

A Bad Complication I have  
had-seen-participated in-  
struggled through!

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# Disclosures:

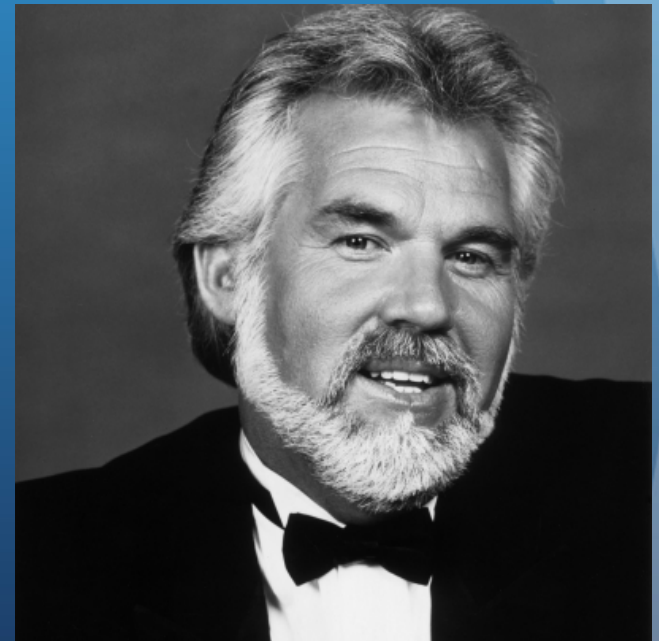
- Committee appointments: Scoliosis Research Society, Abbott Northwestern Hospital
- Royalties - Medtronic
- Research or Institutional Support - Depuy, a Johnson and Johnson company, Medtronic, Nuvasive,

# Complications EOS

- Common, multiple
- Challenging clinical scenarios
- Frequently there are no “good” options
  - No return or development to “normal”
- Focus on realistic GOALS
- Optimized long term function with minimizing risks and adverse events.

“You got to know when to hold 'em,  
know when to fold 'em,.”

