

# The influence of FAI on Sacroiliac joint



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# Disclosure

**Moriyuki Noguchi , MD**

**I have no financial relationships for  
disclose**

# Background

There are few reports about the relationship between FAI and sacroiliac joint(SIJ) disorder. We reserched about the frequency of occurrence of osteoarthritis(OA) of SIJ complicated with FAI and the change of lumbo-pelvic motion before and after FAI correction surgeries by functional Xray imaging .



# Methods1

	① FAI cases (n=53)	② Control cases (n=53)
sex	Male 29, Female 24	Male 27, Female 26
age	43.5(13-73)	40.8(22-50)

① : 53 cases diagnosed FAI(March 2014 - December 2016)

② : 53 cases who had CT

SIJ OA classification  
by CT axial image

## Grade of sacroiliac joint OA

A : no OA

B - : mild OA(exist at least one of mild bone spur and/or osteosclerosis and/or bone cyst around the sacroiliac joint)

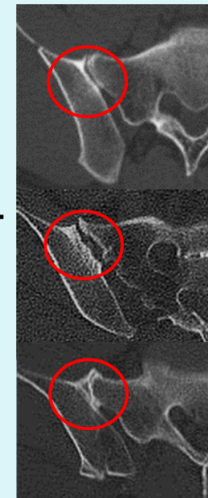
B+ : severe OA(exist sever osteophyte around the sacroiliac join, non bridging)

C: bony ankylosis or subluxation of sacroiliac joint

B-

B+

C

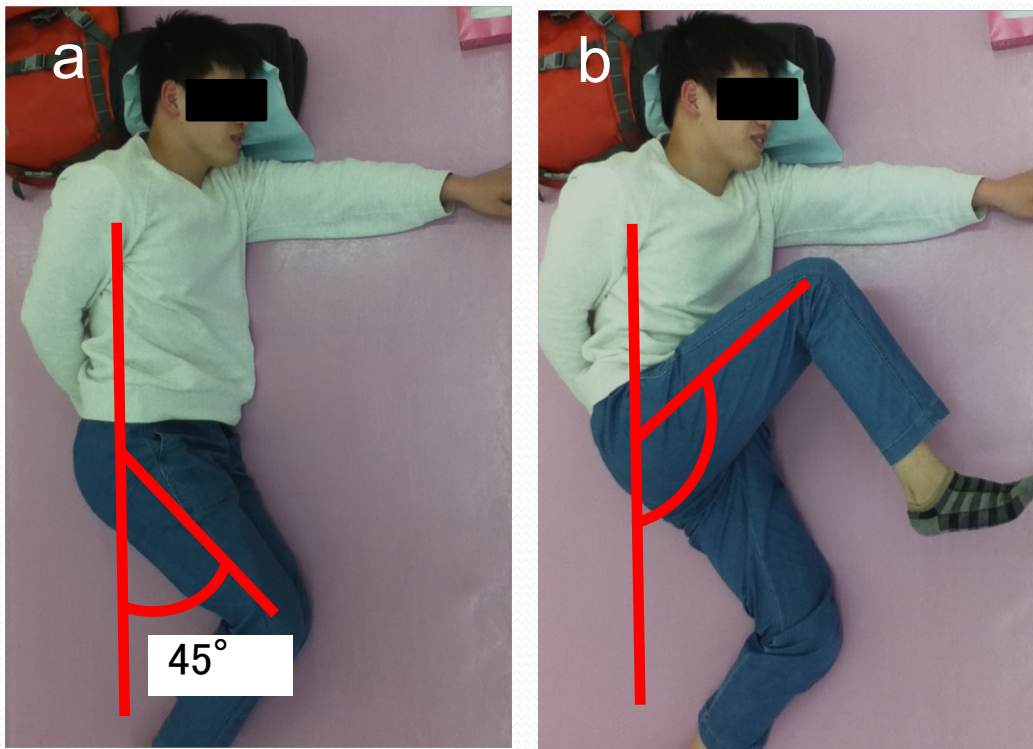




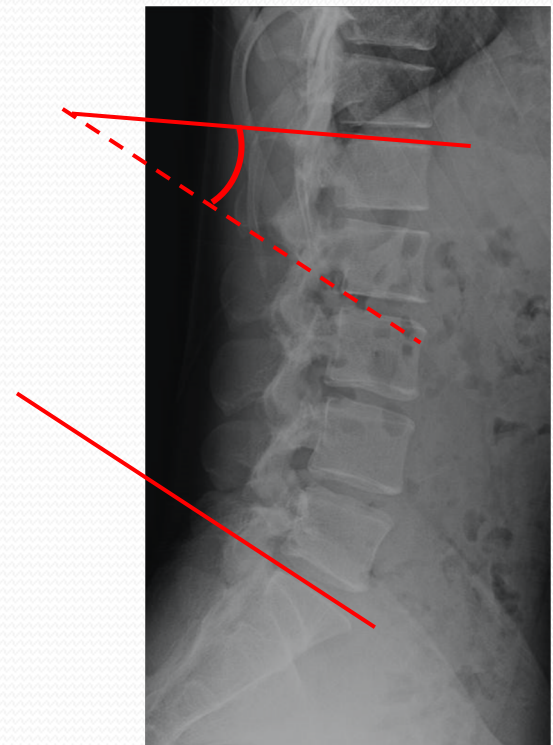
# Methods2

Investigation of Lumbo-pelvic motion change before and after FAI correction surgeries by lumbo-pelvic functional Xray imaging.

