

## 대동맥 질환의 영상 진단

박    중    춘

### Imaging Study of Diseases of the Aorta

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#### ABSTRACT

New imaging techniques, such as computed tomography, magnetic resonance imaging and transesophageal echocardiography, have improved the detection of diseases of the aorta. The development of these techniques has led to further insight into the pathogenesis of aortic diseases, new strategies for decision making and patient management. Early stabilization of patients should be followed by an extensive analysis (staging) of the patient's aorta, the coronary, carotid and peripheral arteries. Therefore, we must understand and use these imaging studies to manage aortic and vascular diseases. Patients with aortic diseases should also be cared for by specialists, including cardiologists, interventional radiologists and vascular/cardiovascular surgeons, who should work as a team and be involved in all the decision making steps. (**Korean Circulation J 2002;32(11): 941-948**)

**KEY WORDS** : Aortic diseases ; Diagnostic imaging.

#### 서    론

(computerized tomography : CT), (ma-  
gnetic resonance imaging : MRI),  
가

,  
가

가,

(transesophageal echocardiog-  
raphy : TEE)가    .    CT, MRI, TEE

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(intramural hematoma),    (atheroma)  
(penetrating ulcer),  
1)2)

## 주요 영상 진단법

심초음파검사

10 MHz

reentry

7)

가 CT

가

(

)

가

가 .<sup>8)9)</sup> Spiral CT

3

TEE

MRI

가 (gadolinium)

3

가 horizontal view

<sup>10)</sup>

phase - contrast cine - MRI

reverberation

<sup>1-4)</sup>

가

MRI

가

가 가

가

가

<sup>3-5)</sup>

(intravascular ultra-

clips,

sound)

가 <sup>11)</sup>

TEE가 가

MR angiography

MRI

(epia-

ortic ultrasound)가 가 <sup>6)</sup>

## 중요 질환에 대한 영상 진단

fenestration

대동맥 박리

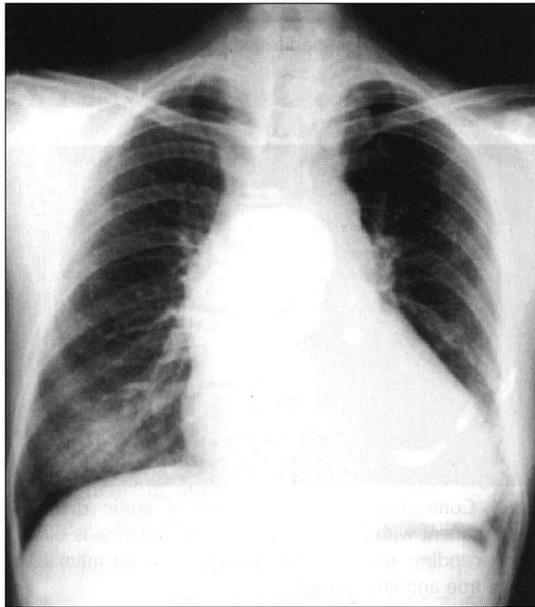
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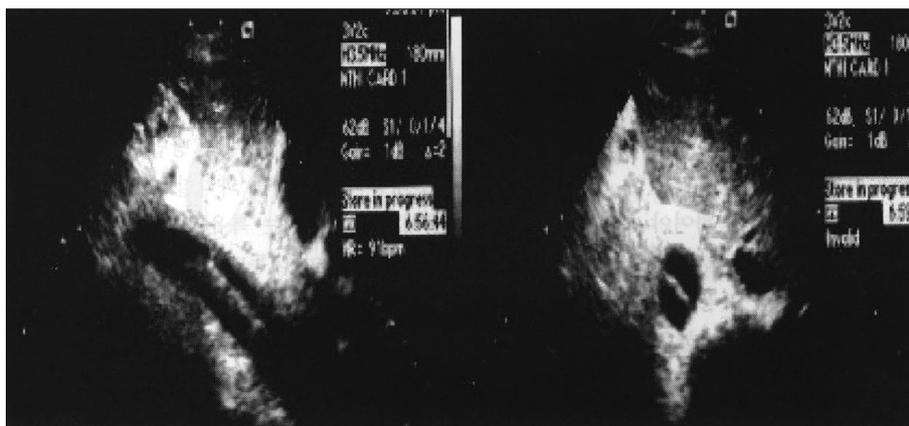
**Table 1.** Diagnostic sensitivity and specificity for aortic dissection

Method	Sensitivity	Specificity
TTE	59 - 85%	63 - 96%
TEE (single plane)	99%	77 - 98%
CT with contrast	94%	87%
MRI	98%	98%
Aortography	88%	94%

TEE : transesophageal echocardiography, MRI : magnetic resonance imaging



**Fig. 1.** Chest radiography revealed the widening of the mediastinal shadow, which has been reported in up to 50% of cases of aortic dissection. The ascending aorta bulges to the right due to the dissection.