- Kenny Rogers - The Gambler

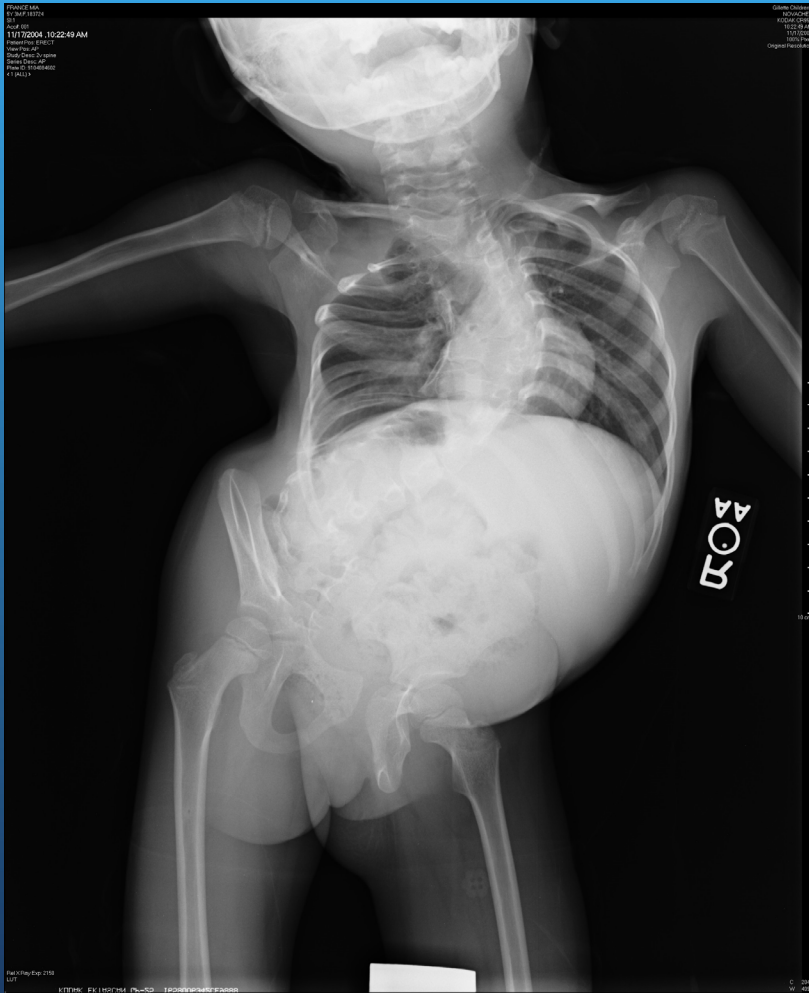




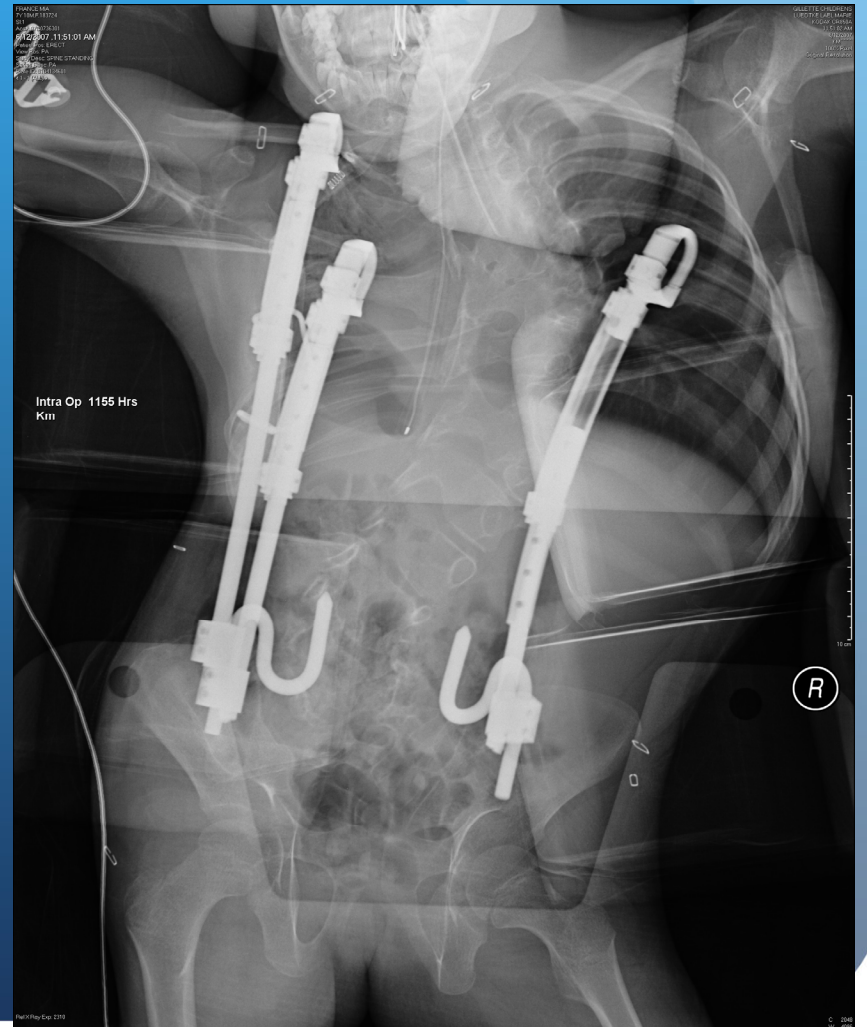
# Severe Mixed Anomalies Progressive with severe LS kyphosis

- First presentation to Gillette age 5
  - Adopted from China, Known multiple anomalies
  - Multiple mixed congenital anomalies, dysraphism, diplomyelia, tethered cord, multiple rib fusions
  - Diastematomyelia (released-Hong Kong age 3)
- Observed - no clear deformity treatment (2005)
- Progression of deformity - sent away for VEPTR placement Dec 2006 age 8

# Presentation, 5+3 female



# VEPTR age 8



## 2 weeks Post VEPTR

- Increased deformity (LS) and developed drainage from iliac sites
- Oral antibiotics started, presented back to us with exposed implants
- Malnourished !!
- Underwent I&D partial implant removal,
- Later revised and replaced pelvic fixation

# Complications - continued

- Deformity progresses (2 months later), revised (#4 in 4 months)
- Lengthened and revised 6 months later with breakdown and infection
- Removed portion of VEPTR and G tube placed for nutrition (1 yr into treatment)
- Continued breakdown of wound, chronic infection, leads to further attempts at revision (3)
- Multiple surgeons involved during course (4!)(not me!!)

