

상행 대동맥을 이환한 대동맥 벽내출혈과 대동맥 박리의 임상적 비교

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Clinical Comparison of Aortic Intramural Hemorrhage with Aortic Dissection Involving the Ascending Aorta

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ABSTRACT

Background and Objectives : Although aortic intramural hemorrhage (AIH) is different from classic aortic dissection (AD) in terms of absence of continuous direct flow communication through intimal tear, the same treatment strategy, emergent surgical repair, has been applied for patients with AIH involving the ascending aorta. The impact of different false lumen hemodynamic has not been seriously investigated and clinical features of AIH and AD have not been directly compared. **Methods :** From 1990 to December 1998, clinical evaluation with various imaging modalities confirmed the diagnosis of proximal AD and AIH in 73 and 18 patients, respectively. Direct comparison of clinical data including clinical features, hospital course, and follow-up data was performed retrospectively. **Results :** Patients with AIH were older (69 ± 10 years-old 49 ± 14 , $p < 0.05$) and female was predominant in AIH (15/18 vs. 26/73, $p < 0.05$). The development of mediastinal hemorrhage, pericardial and pleural effusion was more frequent in AIH than in AD. In-hospital mortality was same in both groups (11% in AIH vs. 17% in AD, $p = \text{NS}$). Although medical treatment was more frequently selected in AIH group (61% vs. 12%, $p < 0.05$) due to old age and other associated medical diseases, mortality rate with medical treatment was much lower in AIH than in AD (9% vs. 66%, $p < 0.05$). Among 11 patients with AIH, in whom medical treatment was chosen, 10 patients were discharged without any event. In follow-up imaging studies of 8 survived AIH patients without surgical repair, 4 patients showed complete resolution. Typical AD developed in 2 about 2 months after the acute event, and the other 2 patients showed focal AD only in the descending aorta. The 3-year survival rate of AIH group was $89 \pm 7\%$, which was not significantly different from that of AD group ($75 \pm 6\%$, $p > 0.05$). **Conclusions :** Patients with proximal AIH shows different clinical features and much better prognosis with medical treatment compared to those with AD. These results

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support our initial hypothesis that AIH is not just a precursor of overt AD but a distinct disease entity and absence of continuous flow communication in AIH can have different clinical impact. This should encourage systematic investigations to find out the predictors of development of complications and to assess the role of elective surgery with frequent imaging follow-up in proximal AIH. **(Korean Circulation J 2000;30(4):440-447)**

KEY WORDS : Aorta · Dissection · Intramural hemorrhage · Natural history.

서론		91
가	가	,
	(intima)	.
(tearing site),	(intimal flap),	(true
lumen) 가	(false lumen)	,
(flow communication)		가
가	,	가
가		.
1-4)	(aortic intramural hemorrhage)	.
(media)	(thick -	0.7 cm
ening)		(maximal crescentic or cir -
2-6)		cular thickening of aortic wall)
		(Fig. 1).
		DeBakey
	3-7)	.
	,	
	가	가
가		
	가	.
	4	
	10%	(lidocaine sp -
	ray)	
	가	
	3~6 mg midazolam	.
가		,
		.
재료 및 방법		
		(cross - sectional ; 30 ° omniplane view)
		(longitudinal ; 120 ° omniplane view)
대 상		.
1990 1	1998 12	

