



가  
103  
가  
6 mm  
: 103 48  
48 34 , 가 2 가  
14 가 55 30  
25  
94%, 81%, 76% 84%, 71%,  
96%  
:

가  
가  
가 1998 1 2002 12 5  
가 103  
가  
가 1  
가 6 19  
(1), 38 10 1 , 20 76 , 30 26  
20 가 가 , (13  
(1-5) ) 35 , (14-27 ) 47 , (28 )  
90% 가 . 103 77 (75%)  
(6, 7) 26 (25%)  
가 Model 128XP/10(Acuson, Mountain  
View, Calif, U.S.A.) HDI 5000(ATL, Bothell, Wash,  
U.S.A.) , 2-5 MHz  
가  
1 , 5-12 MHz

가

가

가

16 , 18 , 14 가

48

6 mm 43 (90%)

48 34

(Table 1), 가

2 1 가

CT 6 mm (8-9).

1

가

14 가 4 5

1 , 9

4 , 2 ,

Chi - square test 가 3

55 30

25 9 , 3 ,

3 , 2 , 2 ,

2 , 2 , 1 ,

1

103 52 48

39 , 6 , 3

1 2 가 ,

1 1 76% 가 가 94%, 81%,

1

24 ( 2 ), 8 ,

1 가

( $p > 0.05$ ), 71%, 96%,

94%, 79%, 84% (Table 2).

Table 1. Sonographic Findings and Final Diagnosis

Sonographic Findings	Final Diagnosis		Total
	Appendicitis	Other Disease	
Positive	34	25	59
Negative	14	30	44
Total	48	55	103

Table 2. Diagnostic Value of Ultrasound by Trimester

Trimesters	Diagnostic Value(%)				
	Sensitivity	Specificity	PPV	NPV	Accuracy
1st (n = 35)	14/16 (88)	19/19 (100)	14/14 (100)	19/21 (91)	33/35 (94)
2nd (n = 47)	10/18 (56)	28/29 (97)	10/11 (91)	28/36 (78)	38/47 (81)
3rd (n = 21)	10/14 (71)	6/7 (86)	10/11 (91)	6/10 (60)	16/21 (76)
Total	34/48 (71)	53/55 (96)	34/36 (94)	53/67 (79)	87/103 (84)

Note.—PPV = positive predictive value, NPV = negative predictive value.



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## Sonography of Acute Appendicitis in Pregnant Women: Diagnostic Accuracy by the Stage of Gestation<sup>1</sup>

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**Purpose:** To evaluate the diagnostic accuracy of a diagnosis of acute appendicitis in pregnant women according to the trimester.

**Materials and Methods:** A retrospective review was performed on 103 pregnant women who underwent sonography with clinically suspected acute appendicitis. The sonographic technique used involved either the graded compression or a non-compression method. All the sonograms were obtained after changing the patient's position and identifying the diseased appendix. The criterion for a sonographic diagnosis of acute appendicitis was the visualization of a non-compressible appendix with a maximal diameter  $\geq 6$  mm. The sonographic findings were correlated with the surgical findings and clinical follow-up.

**Results:** Acute appendicitis was confirmed by both the surgical and pathological findings in 48 out of 103 pregnant women. Ultrasound established the diagnosis in 34 of the 48 patients with proven appendicitis. There were false-positives in 2 patients and false-negatives in 14 patients. Among the 55 patients who had a normal appendix, 30 patients improved at the clinical follow-up and 25 patients had other intra-abdominal disorders. The diagnostic accuracy of the ultrasound was 94% in the first trimester, 81% in the second trimester, and 76% in the third trimester. The overall accuracy was found to be 84%, with a 71% sensitivity and a 96% specificity.

**Conclusion:** No significant difference was found in the diagnostic accuracy of the ultrasound according to the trimester in which the acute appendicitis occurred. Therefore, regardless of the stage of gestation, sonography is a valuable procedure for diagnosing acute appendicitis.

**Index words :** Appendix, US  
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