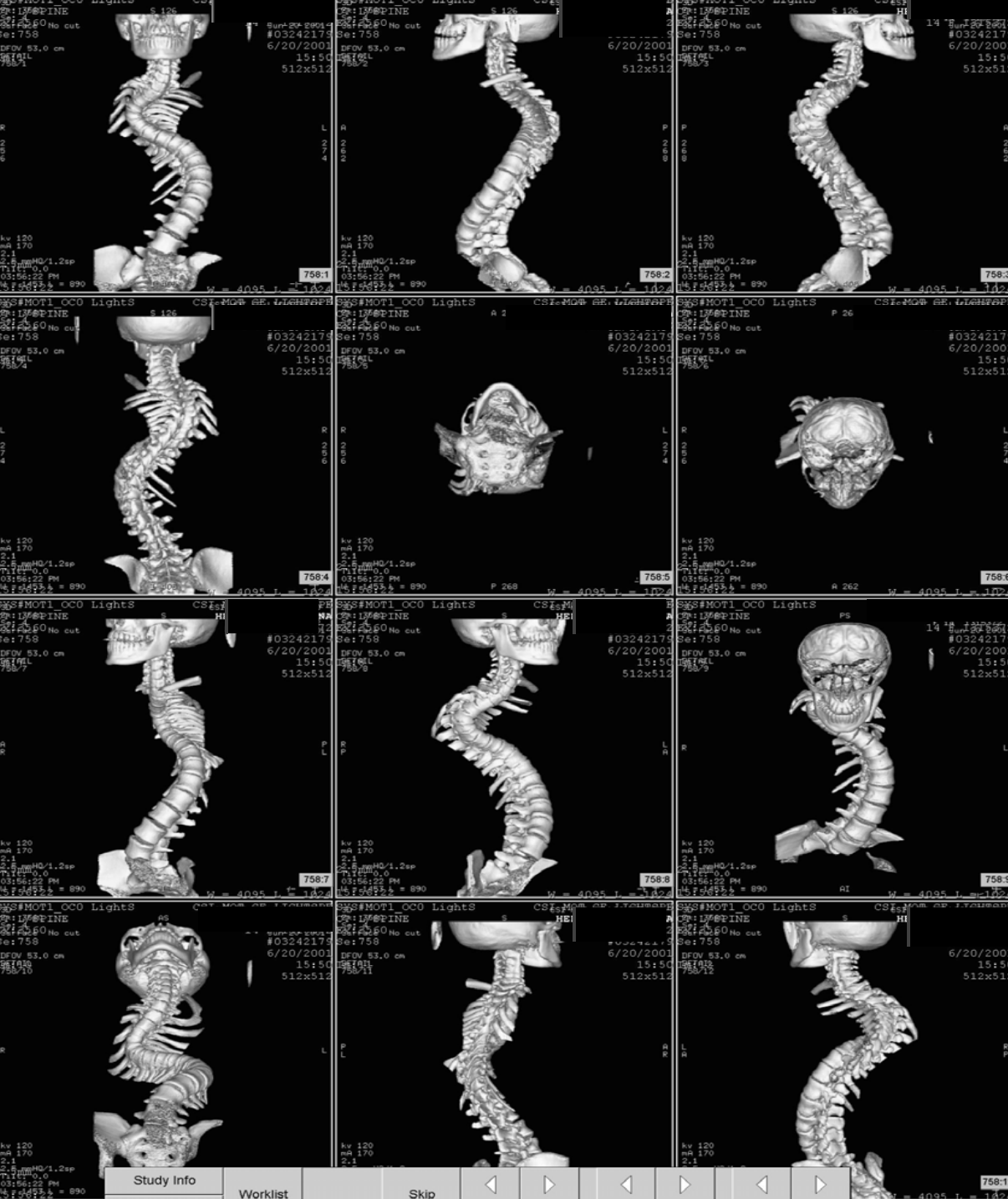


A/P X-ray

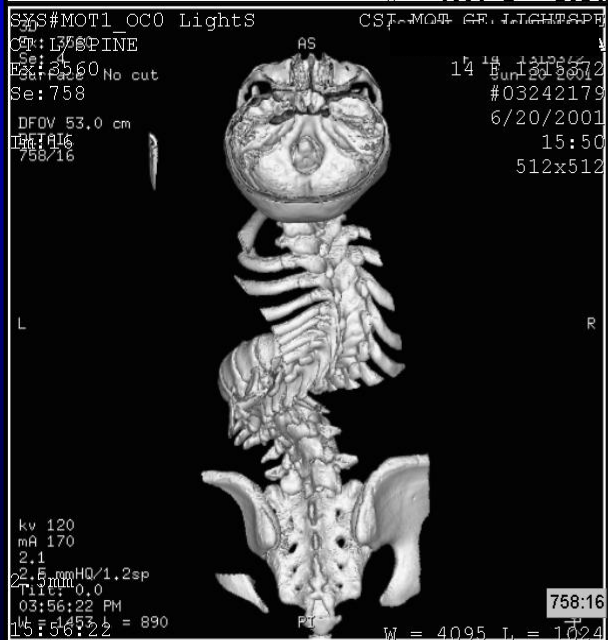
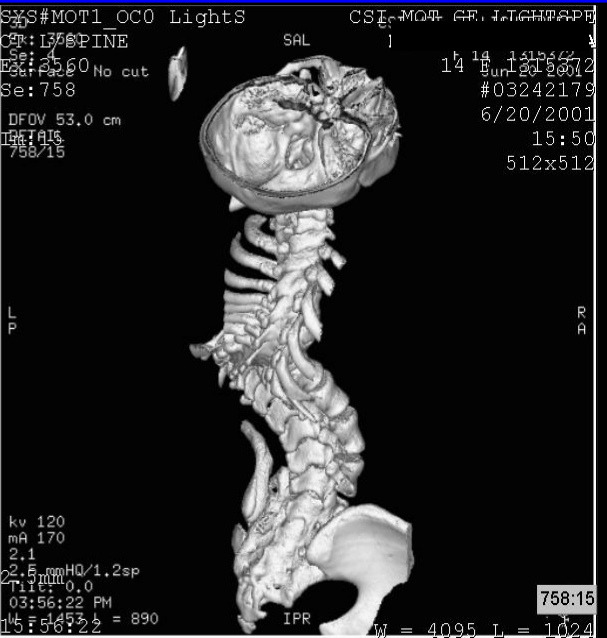


Lateral X-ray

These images show the magnitude of the curvature of her spine. The thoracic spine (upper spine) is in kyphosis, while the lumbar spine (lower back) is in lordosis. The spine is pushing against her abdominal wall producing a belly.



Through new technology, computerized tomography, the physician may look at the child's spine in a 3-d fashion. Looking at the curves on each plane, assists the physician with the surgical plan.



# Staged Surgical Plan

- First procedure was done using the minimally invasive VATS system (Video Assisted Thoracoscopy ) to remove her discs.
- Posterior approach was performed to loosen her spine.
- Halo Traction
- During the Second Operation, correction was obtained by using hooks, rods, and screws to stabilize her spine while the fusion process began.

# Interoperative Positioning



Intra operative positioning.  
shows the magnitude of.  
the patient's kyphosis.

# Thoracoscopic Release



These are intra operative pictures of the VATS (Video Assisted Thoracoscopy) in use. Through a small incision, a camera is inserted into the patient's upper chest and each disc is removed allowing her spine to be "loosened". In the right hand picture, you can see Dr. Pashman viewing the spine as the discs are removed.

