• 1
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. . 2, 3

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:						,				CT

8								10

.								CT

,						,					,						,

,				.

:

6 (75%),						2 (20%)		(p<0.05),

6 (75%),						1 (10%)		(p<0.05),

16		3 (18.8%),						20		12 (60%)

(p<0.05).										16		6 (37.5%),

20		11 (55%)		(p>0.05),

2 (25%),						5 (50%)		(p>0.05).

: CT														,

,										.

.

.

(1-3).								CT									.

,				,

.

(pedunculated)

(exophytic growing)				,								1992	8		1997	1

.				CT(Computed Tomography,						8 (15-65 ,			44.1)

CT		), MRI(Magnetic Resonance Image,		MRI				10 (32-54 ,			44.3)

)											CT

.

.

MRI				18				17								CT

(1,4) CT							,					CT			9800 Quick Scanner(GE,

Milwaukee, U.S.A.)		Somatom Plus S(Siemens, Erlangen,

Germany)			,			(Omnipaque, NYCOMED, Oslo,

Norway) 50ml					5

1998	11	9			1999	3	22			.						5mm,				5mm					,

CT　　　　　　. 1　　　　　　　　　　Leydig cell tumor, undifferentiated carcinoma　1
,　　CT　　,　　　,　　　　　　　　　　　.
CT　　　　　　.　　　　　　　　　　　5　CT
　　　　　　　　　　　　CT　　　　　　　　　　　　　　　　,
　　　　　　　　　　　,　　　　　　　　　　　　　.
　　,　　　　　　　　,　　　　　　　　　　　　　　　　　　　　　　　　　　　10
　　　　　　　　　　.　　　　　　　8（80%）　　　　　　　, 2（20%）
　　　　　　　（iso）,　（less）,　（more）　　　　　　　　　　　,　　　　　　　　8
　.　　　　　　　　　　　　　　　,　　2（25%）　　　　　　, 6（75%）
　　　　　　,　　　　　　　　　　　　　　.
　　,　　　　　　　　　　,　　　　　　　　（p= 0.031）.
　　　　　　　　.
　　　　　　（lobulated）　　　　（s-　　　　　　　　　　　　　　　　10　　4
mooth）　　　　　　,　　　　　　　（40%）　　　　, 4（40%）
　.　　　　　　　　　　　　　　　, 2（20%）
　　　　　　　　　　　.　　8　　3（37.5%）
　Fishers exact test　　　.　　　　　　　　, 5（62.5%）
　　　　　　　　　　,　　　　　　　　　　　　,
　　　　　　　　　　（p= 0.014）.
　　　　　　（fibroma）　　　　　　　　　　　10　　1
2 ,　　　（fibrothecoma）2 ,　　　　　（10%）　　　, 9（90%）　　　,
（granulosa cell tumor）,　　（dysgerminoma）, Sertoli-　　8　6（75%）　　, 2（25%）

Table 1. CT Findings of Solid Ovarian Tumor and Uterine Subserosal Leiomyoma

	Less enhancement than myometrium	Presence of ascites	Detection of normal ovary	Thickening of round ligaments	Lobulating contour of mass
Uterine subserosal leiomyoma(n= 10)	2/10(20%)	1/10(10%)	12/20(60%)	11/20(55%)	5/10(50%)
Solid ovarian tumor(n= 8)	6/8(75%)	6/8(75%)	3/16(18.8%)	6/16(37.5%)	2/8(25%)

A　　　　　　　　　　　　　　　　　　　　B
Fig. 1. A 49-year old woman with uterine subserosal leiomyoma.
A. Contrast enhanced CT scan shows solid pelvic mass(arrows) which abuts on the anterior surface of the uterus. The mass shows homogeneous contrast enhancement as well as uterine myometrium.
B. Contrast enhanced CT scan obtained 1cm caudal to A shows both normal ovaries(arrows). There are no visible ascites in the pelvic cavity.

(p= 0.009).

10   5 (50%)   ,   8   2
(25%)   ,   (p= 0.278).
                          10   5
(50%)   , 1 (10%)
          , 4 (40%)
          ,   20   11 (55%)

.   8   2 (25%)
, 2 (25%)   , 4 (50%)
                          ,   16   6
(37.5%)   ,
(p= 0.240) (Table 1).
  CT

,   , 3
                    10   4 (40%)
(Fig. 1), 2   4 (40%), 1
2 (20%)   (Fig.2), 1   .
                          CT
                                    ,
          3   8
          5 (62.5%) (Fig.3), 2   2
(25%), 1   1 (12.5%) (Fig.4)   , 1
                    .

Fig. 2. A 36-year old woman with uterine subserosal leiomyoma and myxomatous degeneration. Contrast enhanced CT scan shows a large, well-defined mass(white large arrows) in the pelvic cavity with enhancement less than that of myometrium. However, highly enhanced focal myoma tissue is seen in the mass. The mass encases right round ligament(small arrows). The normal left ovary is seen near the left side of the uterus(arrowhead), but right ovary is not seen.

