

·

MRI

1

2

·
MRI
: 1989 11 1999 1 MRI 784
37 47 9
· 29 , 6 , 2
8 , 1 1.5T unit (Magnetom Vision, Sie - mens,
Germany) 2.0T unit (Spectro - 20000, Goldstar, Korea)
(Cp)
(Ct) (Cp - n)
(Cp - x), (Cp - b)
(U - mu), (U - my), - - (U - se)
·
: 37 3 (Cp - n) (U - mu)
3 (Cp - b) 가 1 (U - mu),
1 (U - my), 가 1 (U - se) , 31 (Ct)
6 (U - mu), 가 25 (U - se) ·
9 3 (U - mu) 5 (U - my)
(Cp - n), 1 (U - se) (Ct) ·
:
,
·

MRI

(Magnetic Resonance

Imaging,

MRI)

37

9

MRI

MRI

1989 11

1999 1

MRI 784 47

37

2001 4 16

2001 8 11

9

MRI

37 6 5

lb, 1 IIa 31

MRI

2

29 6

8

1 33 70 (

, 56) 가 32 61 (, 49)

MR 1989 11 1997 2

2.0T (Spectro - 20000, Goldstar, Korea) matrix number

256 × 320, FOV 32 - 33 cm, 8 mm, 2 mm

T1 (TR/TE=600/30)

T2 (TR/TE=2000/60),

T1 (TR/TE=600/30), 1997 3

1999 1 1.5T (Magnetom Vision, Siemens, Germany) matrix number 165 - 210 × 220 - 300, FOV 96 - 308 × 256 - 512 mm, 6 mm, 2 mm

T1 (TR/TE=665 - 1209/12) T2

(TR/TE=4700 - 5400/99),

T1 (TR/TE=1203 - 1393/12)

(Cp)

(Ct)

(Cp - n)

(Cp - b)

(U - mu), (U - my), - - (U - se)

Table 1. The Growing Pattern of Cervical Carcinoma

Cervical Carcinoma	Endometrial Invasion	U-mu	U-my	U-se
Cp-n		3 (8.1%)		
Cp-x				
Cp-b		1 (2.7%)	1 (2.7%)	1 (2.7%)
Ct		6 (16.2%)		25 (67.6%)

Cp-n = involvement of the endocervix
 Cp-x = involvement of the exocervix
 Cp-b = involvement of the endocervix and exocervix
 Ct = involvement of whole uterine cervix
 U-mu = involvement of mucosa of the uterine corpus
 U-my = involvement of mucosa and myometrium of the uterine corpus
 U-se = involvement of mucosa, myometrium, and serosa of the uterine corpus