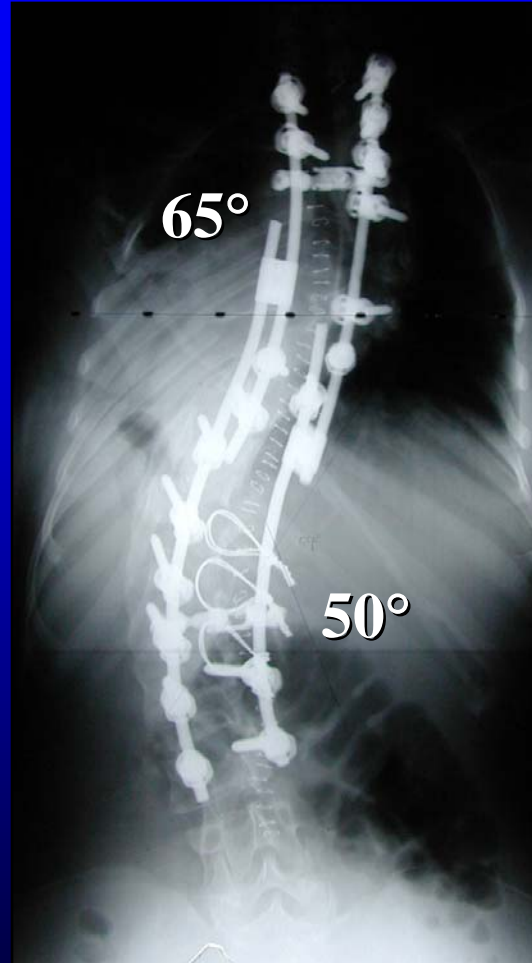
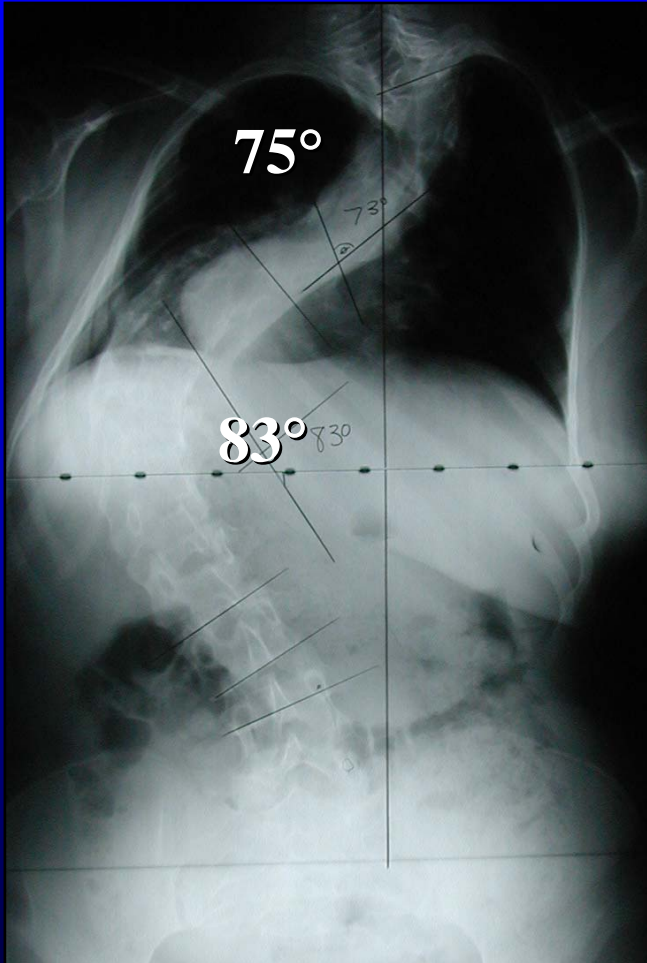
# Halo Traction



The patient was placed in halo traction for 10 days to slowly stretch her spine without damaging the nerves.