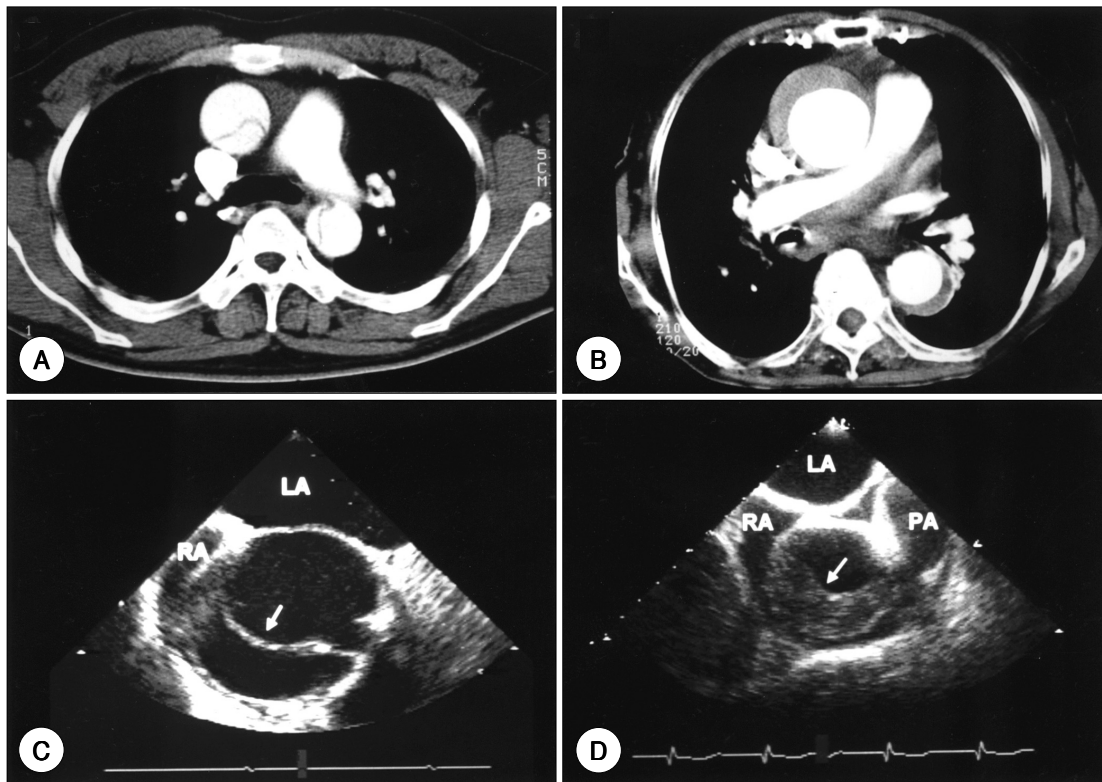


Fig. 1. Representative x-ray computed tomograms (A & B) and transesophageal echocardiograms at the basal horizontal view (C & D) in proximal aortic dissection and intramural hemorrhage. 'Double-channel aorta' with intimal flap is characteristic in aortic dissection (A & C), whereas crescentic aortic wall thickening without any evidence of flow communication in aortic intramural hemorrhage (B & D).

	자료 분석
입원 경과 및 추적 관찰	\pm SS/PC + t - test Fisher's exact test Kaplan - Meier p 0.05 가
100~120 mmHg	SP - Student 2 가
	결 과
가	환자들의 기본 특성 및 임상상 (Table 1)
1999 9	(aortic intramural hemorrhage group ; AIH group, n = 18)
6	(aortic dissection group ; AD group, n = 73)
	69 \pm 10 , 49 \pm 14

Table 1. Baseline characteristics and clinical features

	AIH (n = 18)	AD (n = 73)	p value
Age (year)	69 ± 10	49 ± 14	p<0.05
Female	15 (83%)	26 (36%)	p<0.05
Hypertension	15 (83%)	43 (59%)	p = ns
Syncope	4 (22%)	8 (11%)	p = ns
Chest or back pain	16 (89%)	65 (89%)	p = ns
Marfan's syndrome	0	16 (22%)	p<0.05
DeBakey type (I/II)	13 / 5	59 / 14	p = ns
Renal dysfunction	7 (39%)	13 (18%)	p = ns
Pericardial effusion	15 (83%)	41 (56%)	p<0.05
Pleural effusion	12 (67%)	15 (21%)	p<0.05
Mediastinal hemorrhage	4 (22%)	1 (1%)	p<0.05

AIH : aortic intramural hemorrhage ; AD : aortic dissection

가 (p<0.001),
3 : 15, 47 : 26
가
(83% vs. 36%, p<0.001).
(back)
,
. Marfan
16
Marfan
DeBakey
가 , (83% vs. 56%),
(67% vs. 21%) (22% vs.
1%)