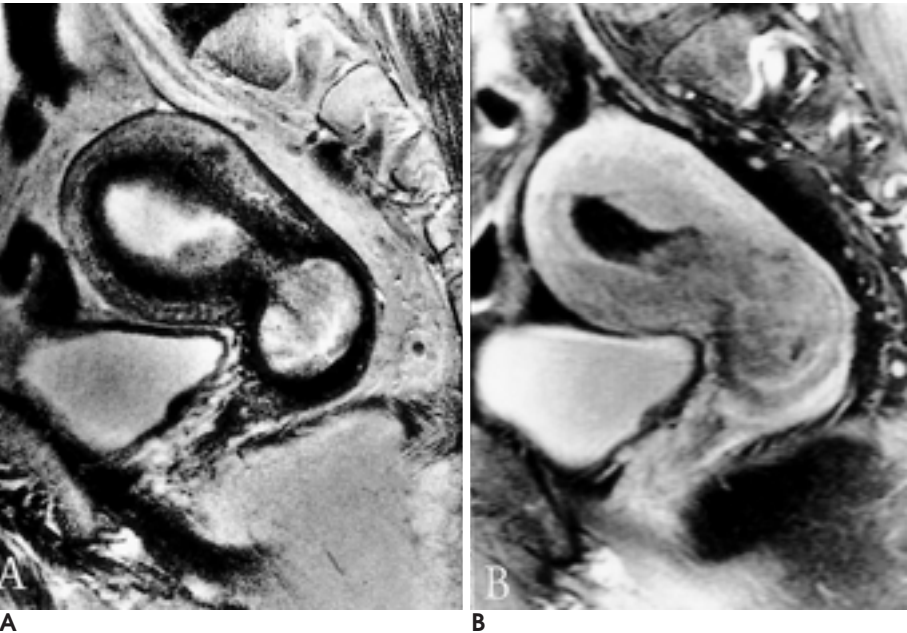


Fig. 1. Cervical carcinoma involving endocervix shows invasion of the endometrium without destruction of junctional zone on sagittal T2-weighted image(A) and fat-suppressed Gd-enhanced T1-weighted image(B).

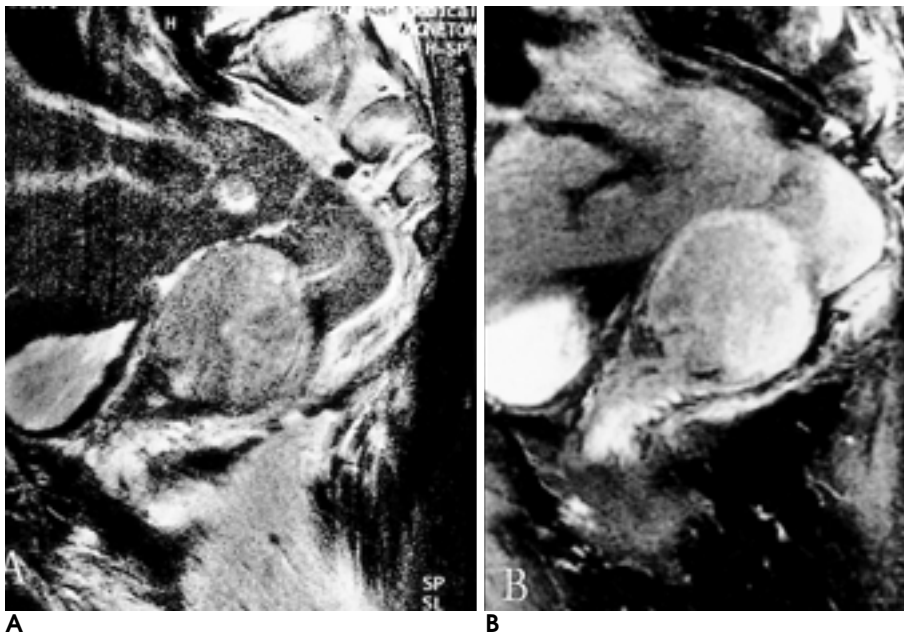


Fig. 2. Cervical carcinoma involving endocervix and exocervix shows invasion of full-thickness uterine corpus on sagittal T2-weighted image(A) and fat-suppressed Gd-enhanced T1-weighted image(B).

Table 2. The Growing Pattern of Endometrial Carcinoma

Endometrial Carcinoma	Cervical Invasion	Cp-n	Cp-x	Cp-b	Ct
U-mu		3 (33.3%)			
U-my		5 (55.6%)			
U-se					1 (11.1%)

Cp-n= involvement of the endocervix

Cp-x= involvement of the exocervix

Cp-b= involvement of the endocervix and exocervix

Ct= involvement of whole uterine cervix

U-mu= involvement of mucosa of the uterine corpus

U-my= involvement of mucosa and myometrium of the uterine corpus

U-se= involvement of mucosa, myometrium, and serosa of the uterine corpus

31 (Ct) . 86%
 (Cp - n) 3
 (U - mu, 8.1%)
 b) 가 1 (U - mu, 2.7%),
 가 1 (U - my 2.7%), 가 1
 (U - se, 2.7%) .
 (Ct) 31 가 6 (U - mu, 16.2%),
 가 25 (U - se, 67.6%) (Table 1).
 9 가 (U -
 mu) 가 3 , (U - my) 가 5 ,
 (U - se) 가 1 .
 3 (Cp - n, 33.3%)
 5 (Cp - n,
 55.6%)
 (Ut, 11.1%) (Table 2).

