

CT 1

:
 CT
 : 83 CT
 36 , 47 . CT
 , , (right anterior renal fascia)
 , ,
 t - test , CT χ^2 test Fisher's
 Exact test 가
 : 11.0 ± 3.4 mm , 6.7 ± 2.0 mm
 ($p < 0.0001$).
 25 (69%) , 15 (32%) 가
 ($p=0.0007$). 18 (50%), 7 (15%)
 가 ($p=0.0026$). ,
 가 .
 가 ($p < 0.05$).
 가 .
 : , 가
 ,

(1), CT 가 가 ,
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 가 ,
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 (4 - 6), ,
 가 , (가) , ,
 가 (2, 3). , (7, 8).

가 , CT
 가, , ,

12 가 10 ,
 11 가 10
 가 ($p=0.1520$).
 가 16 (35%) ,
 가 19
 (40%) 가
 ($p=0.4455$).
 9 (25%),
 11 (23%) 가
 ($p=0.9279$).
 15 (42%),
 26 (55%)
 ($p=0.3118$, Table 1).
 48 가
 , 16 , 10 ,



Fig. 1. 43-year-old woman with periappendiceal inflammation. CT scan shows wall thickened appendix with enhancement (arrow) and periappendiceal fatty infiltration in right lower quadrant.



Fig. 2. 67-year-old woman with periappendiceal inflammation. CT scan shows increased mesenteric fatty infiltration (arrow-heads) and abscess (*) in right lower quadrant, and thickening of right anterior renal fascia (arrow).

4 5
 가 ($p=0.1327$).
 가
 ($p=0.0234$, Table 2).
 Table 3
 10 (28%) 가
 (Fig. 2) 2 (6%)
 6 (13%) 가 (Fig. 3) 2
 (4%)
 ($p=0.0042$).
 25 (69%)
 21 (45%) 가 (Fig. 4), 15
 (32%)
 ($p=0.0001$).
 ($p=0.1234$).

Table 1. CT Findings of Periappendiceal Inflammation and Pelvic Inflammatory Disease

CT Findings	PAI (n = 36)	PID (n = 47)	p-value
Appendiceal wall thickening *	25 (69%)	15 (32%)	0.0007
Cecal thickening	10 (28%)	6 (13%)	0.0862
Thickening of RARF *	18 (50%)	7 (15%)	0.0029
Abscess	12 (33%)	11 (23%)	0.3345
Mesenteric fatty infiltration	30 (83%)	40 (85%)	1.0000
Ascites	19 (53%)	28 (60%)	0.6556
Uterus HE	9 (25%)	11 (23%)	0.9279
Paralytic ileus	15 (42%)	26 (55%)	0.3118

PAI: periappendiceal inflammation, PID: pelvic inflammatory disease, RARF: right anterior renal fascia, HE: heterogeneous enhancement of endometrium, *: Statistically significant (p -value < 0.05)

Table 2. Location of Appendix and Thickening of Right Anterior Renal Fascia

Thickening of RARF	Location of Appendix				p-value
	RLQ	Pelvis	RC	ND	
PAI *					0.0234
Yes	8	3	3	4	
No	10	8	0	0	
PID					0.1185
Yes	3	0	3	1	
No	27	5	4	4	

PAI: periappendiceal inflammation, PID: pelvic inflammatory disease, RARF: right anterior renal fascia, RLQ: right lower quadrant, RC: retrocecal, ND: not detectable, *: Statistically significant (p -value < 0.05)

가 , 4.3 - 17.4 mm

가 . , 가 ,

7 - 15 mm ,

(target - sign)가 (9, 10). CT (10),

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(10).
11 mm 6.7 mm
6 mm

CT

Table 3. Location of the Associated CT Findings

CT Findings	Location				p-value
	RLQ	Pelvis	R&P	Abd	
Abscess*					0.1143
PAI	7	2	3	0	
PID	2	6	2	1	
Mesenteric fatty infiltration*					0<0001
PAI	23	2	1	4	
PID	2	21	2	15	
Ascites					0.1234
PAI	4	10	4	1	
PID	1	20	2	5	

