



Efficacy of pectoralis major portals in modified arthroscopic Bankart-Bristow procedure

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COI Disclosure Information

Presenter: Sho YAMAUCHI

I have no financial relationships to disclose.

Introduction



✓ 2007 Arthroscopic Latarjet procedure

Laffosse L: Arthoroscopy 2007

✓ 2010 Arthroscopic Latarjet + Bankart procedure

Boileau P: Arthoroscopy 2010

✓ 2011 Modified arthroscopic Bankart-Bristow procedure

Suzuki K: Katakannsetsu 2011

➤ Coracoid fixation → Anteroinferior portal (South portal)

Laffosse L: Arthoroscopy 2007

Boileau P: Arthoroscopy 2010

Pectoralis major portal

Suzuki K: Katakannsetsu 2011

Purpose



- To investigate the efficacy of the pectoralis major portal (PMP) in modified arthroscopic Bankart-Bristow procedure

Materials

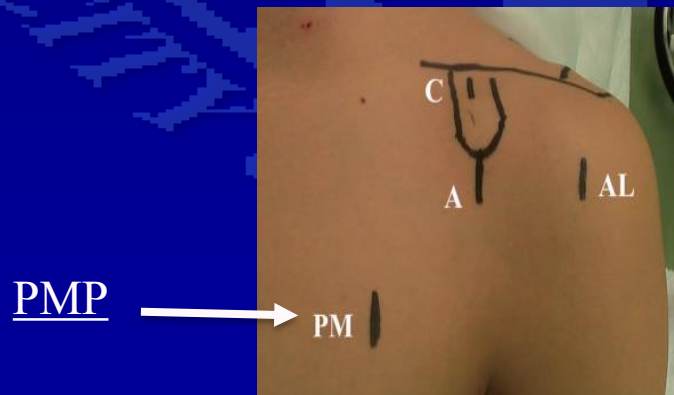


- 8 shoulders of 5 Thiel embalmed cadavers
- Exclusion criteria : GH-OA
- Age: mean 90.2 (84~96) years
- 2 males and 3 females
- 5 right and 3 left shoulders

Methods



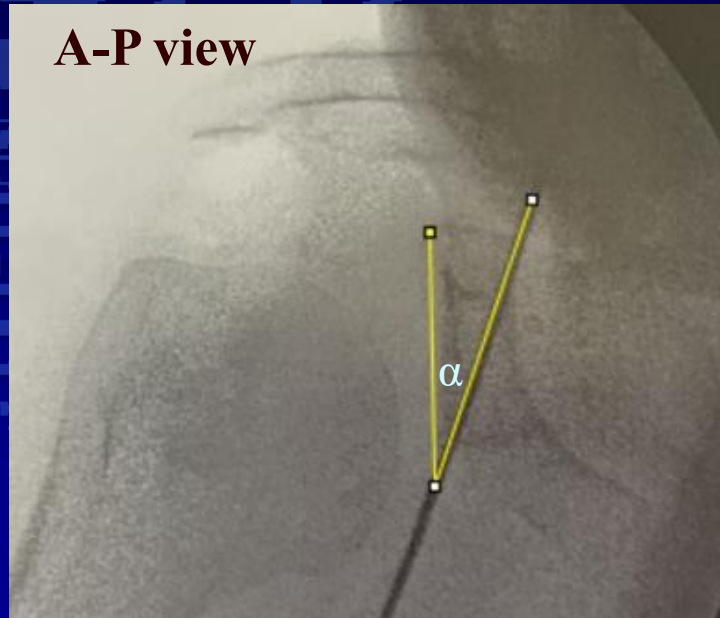
- Beach-chair position
 - Modified arthroscopic Bankart-Bristow procedure was performed
 - Guidewire was inserted at the 4 o'clock position and 5 mm medial from the glenoid edge through
-
- ✓ Pectoralis major portal (PMP) : 7 cm medial and 7 cm distal from the coracoid process
Suzuki.K:2011 katakannsetsu
 - ✓ Anteroinferior portal (AIP) : 5 cm distal from the coracoid process along the conjoint tendon
Braiden M: 2021 Arthrosc Tech