# Complications - continued

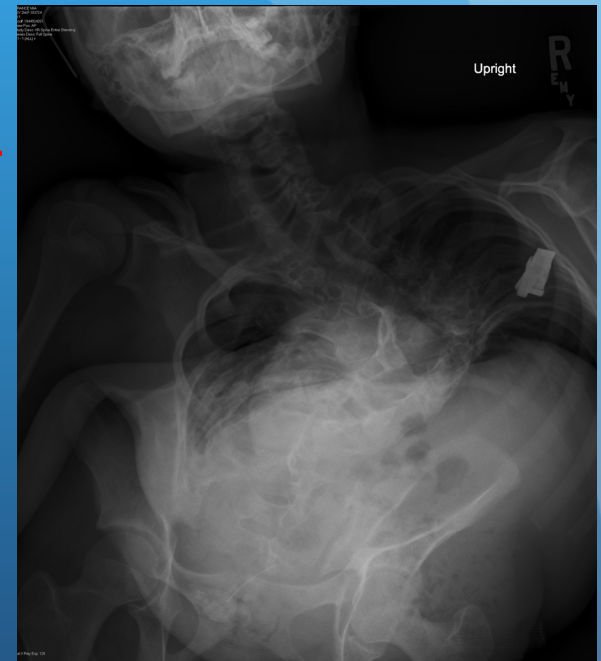
- Continues to show signs of infection along implants
- Implant removal 3 years after implantation.
  - One lengthening performed and multiple revisions (10)
- Infection found throughout!!
- Treated with IV antibiotics, VAC, closure
- Family thoroughly disgusted with challenges wanted a “time out”! Also felt Pt too “small” to do fusion!!!

# Time out!!

- Family thoroughly disgusted with challenges wanted a “time out”!
- Also felt Pt too “small” to do fusion!!!
  - Message emphasized early in care!

# Child desires improvement in deformity!

- Age 12 (2 years later)
- Child desires to be made more **normal**
- Using **WC** for community ambulation
- Mild motor deficit (stable)
- SOB with walking
- Denies significant pain
- Nutrition thought to be improved - stable





# Severe TIS, neuro (mostly) intact,



# Treatment options multiple caregiver options obtained Summary:

- Severe respiratory limitation - short distance ambulation only
  - WC for school - FVC 27% predicted on arm span
- Options of do nothing, limited stabilization, posterior releases/osteotomies, VCR discussed
- Mother declines VCR - desires “safer” approach
- Waits another 9 months to decide

