

Clinical outcomes after the repair of full radial tear at midbody of lateral meniscus

AIS

vs

TCS

All-inside suture repair

Trans-capsular suture repair

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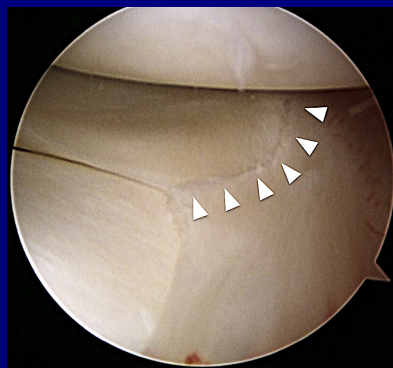
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We do not have any company affiliations
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Treatment of Radial Tear at Midbody of Lateral Meniscus (RTMLM) in stable knee



Partial
meniscectomy

→ [Contact pressure ↑
Repetitive hydrops
Functional score ↓

Nawabi DH, et al. AJSM 2014

Bedi A, et al. JBJS Am 2010

Ford KR, et al. KSSTA 2011

Could AIS or TCS repair be an alternative ?

Purpose

To compare the clinical outcomes between AIS and TCS repairs for RTMLM in young athletes

Materials

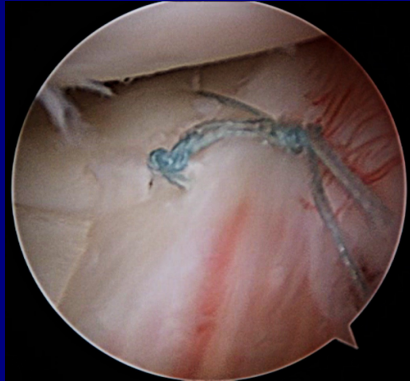
33 Athletes w/ repair of RTMLM in stable knees

	AIS	TCS (inside-out repair)
n	13	20
Age (years)	18.5 (18–22)	19.8 (15–31)
male : female	10 : 3	16 : 4

Surgical procedures

AIS

(2-0 FiberWire)



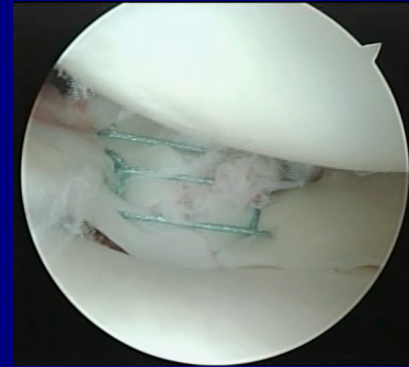
Double-horizontal
suture

Uchida R, Horibe S, Shino K et al,
Arthrosc Tech 2019

TCS

(2-0 Ethibond)

inside-out repair



Tie-grip suture

Nakata K, et al. Sports injuries, Springer. 2012
Tsuji A, Horibe S et al, JOS 2018

Rehab.