(70.3%) . (83.3%)
 (88.9%)
 MRI , ,
 81 - 90% . Hricak (1)
 MRI
 MRI
 FIGO TNM
 Perez (2)
 가 5 1/3
 , Noguchi (3)
 가 가 가
 5 61.8, 53.7, 45.5%
 가
 ,

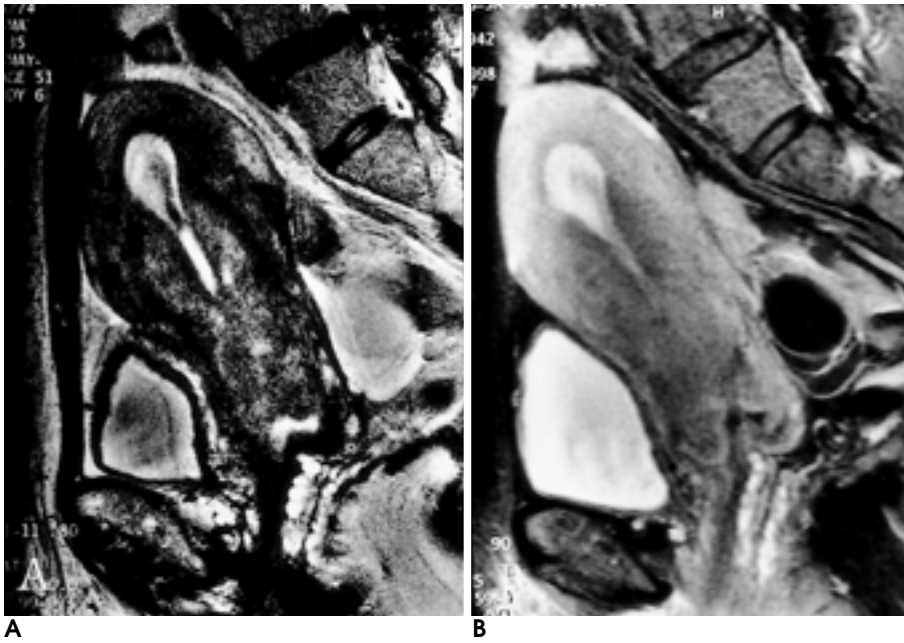


Fig. 3. Cervical carcinoma involving uterine endocervix and exocervix shows invasion of the endometrium without destruction of junctional zone on sagittal T2-weighted image (A) and fat-suppressed Gd-enhanced T1-weighted image(B).

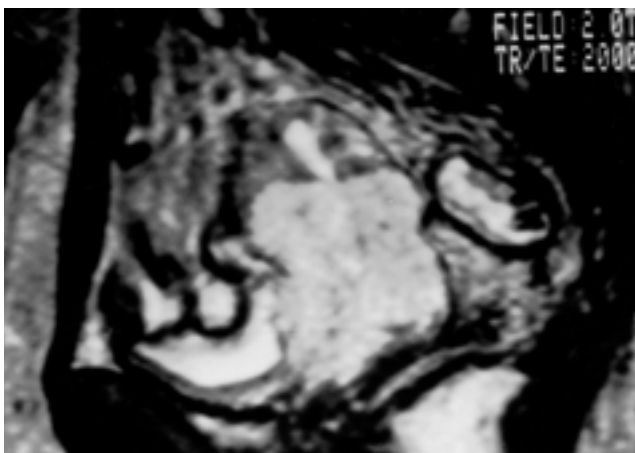


Fig. 4. Cervical carcinoma involving whole uterine cervix shows invasion of full-thickness of the uterine corpus on sagittal T2-weighted image.

