

kissing :

1

. . .

: Kissing (ACL) kissing

: 323 MRI . Kissing (44) kissing (279) ,

chi - square test .

: Kissing 44 (100%) ACL . Kissing 279 78 (28%) ACL . Kissing 10 (23%) (MCL) , (LCL), (PCL) . Kissing 17 (6%) MCL , 5 (2%) LCL, 10 (4%) PCL . Kissing , 22 (50%) 19 (43%) . Kissing 128 (46%) 128 (46%) . Kissing 17 (77%) 가, 19 . Kissing 13 (68%) 가 . Kissing , 128 97 (76%) 가, 128 60 (47%) 가 (p< 0.05), 가 (p> 0.05). : Kissing ACL , MCL . Kissing .

(magnetic resonance (4, 5). imaging, MRI) (bone contusion) kissing (occult fracture), (bone bruise), (microtrabecular fracture) ,

(1, 2). (6, 7). kissing

(3) , MRI

가 . MRI kissing MRI

kissing MRI

,

1995 1 1998 9
MRI 316
. 7 323
(8).
646 4 71
(31.4) , 가 229 , 가 87 . MRI
48.9
가
1.5 - T Magnetom Vision (Siemens, Erlangen, Germany)
10 °
MRI
T2 (3000 - 3500/16,
98/5/2[TR/effective TE/ETL/NEX])
(double - echo steady state, DESS)
(25.4/9[TR/TE]; flip angle, 35 °) T2
FOV 128 - 140 × 160 - 170, 170 - 190 ×
256, 4 mm, 0.8 mm ,
FOV 120 × 160, 170 - 190 × 256, 4 mm,
0.4mm .
FOV 120 - 160 × 160 - 170, 154 - 192 × 256,
1.4 mm, 0 mm, 64 . 199
(3)
CSE T1
(900/20[TR/TE]) 가 , FOV 128 - 140 × 160 -
170, 154 - 180 × 256, 4 mm, 0.8
mm .
가
MRI . MRI kissing
가
(4, 5).

Table 1. Results of MR Imaging with Arthroscopic Correlation for ACL Tear in a Group with Kissing Contusion (group I) and Group without Kissing Contusion (group II)

	Group I (n = 44)	Group II (n = 279)	Total (n = 323)
ACL tear (+)	44	78	122
ACL tear (-)	0	201	201

Table 2. Results of MR Imaging for MCL Tear in a Group I and Group II

	Group I (n = 44)	Group II (n = 279)	Total (n = 323)
MCL tear (+)	10	17	27
MCL tear (-)	34	262	296

(9, 10).
323 kissing
(group I, n=44) kissing (group
II, n=279)
MRI
가
chi-square test
Kissing I (100%)
, kissing II
78 (28%) (Table
1). 가
가 . Kissing
, 36%, 100% kissing
I 10 (23%) , II 17 (6%)
가 , 가
(Table 2). I
0 , II 5 (2%), 10 (4%) 가 .
I 22 (50%) , II
128 (46%) 가 , 가

Table 3. Results of MR Imaging with Arthroscopic Correlation for Meniscal Tears in a Group I and Group II

	Group I (n = 44)		Group II (n = 279)		Total (n = 323)	
	MM	LM	MM	LM	MM	LM
Tear (+)	22	19	128	128	150	147
Tear (-)	22	25	151	151	173	176

MM : medial meniscus
LM : lateral meniscus

Table 4. Location of Meniscal Tears in a Group I and Group II

	Group I		Group II		Total	
	MM	LM	MM	LM	MM	LM
Anterior horn	0	1	5	23	5	24
Body	2	3	5	24	7	27
Posterior horn	17	13	97	60	114	73
Other	3	2	21	21	22	23
Number	22	19	128	128	150	147

128 (46%) 가 ,
(Table 3) (Fig. 1).
97 (76%) 가 ,
13 (68%) , II 60 (47%) 가
(Table 4).
($p < 0.05$),
가 ($p > 0.05$).
MRI
(8).
MRI
(4, 5, 17, 18).
Kissing
(anterolateral rotary subluxation)
(anteriorly subluxation) (5,
17, 18). Kissing
(pivot shift phenomenon)
(valgus stress) (internal rotational force) 가
가
(reduction) 가
MRI
(4, 5, 17, 18).
MRI
(8).
, Mink Deutsch (4)
,
(11).
, Rosen (19)
MRI
(3)