, 30
    20-40%   (2,3,5,6)

.
                    (hyaline),
(cystic),   (myxomatous),   (fatty), (carneous)   (2).
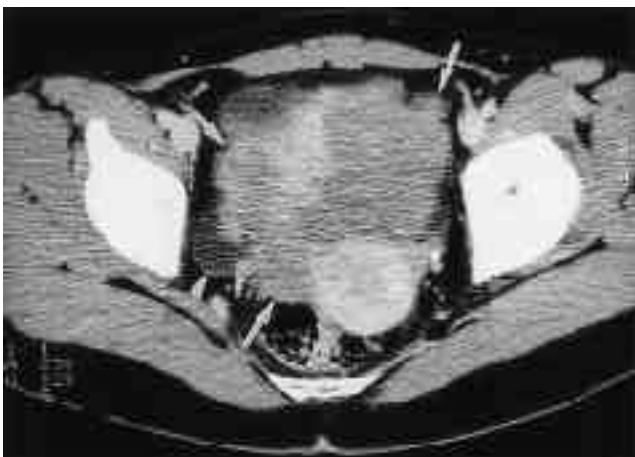   (submucosal),

Fig. 3. A 19-year old woman with right ovarian dysgerminoma. Contrast enhanced CT scan shows well defined lobulating contour mass(arrows) in the pelvic cavity which abuts on the anterior surface of the uterus and demonstrates less enhancement than that of myometrium. Small amount ascites is noted in the right ovarian fossa(arrowhead), both ovaries are not visualized.

Fig. 4. A 59-year old woman with left ovarian fibrothecoma. Contrast enhanced CT scan shows well defined heterogeneous large mass(arrows) in the pelvic cavity which abuts on the anterior surface of the uterus and demonstrates less enhancement than that of myometrium. Normal right ovary is well visualized in the right ovarian fossa(arrowhead), but left ovary cannot be found.

(mural),
(subserosal) (2,3,7).

CT MRI .

, MRI
(1,4,8). MRI T1 8 (80%),
(20%) ,
T2 , CT
, T2 (3),
. MRI
T1, T2 .
T2 CT MR
(follicular cyst)
(1). (9).

MRI CT Marc 79%
, 18
10
, 12 , 7 , 1
8 8 (10).
(4). US 8 ,
3 . 8 6
, 15 14 ,
(8).
CT MR (ex-
US udate) (9).
, 8 6 (75%) .

CT
CT , CT CT
, , ,
, (2,3,7). ,
(parasitized blood ,
supply) ,
(6). CT ,
,
(3). CT .
,
,
.

(broad ligament)
(5).
CT ,
10% (7).
10 5 (50%)
.

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CT Differentiation of Solid Ovarian Tumor and Uterine Subserosal Leiomyoma[1]

Kyung Rae Kim, M.D., Kyoung Sik Cho, M.D., Chul Ho Sohn, M.D.[2], Eun-Kyung Ji, M.D.[3]

[1]*Department of Diagnostic Radiology, Asan Medical Center, University of Ulsan*
[2]*Department of Diagnostic Radiology, Dongsan Medical Center, University of Keimyung*
[3]*Department of Diagnostic Radiology, Bombit Hospital*

Purpose : On the basis of CT findings, to differentiate between solid ovarian tumor and uterine subserosal myoma.

Materials and Methods : In eight surgically proven cases of solid ovarian tumor and in ten uterine subserosal myoma patients, contrast-enhanced CT images were obtained. Two genitourinary radiologists reviewed the findings with regard to degree of enhancement of the mass as compared with enhancement of uterine myometrium, thickening of round ligaments, visualization of normal ovaries, contour of the mass, and the presence of ascites in the pelvic cavity.

Results : Six of eight ovarian tumors but only two of ten uterine myomas were less enhanced than normal uterine myometrium ($p < 0.05$). Pelvic ascites were seen in six of eight ovarian tumors, but in only one of ten uterine myomas ($P < 0.05$). Three of 16 ovaries in ovarian tumor patients, but 12 of 20 ovaries in uterine myoma patients, were normal ($p < 0.05$). Six of 16 round ligaments of the uterus in ovarian tumor patients, were thichened but 11 of 20 round ligaments in uterine myoma patients, were thickened ($p > 0.05$). The contour of the mass was lobulated in two of eight ovarian tumor patients, but in five of ten uterine myoma patients ($p > 0.05$).

Conclusion : CT findings suggestive of solid ovarian tumor were less contrast enhancement of the mass than of normal uterine myometrium, pelvic ascites, and nonvisualization of normal ovary.

Index words : Ovary, CT
Ovary, neoplasms
Uterus, CT
Uterus, neoplasms

Address reprint requests to : Kyoung Sik Cho, M.D., Department of Diagnostic Radiology, Asan Medical Center,
#388-1 Poongnapdong, Songpagu, Seoul 138-736, Korea.
Tel. 82-2-224-4400   FAX. 82-2-476-4719   E-mail. kscho@www.amc.seoul.kr