70.3%

34.5%, 20.2%

. Perez (4)

Ib Ila 15% 26%, IIb 43%, III 가

49%

,

,

가 ,

(9).

Anderson (10)

,

가 5 mm 5

65%, 10 mm 97%

가

1/2 가 가

가 (3, 4).

Noguchi (3)

21.6% 가 63.1%,

20%, 16.9%

. Kanbour (5)

, Ferenczy (6)

(8, 9, 12).

가 73%

가

388

(7, 9, 11) .

MRI가

가 가

92%

97%

MRI

85 -

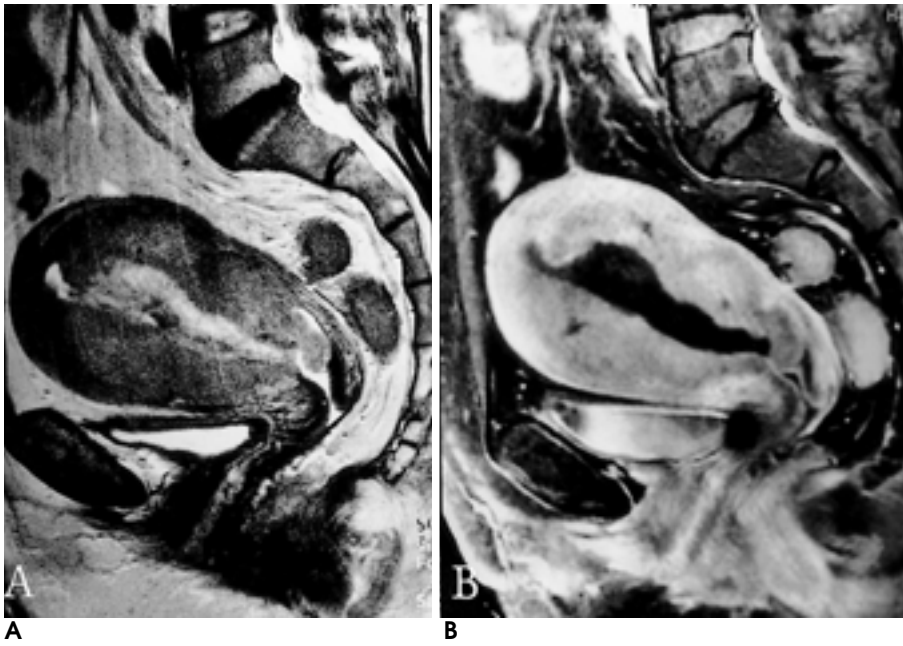


Fig. 5. Endometrial carcinoma involving endometrium and myometrium shows invasion of the uterine endocervix on axial T2-weighted image(A) and fat-suppressed Gd-enhanced T1-weighted image(B).

