

Myth or Truth:

**“Growing Rods have
Too Many Complications”**

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Nov. 20, 2009. ICEOS Istanbul

Too many;

Does it mean

Too many kinds ?

or

Rate is high ?

**Growing rods have too many
complications.**

Complication rate is high; Looks True.

The question is: “ Is it too high ?”

or,

“It is high, but we have not other choice.”

or, , but we can overcome.

or, , but it is acceptable.

Akbarnia. B., et al: Dual Growing Rod Technique for the Treatment of Progressive Early-Onset Scoliosis

Spine Vol. 30, Number 17S, pp 546-557, 2005

23 cases; 189 procedures

Complication: 11/23 cases (47.8%) 13/189 (6.9%)

Dislodgement	3
Loosening	0
Infection	6
Rod breakage	2
Neuro.	0
Crankshaft	1
Junctional Kyphosis	1

Watanabe et al , JSS Meeting 2009:

11 cases, Number of procedure (?)

Complications; 5 cases(45%)

Dislodgement of upper foundation	5
Loosening of lower foundation	1
Infection	3
Rod breakage	1
Neuro.	0

Suzuki T., Uno K. et al, JSS Meeting 2009:

37 cases, 245 procedures

Complications: 56/245 (22.8%)

Dislodgement	21
Loosening	11
Infection	8
Rod breakage	15
Neuro.	1

Suzuki, Kohno, 2009

61 cases, 250 procedures

Complications: 18/61 (29.5%) 33/250 (13.2%)

Dislodgement	4	
Loosening	0	
Infection	3	
junctional kyphosis:	3	
<hr/>		4%
Rod breakage	23 (70%)	
Neuro.	0	

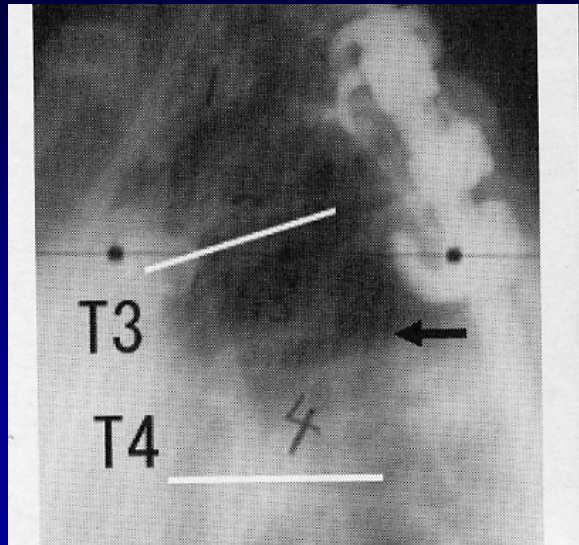
Other than Growing rods. 261

Complications: 24/261 (9.2%)

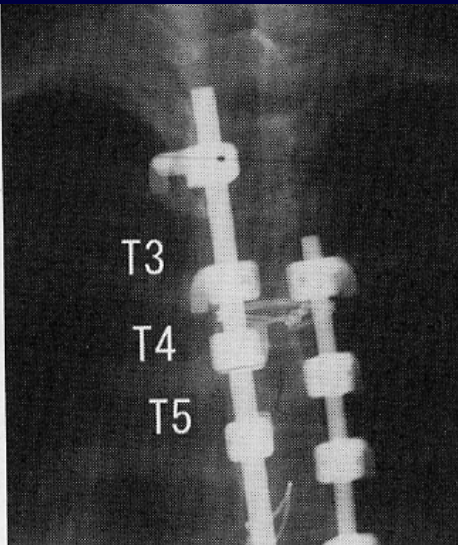
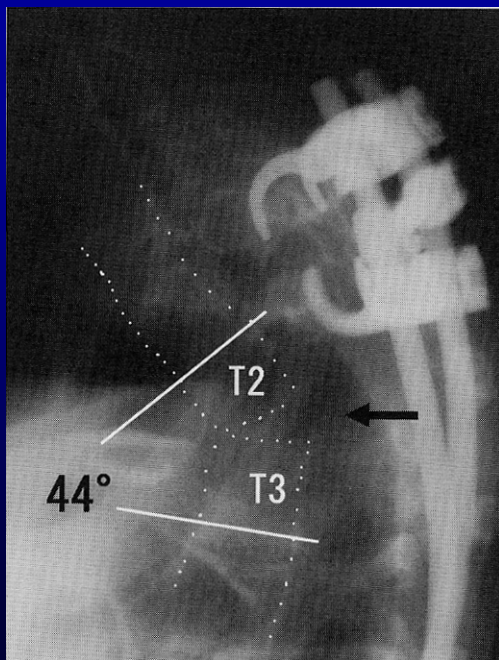
Facts:

	<u>/cases</u>	<u>/procedures</u>
Complication rate	29.5%	13.2%
Infection	4.9%	1.2%
Implant dislodgement	6.6%	1.2%
Rod breakage		9.2%

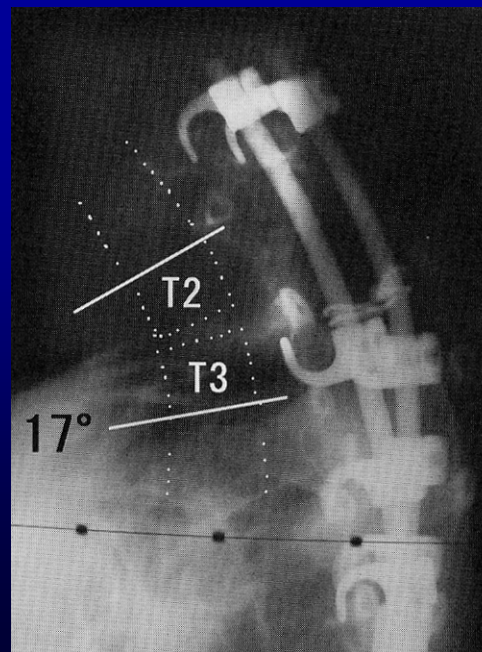
High-T Kyphosis



Pre -final



Post-final



Rod Breakage

Protruded	6 (26%)
Not protruded	17 (74%)

Don't we have solutions ?

A. Learning curve problems.

---- can be solved by experience.

B. Rod breakage. ----- inevitable

Rod breaks without bone grafting.

Use larger rod ?

or

Say “ So what ?”

**If you don't accept rod breakage,
then don't do instrumentation without fusion
such as growing rods**

**Let patients and family understand that
“ The rod breakage is not a big deal.”.**



Benefits

Risks

Parachute use to prevent death and major trauma related to gravitational challenge: systematic review of randomised controlled trials

Gordon C S Smith, Jill P Pell



BMJ VOLUME 327 20-27 DECEMBER 2003

RCT on Parachute

No RCT published.

Jump from an airplane.

Death rate is not 100%

without a parachute.

Suppose the accident rate is

50% with a parachute,

Do you jump without a parachute ?

Conclusion.

“Growing rods have
too many complications”

It is a Myth !

BUSTED !