PAI: periappendiceal inflammation, PID: pelvic inflammatory disease, RLQ: right lower quadrant, R&P: Right lower quadrant and pelvis, Abd: Abdomen, *: Statistically significant (*p*-value <0.05)

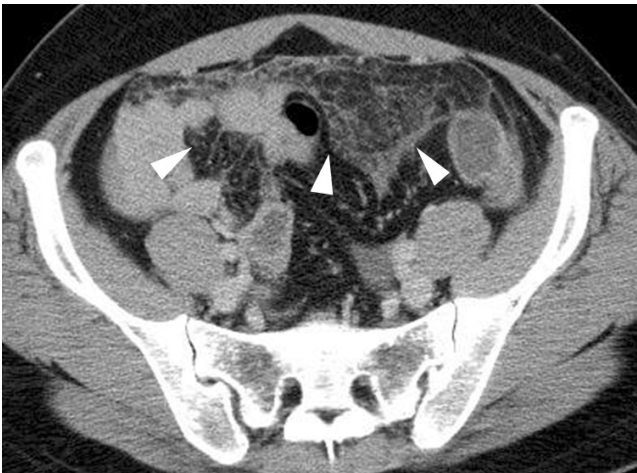


Fig. 4. 27-year-old woman with pelvic inflammatory disease. CT scan shows diffusely increased mesenteric fatty infiltration (arrowheads) in pelvic cavity.



A
Fig. 3. 22-year-old woman with tuberculous peritonitis and tuboovarian abscesses.
A. CT scan shows mild wall thickening of appendix (arrow) and increased strand like mesenteric fatty infiltration (arrowheads) in pelvis.
B. CT scan shows multiseptated abscess (arrows) and small amount of ascites (*) in pelvis.



CT

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(iliac fossa)

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(20). CT

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(5, 11).

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(15 - 17).

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CT

(21).

(nonsegmental)

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(14)

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CT Differentiation of Periappendiceal Inflammation with Appendicitis and Pelvic Inflammatory Disease in Woman with Right Lower Quadrant Pain¹

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Purpose: We wanted to determine the usefulness of the computed tomography (CT) findings for making the diagnosis between periappendiceal inflammation (PAI) with appendicitis and pelvic inflammatory disease (PID) for the women presenting with right lower quadrant pain.

Materials and Methods: We retrospectively analyzed the CT findings of 83 women with right lower quadrant pain: PAI in 36 and PID in 47 patients. We reviewed the CT images, including the appendiceal diameter and the enhancing wall thickening, the cecal thickening, the location of the appendix, thickening of the right anterior renal fascia, abscess, mesenteric fatty infiltration, ascites, heterogeneous uterine enhancement and paralytic ileus. Statistical analysis was performed by using the t-test for the diameter of appendix, and the χ^2 test or Fisher's exact test for the CT findings.

Results: The mean diameter of the appendix was 11.0 ± 3.4 mm for the PAI subjects and it was 6.7 ± 2.0 mm for the PID subjects ($p < 0.0001$). Wall thickening of the appendix was more commonly detected in PAI (25 subjects, 69%) than in PID (15 subjects, 32%) ($p = 0.0007$). Thickening of the right anterior renal fascia was more commonly detected in PAI (18 subjects, 50%) than in PID (7 subjects, 15%). Cecal thickening, ascitis, heterogeneous uterine enhancement and paralytic ileus were not significantly different between PAI and PID. Abscess and mesenteric fatty infiltration were more frequently detected in the RLQ, and in the abdomen or pelvic cavity in PAI and PID, respectively ($p < 0.05$). There was no significant difference in the distribution of ascites between the diseases.

Conclusion: The CT findings of the appendiceal diameter, enhancing wall thickening and thickening of the right anterior renal fascia are useful for making the diagnosis of PAI. The abdominal and pelvic distributions of abscess and mesenteric fatty infiltration are highly suggestive findings of PID.

Index words : Abdomen, CT
Appendicitis
Pelvic organs, inflammation

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