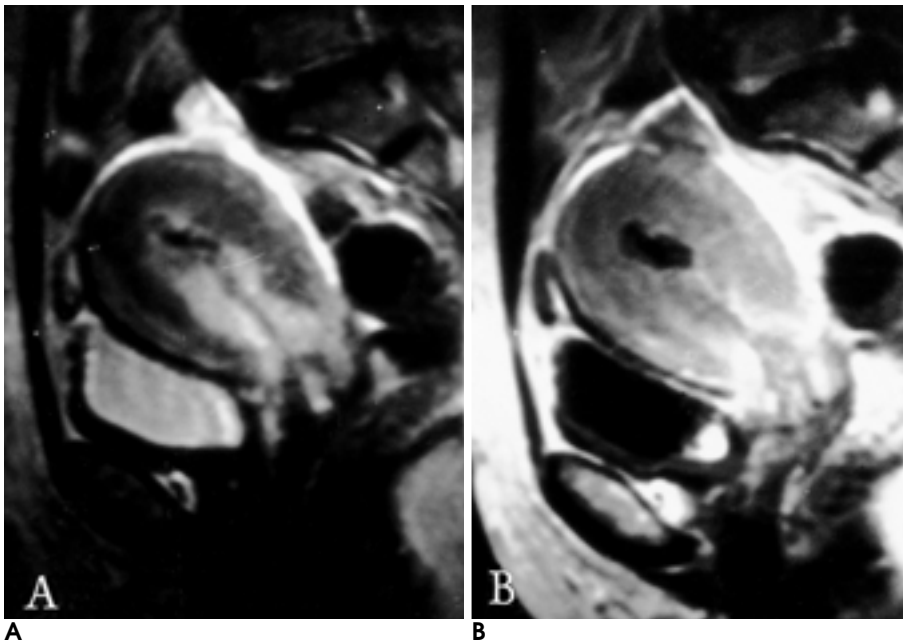


Fig. 6. Endometrial carcinoma penetrating beyond the serosa shows invasion of full-thickness of the uterine cervix on sagittal T2-weighted image(A) and fat-suppressed Gd-enhanced T1-weighted image(B).

90% , Murakami (13) MRI 가 33.3%
 . Hricak (9) II (11.1%) 가 88.9%
 가 66.7%
 가 33.3%
 II
 . Elia (14) MRI
 83% , 17%
 55.6%
 389

MRI

가

가 ,

가

가

가

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Cervical Carcinoma vs Endometrial Carcinoma, Involving Both Corpus and Cervix: Comparison of Growing Pattern with MR Imaging¹

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Purpose: To evaluate the growth pattern depicted by MR imaging and used to differentiate between uterine cervical and endometrial carcinoma where the mass involves both the uterine corpus and cervix.

Materials and Methods: The tumor growth pattern observed on MR images obtained between November 1989 and January in 1999 in 37 of 784 cervical carcinomas and 9 of 47 endometrial carcinomas in which the tumor involved both the uterine corpus and cervix was analysed. The histologic type was squamous (n = 29), adenocarcinomatous (n = 6) or adenosquamous (n = 2) in cervical carcinoma, and carcinomatous (n = 8) or adenosquamous (n = 1) in endometrial carcinoma. A 1.5-T (Magnetom Vision, Siemens, Germany) and a 2.0-T unit (Spectro-20000, Goldstar, Korea) were used to obtain T1- and T2-weighted axial, T2-weighted sagittal and Gd-enhanced images. Tumor involvement of the uterine cervix was classified as either partial(Cp) or total(Ct), and partial involvement(Cp) was subclassified as Cp-n, Cp-x, or Cp-b according to involvement of the endocervix, exocervix or both. Tumors of the uterine corpus were classified as involving the mucosa(U-mu), myometrium(U-my) or serosa(U-se).

Results: In 37 cases of cervical carcinoma, all three involving the endocervix(Cp-n) invaded the endometrium(U-mu), three involving both the endo- and exocervix(Cp-b) invaded the endometrium(U-mu, 1 case), myometrium(U-my, 1 case), or serosa(U-se, 1 case), and 31 involving the full-thickness of the uterine cervix(Ct) invaded the endometrium (U-mu, 6 cases) or serosa(U-se, 25 cases). In nine cases of endometrial carcinoma, three involving the endometrium(U-mu) and five involving the myometrium(U-my) invaded the endocervix(Cp-n), and one involving the serosa(U-se) invaded the full-thickness of the uterine cervix(Ct).

Conclusion: Cervical carcinoma tended to involve the entire cervix and the full thickness of the uterine corpus, but endometrial carcinoma tended to involve the endometrium or myometrium of the uterine corpus and endocervix.

Index words : Uterus, MR

Uterine neoplasms

Uterine neoplasms, MR

Uterine neoplasms, staging

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