2w Knee brace

6w PWB

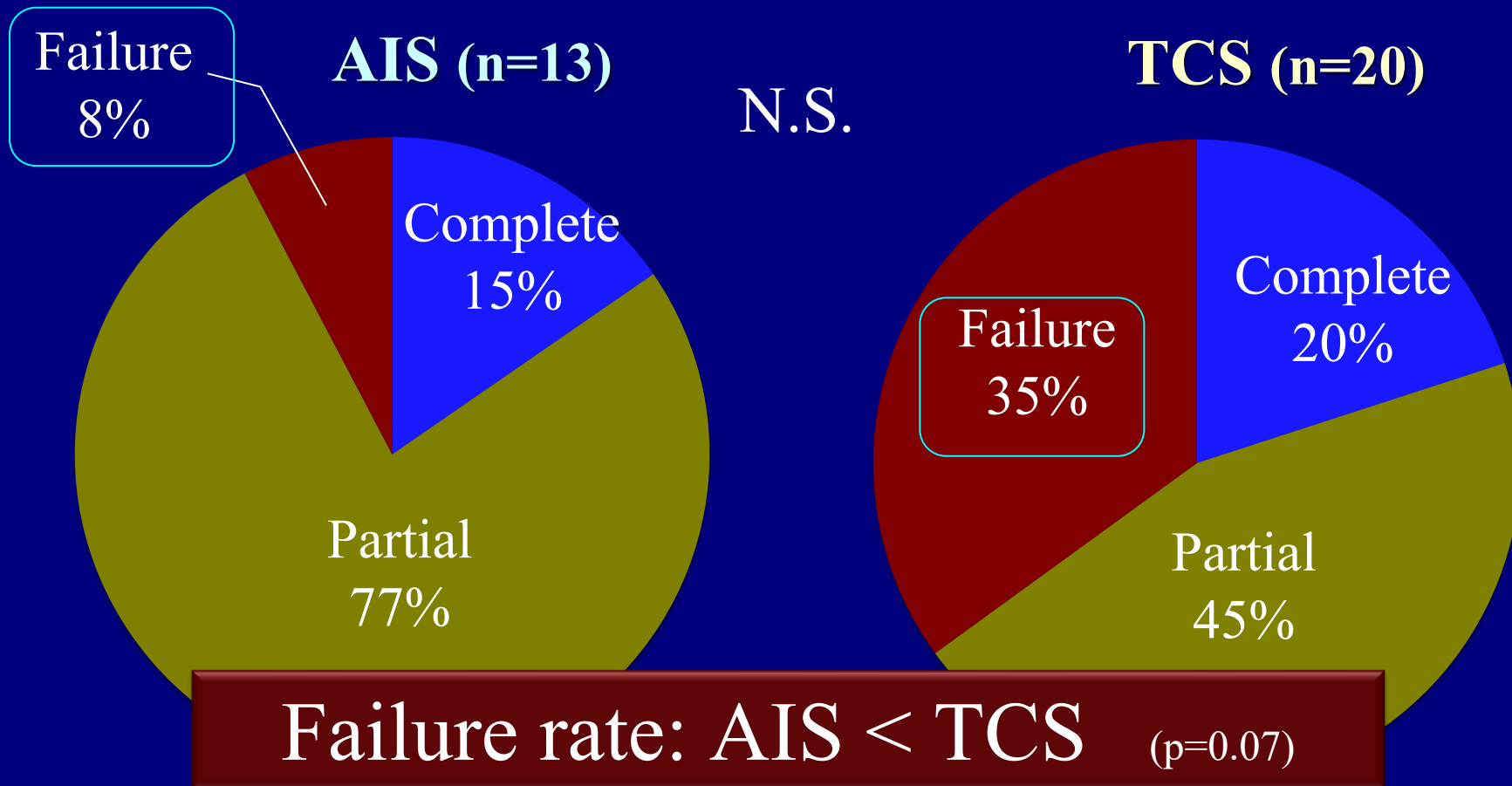
8w FWB

6m 2nd look

Return to sports

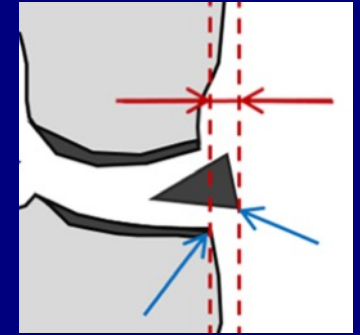
Results: Healing Status @ 2° look

-@6 mos.-



Results: Lateral extrusion

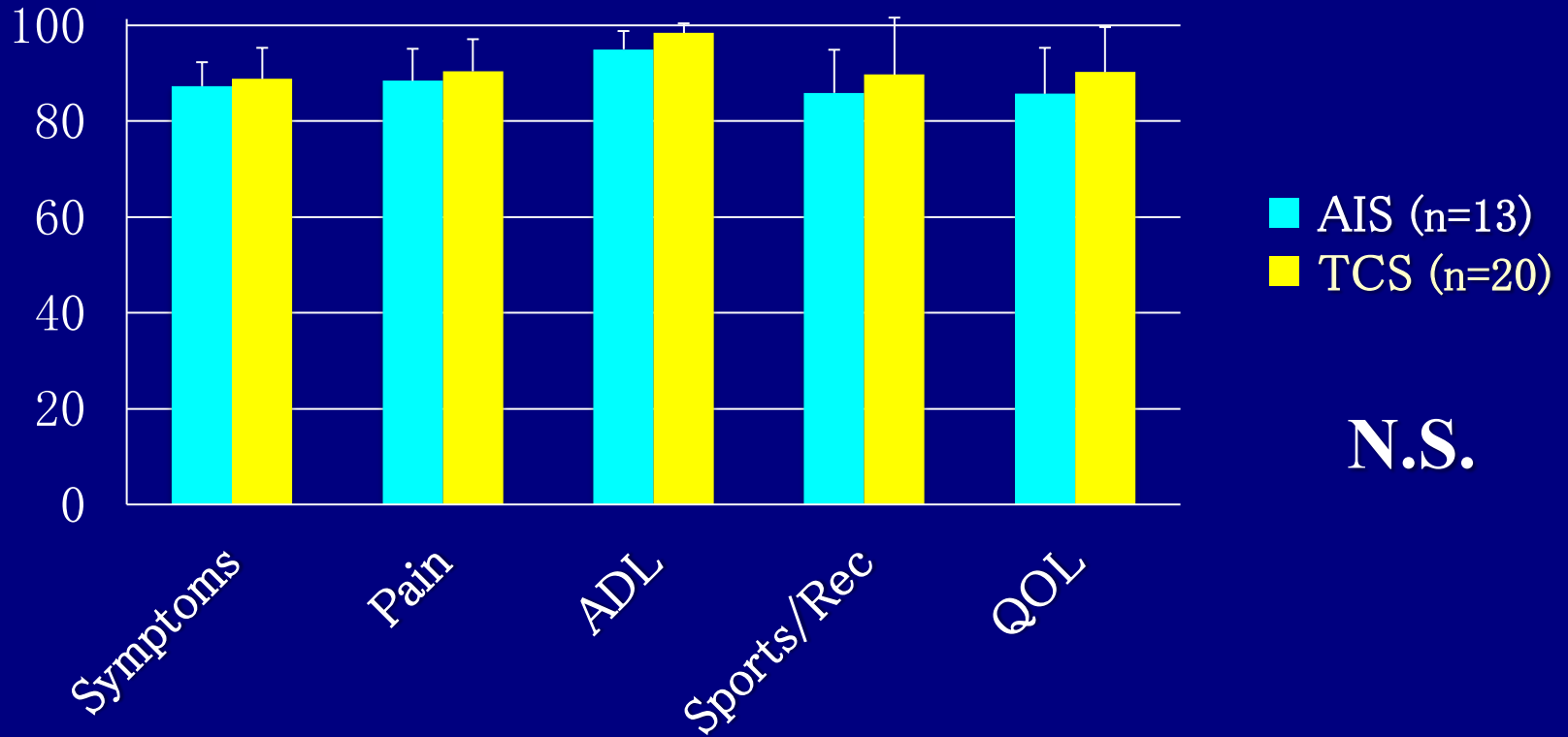
- @ 6 mos. -



	AIS (n=13)	TCS (n=20)	P value
Pre-op. (mm)	2.6 ± 1.2	2.6 ± 1.3	0.77
6 mos. (mm)	2.0 ± 1.2	3.0 ± 1.4	0.077
6 mos. - Pre-op. (mm)	-0.6 ± 1.0	0.3 ± 0.8	0.035

Results: KOOS

-@2 yrs.-



Discussion : Healing status & KOOS

Healing status

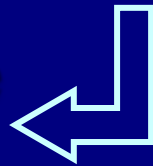
KOOS

Complete healing: 15–20%

Satisfactory results

$AIS \doteq TCS$