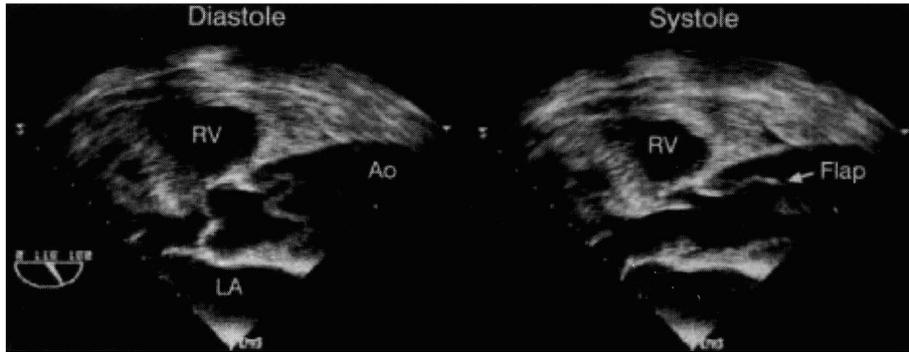
**Fig. 2.** Transthoracic echocardiogram of the abdominal aorta (same patient with figure 1). An aortic dissection is manifested by the presence of a true lumen, a false lumen, and a free-floating intimal flap.

가 , cine MRI  
가 CT 가 가  
가 TEE

<sup>12)</sup>  
(Table 1).

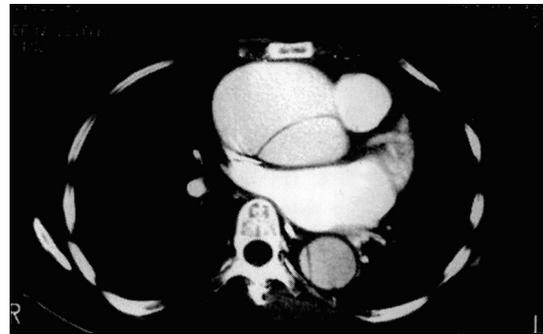
50%

) ( ( (Fig. 1).<sup>13)</sup>



**Fig. 3.** Transesophageal echocardiogram of the ascending aorta. An aortic dissection is manifested by the presence of a true lumen, a false lumen, and a free-floating intimal flap.

가 (intimal flap) .  
 가  
 가 (Fig. 2, 3).  
 가 ,  
 , 가  
 (pene-  
 trating ulcer)  
 (probable)  
 (definitive) 가  
 가



**Fig. 4.** Contrast-enhanced CT image of aortic dissection (same patient with figure 1). The ascending aorta is dilated. The ascending and descending aorta show an intimal flap with a true and false lumen.

(Fig. 4).<sup>14)</sup>  
 (impen-  
 ding rupture)  
 (bulging),

가  
 가  
 가 80%  
 가  
 MRI  
 가 T1, T2  
 가 VENC





<sup>21)</sup> TEE 대동맥 폐쇄증 가  
 가 70% 가  
 30% TEE 가  
 (epicardial echocardiography)가 가 ( )  
 MRI, 가  
 electron - beam CT fast - gated  
 helical CT 가 multicont-  
 rast MRI  
<sup>22)</sup>  
 대동맥류  
 가  
 가 , 가 ,  
 가 ,  
 가 ,  
 가 ,  
 대동맥염 , , ,  
 가 ,  
 90% 가 ,  
 50 1~2% ( 가 ) ,  
<sup>11)</sup>  
 X- MRI 가 CT  
 25% 가 <sup>23)</sup>  
 X- CT scan double ring pattern  
 ring ring  
 ring  
 가 <sup>1-3)</sup> <sup>24)</sup>

TEE

CT, MRI,

가

중심 단어 :

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