(① Before surgery, ② 5months after surgery)



- a : Start position(lateral, 45° hip flexion)
- b : End position: (maximum active hip flexion)



- Change of the angle made by L1 upper line and S1 upper line

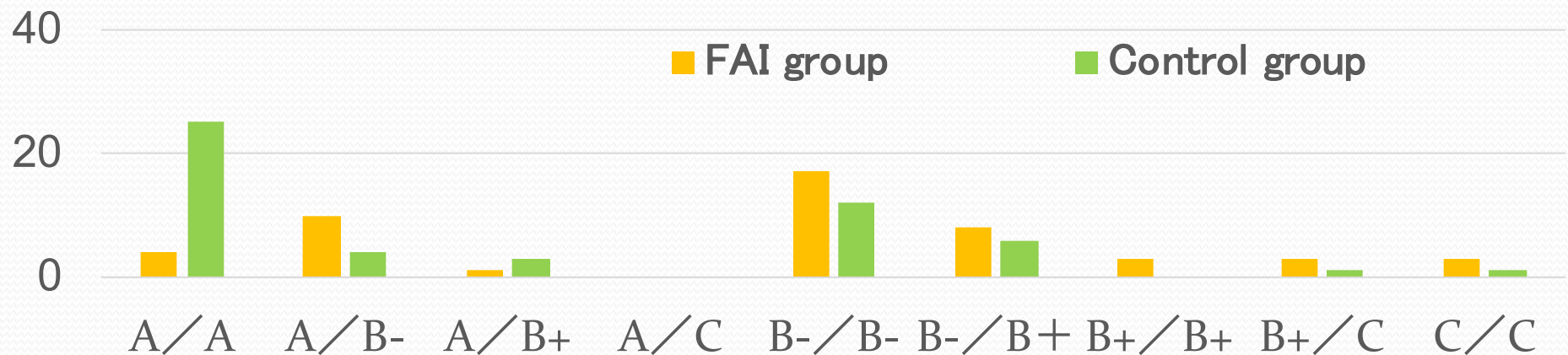
# Conclusion1

## ①Frequency of occurrence of SIJ OA

	FAI group	Control group	P value (※1)
	53cases (M:29、F24)	53cases (M:27、F26)	
Ave.age	42.8y(13-64)	40.8y(22-50)	0.17
Sacroiliac Joint OA	49/53cases ( <b>93%</b> )	28/53cases ( <b>52%</b> )	0.014

※1 : Student  
t test

## ②Frequency of SIJ OA for each OA grade



# Conclusion2

③ Frequency of sever SIJ OA side complicated with FAI match hip pain side or sever painful side in bilateral hip pain cases (26 / 53 cases)

	The number of cases sever sacroiliac OA side match hip pain side or sever painful side of bilateral hip pain cases in FAI cases
A/B-	9 / 10
A/B+	1 / 1
B-/B+	7 / 8
B-/C	3 / 4
B+/C	3 / 3
Total	23 / 26 cases (88.5% )

④ Frequency of hip pain in FAI joints complicated with bilateral same grade SIJ OA (23 / 53 cases)

	Hip pain / FAI joints
B- / B-	21/32 joints(66%)
B+ / B+	3/3 joints(100%)
C / C	9/10 joints(90%)



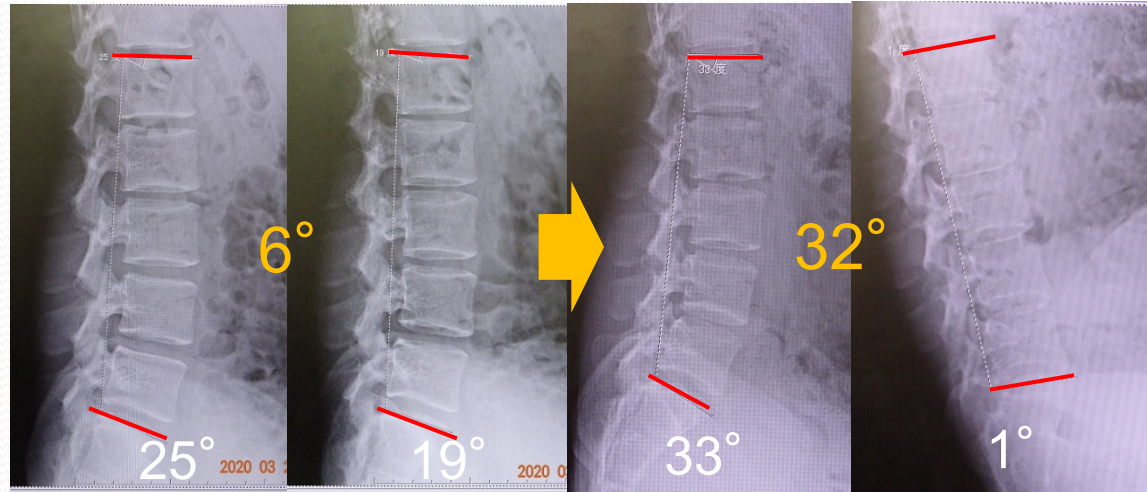
# Conclusion3 ( ⑤Lumbo-pelvic motion before and after FAI correction surgeries )