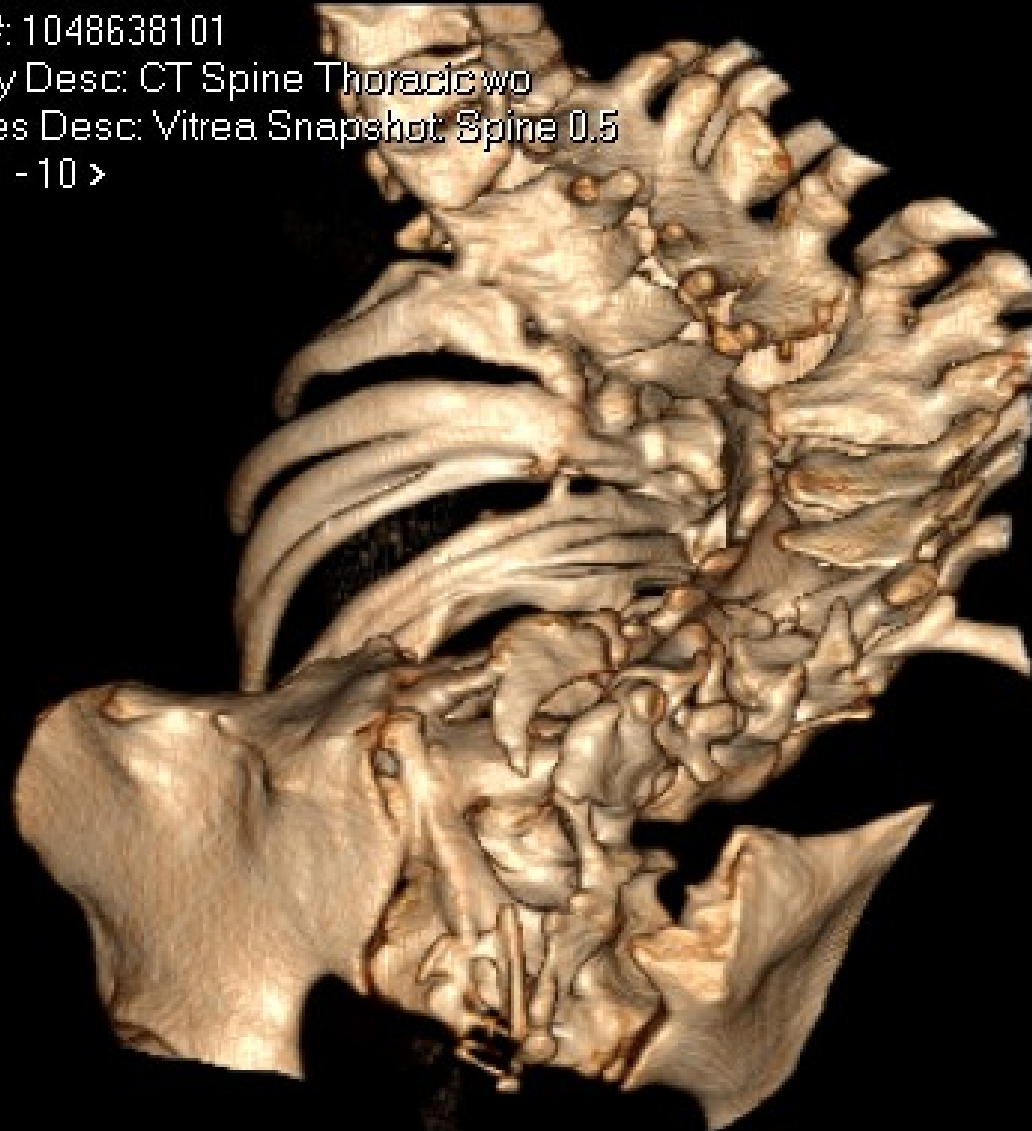
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# Staged treatment

## ☞ Halo traction - 2 weeks

- Little improvement (axilla - pelvis increased from one finger to 3 fingers)