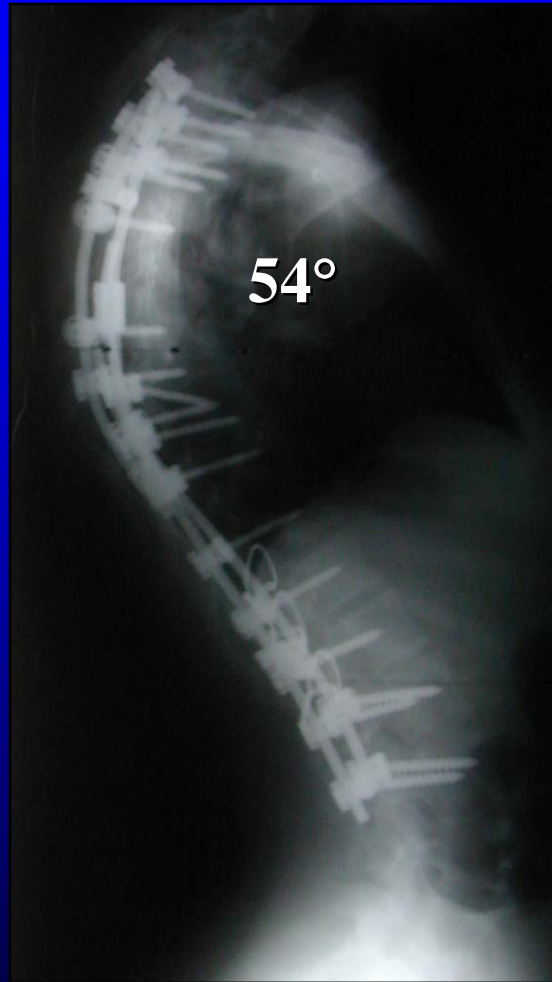
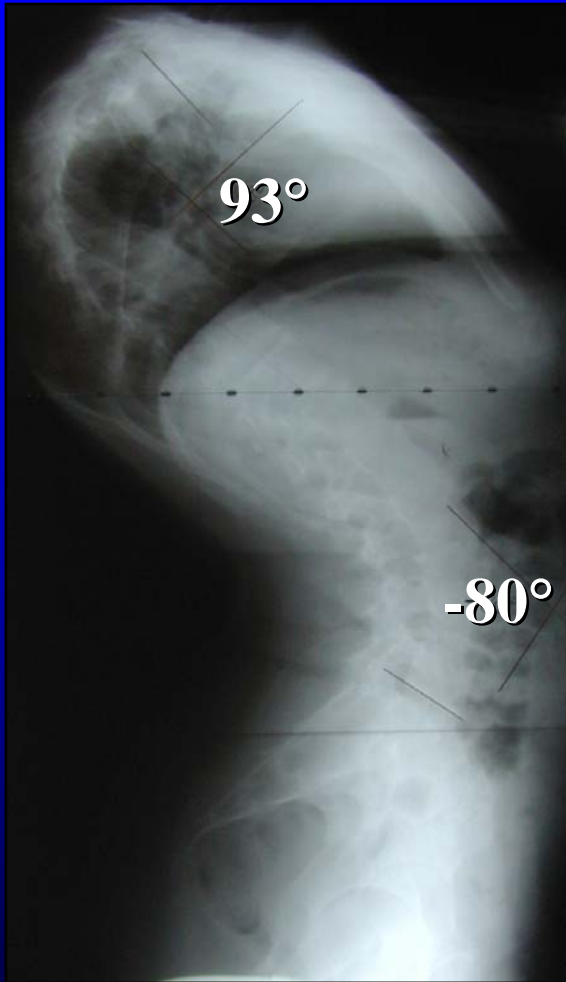
Although this was a painful process, the patient remained in good spirits.

# Pre-Post AP X-Ray Comparison



Note the marked improvement in the curvature of the spine. A  $33^\circ$  correction (40%) was obtained.

# Pre-Post Lateral X-Ray Comparison



As you can see, the “hump” (kyphosis) was greatly reduced with this procedure, leaving the child with a restored self image.

A  $39^\circ$  correction (42%) was obtained.

# Pre-Post Operative Comparison



The patient had no post-operative complications, and was released from the hospital seven days after surgery. As a protective measure while traveling, she wore a brace for 1 month following surgery.

# Acknowledgements

Thanks to the generosity of many people, this child was able to come to Los Angeles for treatment. We would like to thank Univision Television, Mirna Ramos, and Jenni Murphy for bringing this case to our attention. We would like to thank Healing the Children, who has contracted with the hospital to provide services at cost. Most of all, we would like to thank Mr. and Mrs. Donald Long for their generous donation on this patient's behalf.

We would also like to thank the following people for donating their time and services to caring for this patient: Department of Pediatrics, Pediatric Intensive Care Unit, Dr. Lee Miller, Dr. Julian Gold, Dr. Barry Pressman, Dr. Dawn Eliashev, Pam Dimes, and Mary Hernandez.