Change of the angle made by L1 upper line and S1 upper line

## Case1: 19y male, Mixed FAI

Preope.

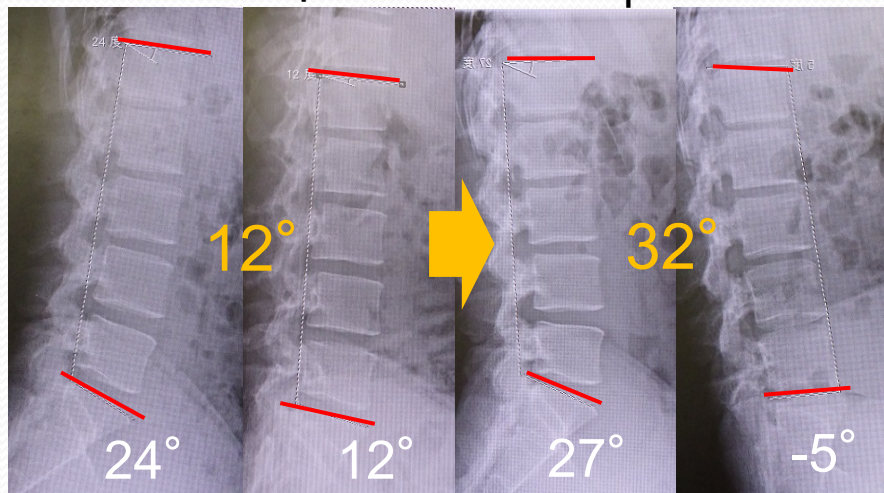
Postope.5M



## Case2: 21y male, Mixed FAI

Preope.

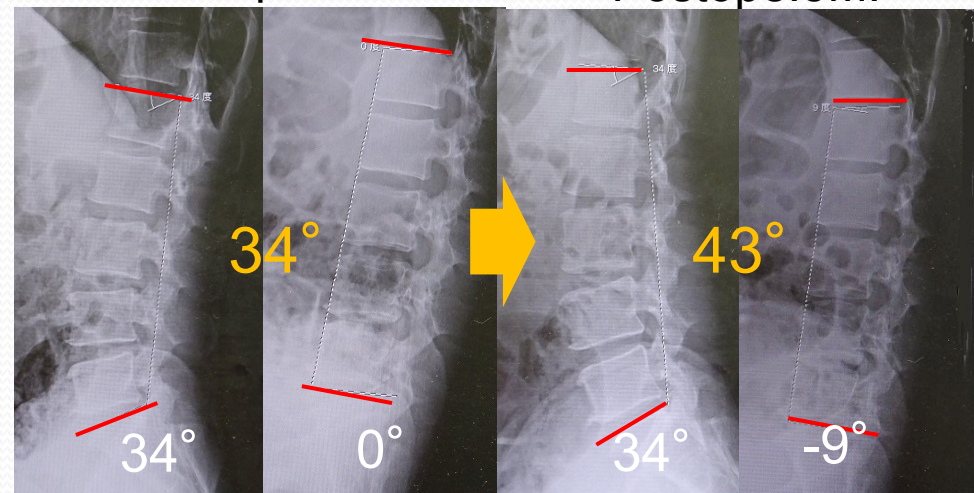
Postope.5M.



## Case3: 37y male, Mixed FAI

Preope.

Postope.5M.



# Discussion

- ① ➡ ● SIJ OA was more in FAI group than control group significantly (FAI:93%>control:53%).
- ② ➡ ● Sever SIJ OA was more frequent in FAI group than control group.
- ③ ➡ ● Frequency of sever SIJ OA side complicated with FAI match hip pain side or sever painful side in bilateral hip pain cases was 88.5%(23/26cases).
- ④ ➡ ● Frequency of hip pain in FAI joints complicated with bilateral same grade sacroiliac joint OA was more in sever SIJ OA cases than mild SIJ OA cases.
- ⑤ ➡ ● Lumbo-pelvic motion got better after FAI correction surgeries for Mixed type FAI cases.