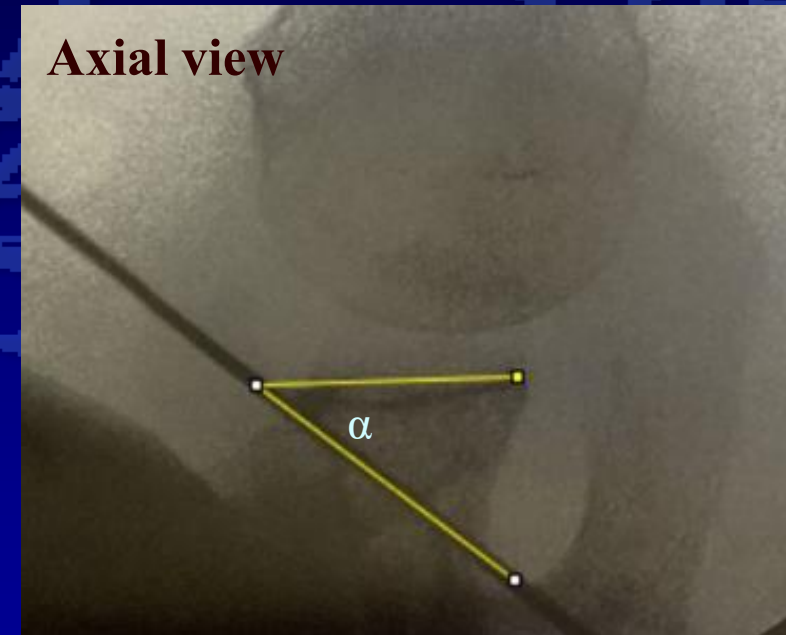
Measurement



- The angles between guidewire and glenoid articular surface were measured using ImageJ.



- ✓ True anteroposterior (A-P) view
Anterior–posterior tilt of scapula was adjusted for the coracoid base to be seen as an ellipse



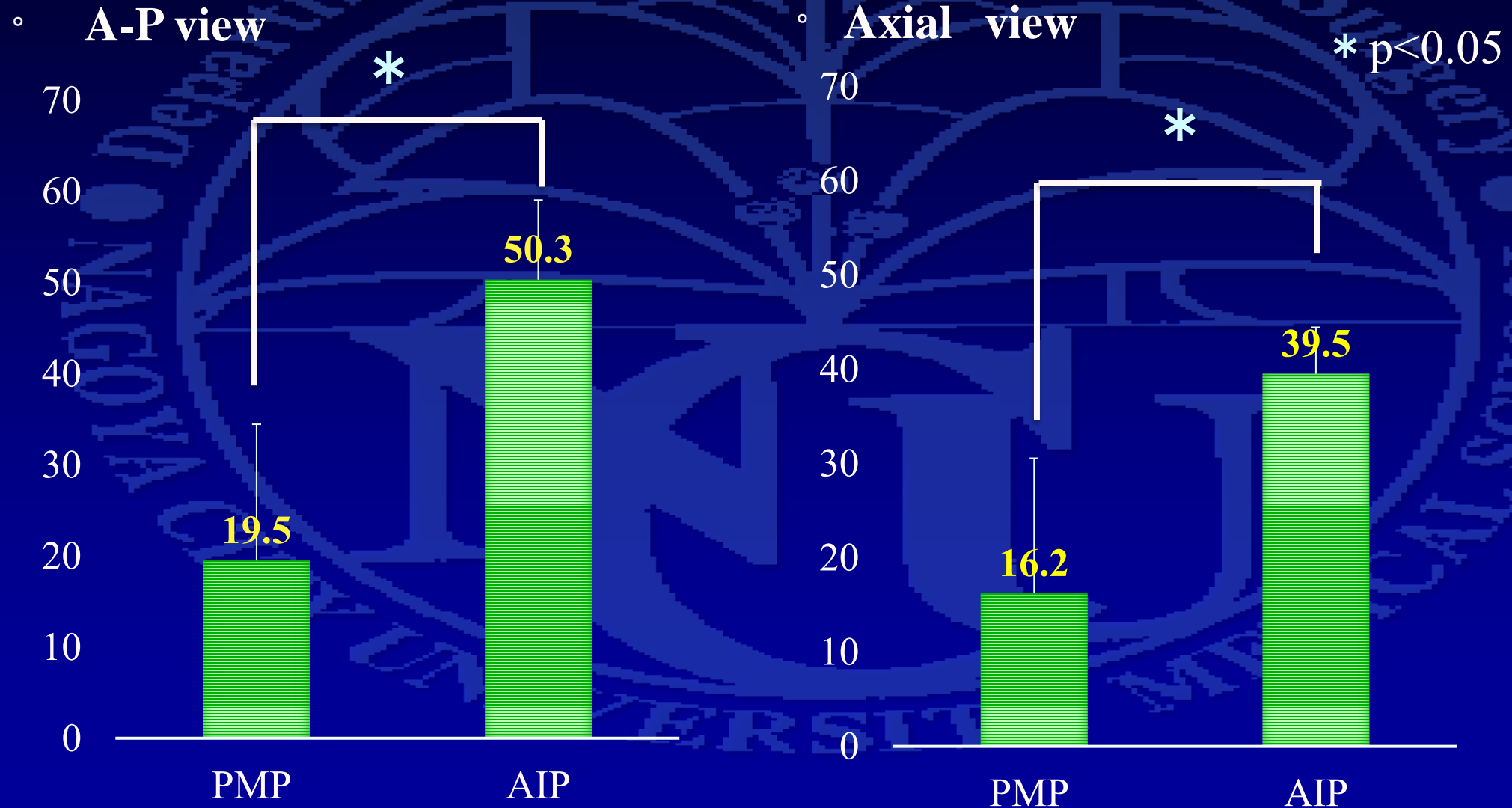
- ✓ Axial view
Superior–inferior tilt of scapula was adjusted