Failure rate
 $AIS < TCS$



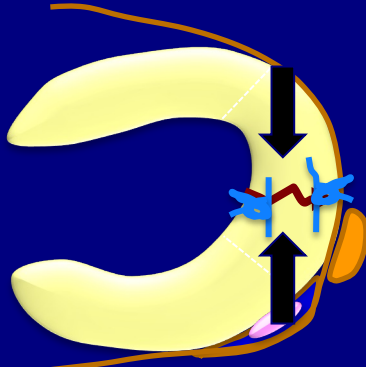
Healing↑ in vascular zone ?

Discussion: Lateral extrusion

✓ Postoperative extrusion

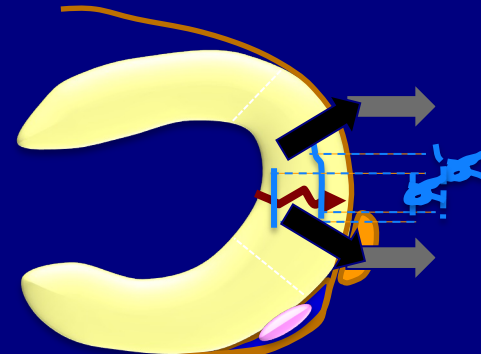
AIS < TCS

AIS



Only
compressive force

TCS



Traction to
periphery

Better for healing ?

Conclusion

- AIS and TCS repair techniques for RTMLM were comparable in providing satisfactory clinical results.
- AIS repair technique could minimize postoperative meniscal body extrusion compared with TCS repair technique, which would be better for healing in vascular zone.

References

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