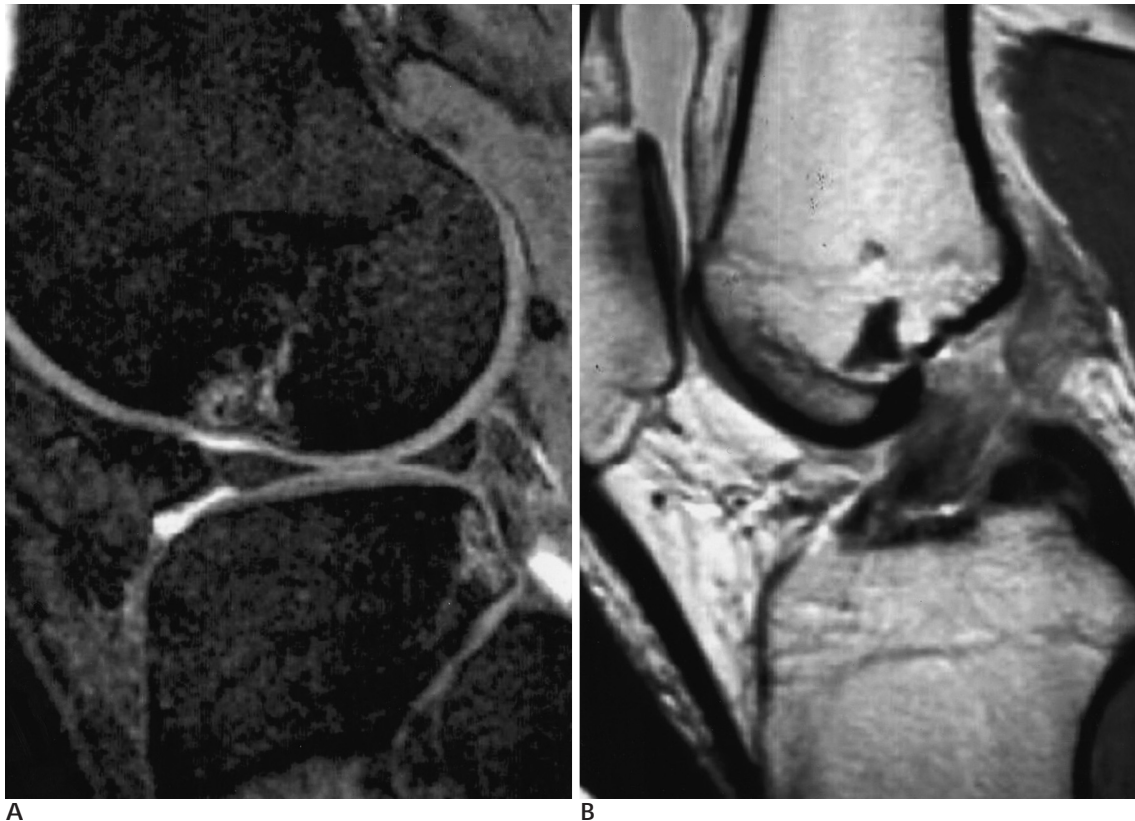


Fig. 1. Sagittal knee MR image in 23-year-old man with knee pain
A. Sagittal double-echo in steady state(DESS) image(25.4/9; flip angle, 35 °) shows kissing contusion at lateral femoral condyle and lateral tibial plateau. Lateral meniscus shows normal shape, and normal signal intensity.
B. Sagittal fast spin-echo (FSE) proton image (TR/TE = 3500/16) shows abnormal high signal intensity within ACL, with discontinuity. Subsequent arthroscopic findings confirmed a tear.

32 . Murphy (5)

가 kissing

kissing McCauley (13)

MRI

kissing

30%, 100% kissing 가

Kissing MRI

, Tung (12) 9 , Graf (20) 6

kissing 가

MRI (7) . Schweitzer

(microavulsion)

kissing

kissing

(17).

가

가

(coronary ligament)

(popliteal tendon)

가

가

kissing

가 MRI

Sanders (21)

, MRI

- (shear injury) (21).
- kissing
- kissing
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Kissing Contusion Between the Posterolateral Tibial Plateau and Lateral Femoral Condyle: Associated Ligament and Meniscal Tears¹

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Purpose: Kissing contusion between the posterolateral tibial plateau and lateral femoral condyle is frequently found in association with a tear of the anterior cruciate ligament (ACL). The purpose of this study was to determine which ligamentous and meniscal tears are associated with kissing contusion.

Materials and Methods: We retrospectively reviewed the findings depicted by 323 consecutive MR images of the knee and confirmed at arthroscopy. For the diagnosis of disruption, ligaments, medial menisci (MM) and lateral menisci (LM) were evaluated using accepted criteria. We compared the prevalence and location of meniscal and ligamentous tears between group I (44 knees with kissing contusion) and group II (279 knees without kissing contusion). For statistical analysis the chi-square test was used.

Results: ACLs were torn in all 44 knees (100%) with kissing contusion, and 78 (28%) of 279 without kissing contusion. There were ten medial collateral ligament (MCL) tears (23%) in group I, and 17 MCL tears (6%), five lateral collateral ligament (LCL) tears (2%) and ten posterior cruciate ligament (PCL) tears (4%) in group II. In group I, meniscal tears were found in 22 MM (50%) and in 19 LM (43%), while in group II, they occurred in 128 MM (46%) and 128 LM (46%). In group I, 17 (77%) of 22 MM tears and 13 (68%) of 19 LM tears were located in the posterior horn, while in group II, the corresponding figures were 97/128 (76%) and 60 of 128 (47%). The differing prevalence of ACL and MCL tears between the groups was statistically significant ($p < 0.05$), but differences in the prevalence and location of meniscal tears were not ($p > 0.05$).

Conclusion: Although kissing contusion was a highly specific sign of ACL tears, its presence was also significant among MCL tears. There was no significant difference in meniscal tears with or without kissing contusion.

Index words : Knee, MR
Knee, ligaments, menisci
Trauma

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