Statistical analysis



- ✓ Paired t test
- ✓ Statistical software R
- ✓ Statistical significance : $p < 0.05$

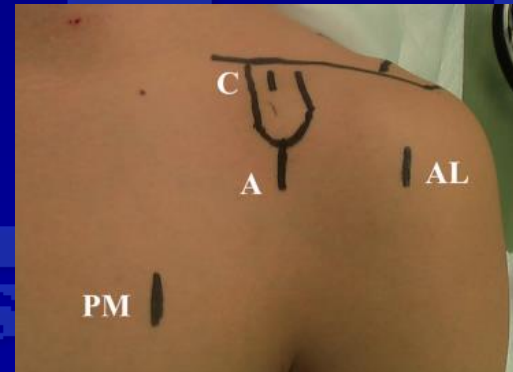
Results



Pectoralis major portal (PMP)



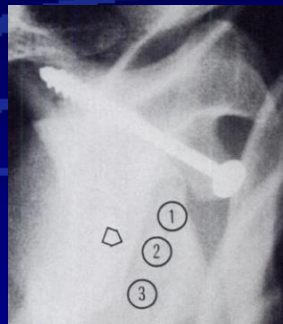
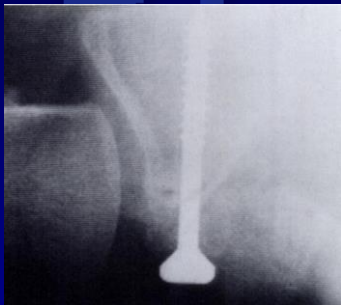
- ✓ Reported by Dr.Suzuki in 2011.
- ✓ PMP enables surgeons to insert guidewires parallel to the glenoid articular surface.



Coracoid position & Complication

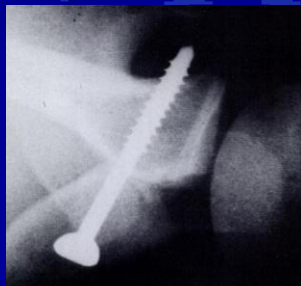


- ✓ Too medial
- ✓ Over the equator



Dislocation

- ✓ Too lateral



OA

Allain J: J Bone Joint Surg 1998

Hovellius L: J Bone Joint Surg 1983

Guidewire angle & bone union



- Lower union rate of the coracoid fragment was reported when guidewire was tilted medially more than 25 degrees.

Boileau P: Clin Orthop Relat Res 2014

- Our study

PMP	A-P view	19.5°	< 25°
	Axial view	16.2°	

PMP has an advantage for coracoid bone union

Conclusions



- PMP enables surgeons to insert guidewires in smaller angles to the glenoid articular surface.
- In terms of the coracoid fragment union, PMP is useful in modified arthroscopic Bankart-Bristow procedure.