## ☞ Posterior rib expansion and distraction and osteotomies of LS area

- Distraction rods C7 lamina to lowest rib

## ☞ Continued traction 2 weeks

- Further spine osteotomies and fixation (CT nav assisted) fusion C7 -sacrum



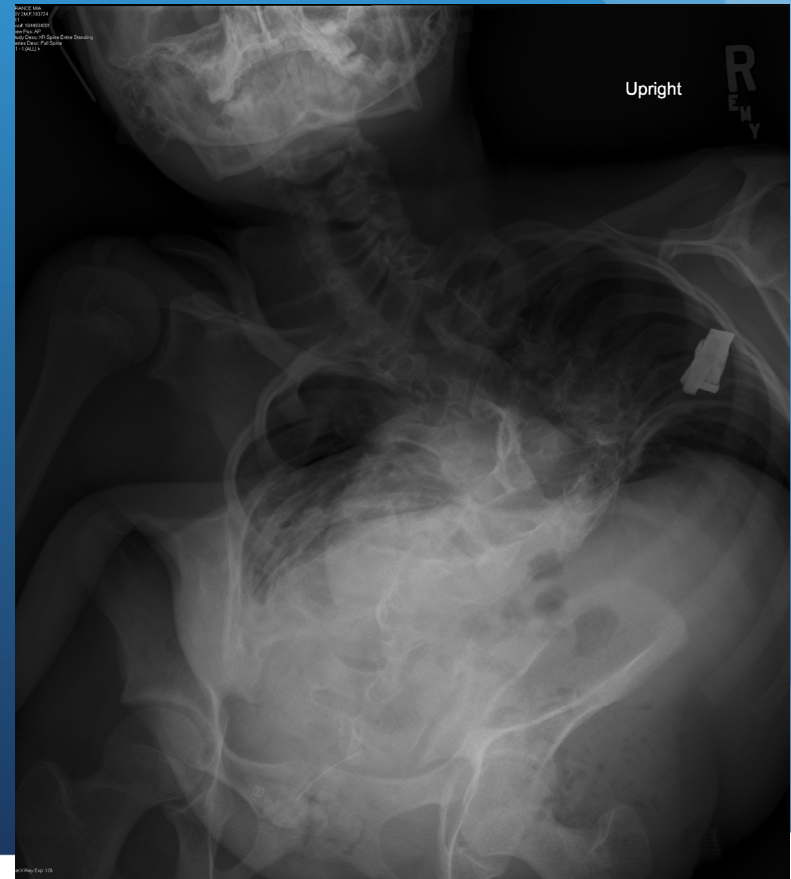
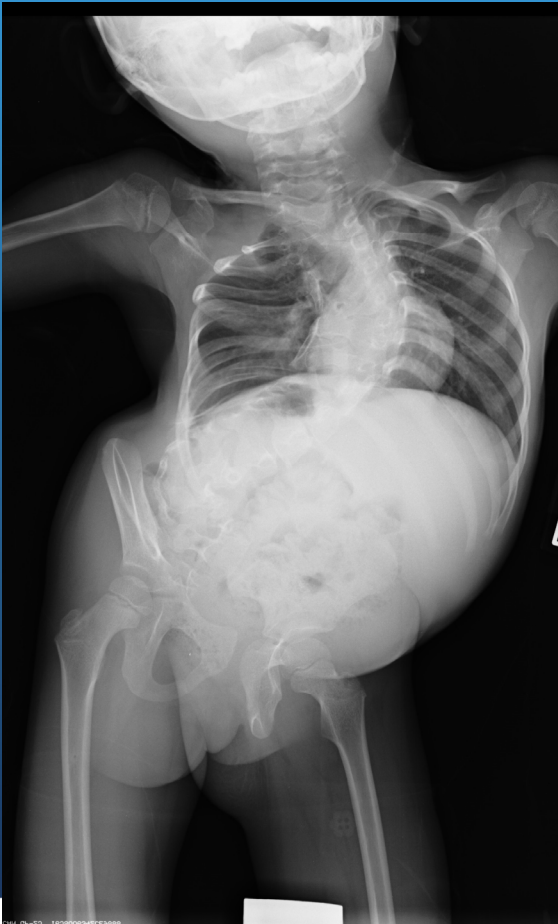


Might have been better if fused early  
- OR???

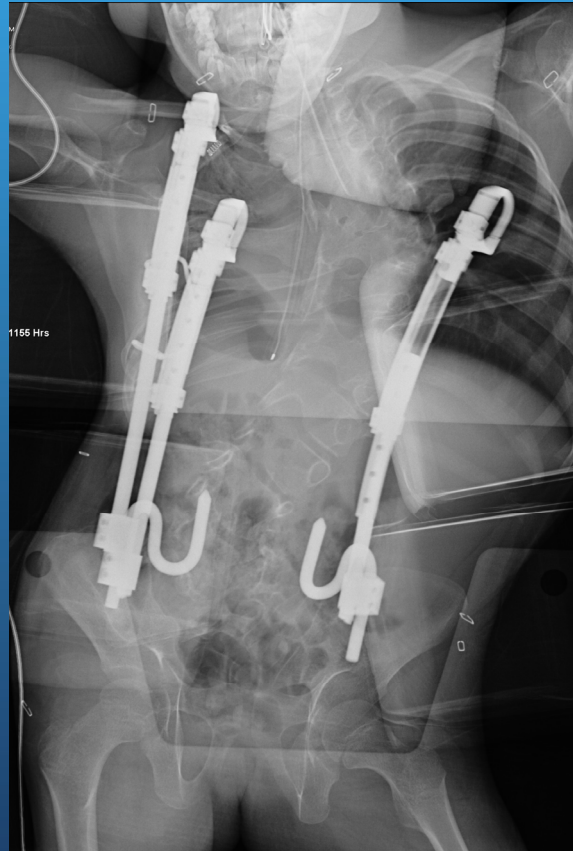
• 7+6

vs.

13+6

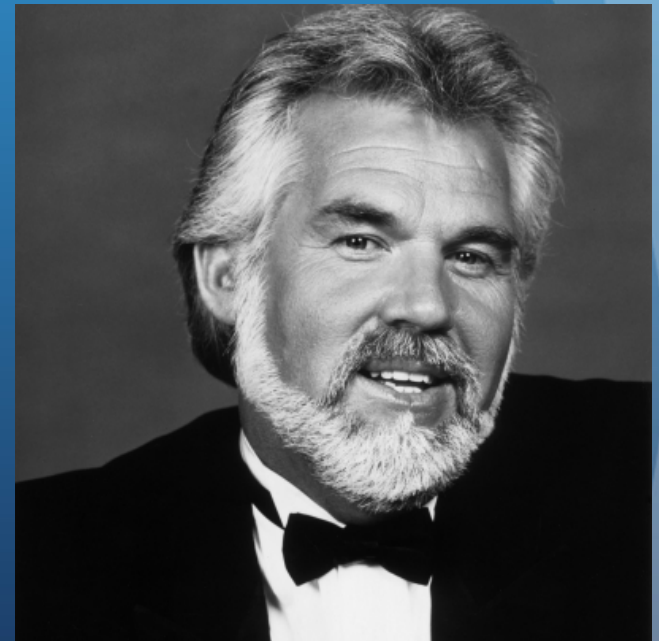


# Unable to make chicken salad!!



“You got to know when to hold 'em,  
know when to fold 'em”

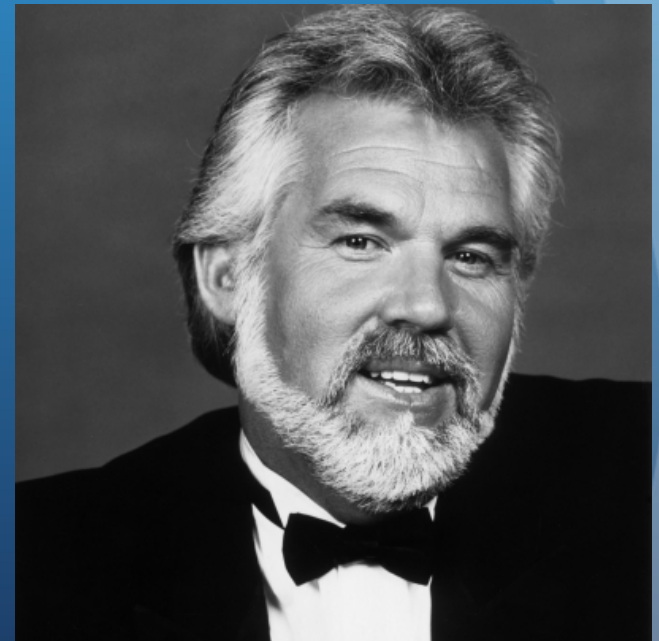
- Kenny Rogers - The Gambler





“You got to know when to hold 'em,  
know when to fold 'em,  
Know when to walk away,  
know when to **run**.”

- Kenny Rogers - The Gambler



# Considerations:

- Nutrition critical to minimize wound issues
- Better end result might have been obtained fused initially or early on after complications started to become overwhelming
- Kyphosis (LS congenital/dysplastic) is most difficult deformity to manage
- Need to balance the message that growth is most important when a deformity is not being controlled
- Family compliance is critical to success



# Thank you

Don't shoot the messenger!