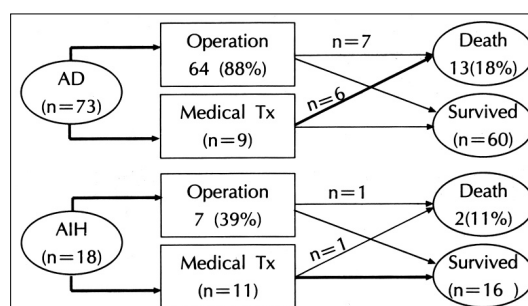
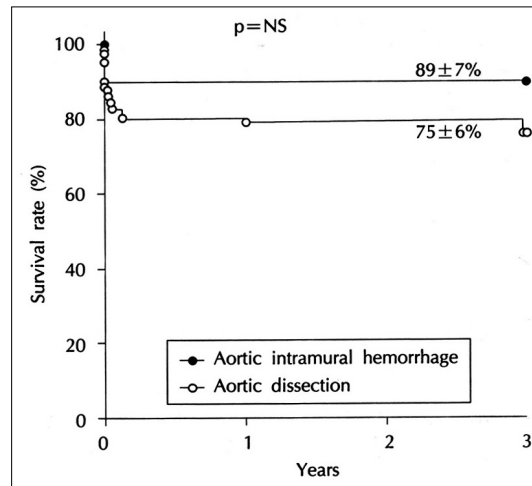
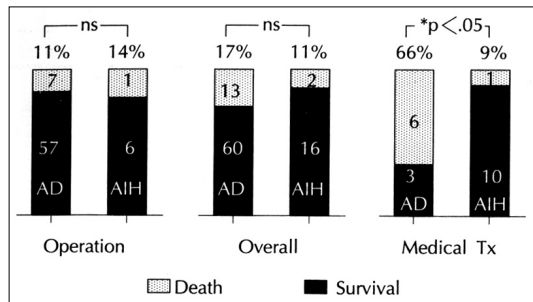


Fig. 2. Therapeutic modalities and hospital course. In AD group, 88% (64/73) underwent emergent surgical repair and medical treatment was selected for the remaining 9 patients. But, in AIH group, only 39% (7/18) underwent surgery, which was significantly lower than in AD group (p<0.05).

입원 경과 및 추적 관찰

Fig. 2 .
64
(88%)
(39%)
11 (61%)
가
(p<0.05).
(shock)
(multiorgan failure)
가 6 , 3
가
가 7
가 3
(shock)
(17% vs. 11%)
(11% vs. 14%)
(p=NS).
가
9 6 (66%)
11 1 (9%)가
(p<0.05)
(Fig. 3).
가 76 26



1

2 가

3

75 ± 6%, 89 ± 7%
(Fig. 4).

6 가

3

가

가

8 가 가 4

가

4 2 (De -

Bakey I 1 , II 2 , III 1)가
(Table 2).

aortic ectasia가

가 2 (DeBakey I 1 , II 1)
(aortic an -

eurysm)

고 찰

가

Fig. 4. Overall actuarial survival curves of patients with the diagnosis of aortic intramural hemorrhage and of patients with typical aortic dissection, including hospital deaths and late mortality during follow-up after both medical and surgical therapy. The 3-year survival rate of AIH was $89 \pm 7\%$, which was not significantly different from that of AD ($75 \pm 6\%$).

Table 2. Summary of clinical profiles, diagnostic procedures, therapeutic strategies and outcomes of 18 patients with proximal aortic intramural hemorrhage

Case NO	Age (yr)	Sex	Diagnostic imaging	De-Bakey Type	Treatment	Reason for medical Tx	In-hospital outcome	Duration of follow-up	Follow-up imaging	Time to dissection	Outcome (DeBakey type)
1	74	F	CT, TEE, MRI	II	Medical		Survived	8 months	CT	20 days	Focal dissection (II)
2	78	F	CT	I	Medical	Bronchial asthma	Survived	15 months	CT	2 months	Overt dissection (I)
3	80	F	CT, TEE	I	Medical		Survived	12 months	CT, TEE		Complete resorption
4	71	F	CT, TEE	I	Medical		Survived	35 months	MRI		Complete resorption
5	87	F	CT, TEE	I	Medical		Survived	37 months	TEE		Complete resorption
6	72	F	CT, TEE	I	Medical		Survived	18 months	CT		Complete resorption
7	48	M	CT, TEE	I	Medical		Survived	15 months	TEE	2 months	Focal dissection (III)
8	71	F	CT, TEE	I	Medical		Survived	17 months	CT, TEE	3 months	Overt dissection (II)
9	71	F	CT, TEE	II	Medical	Malignancy	Survived	2 months			
10	72	F	CT, TEE	I	Medical	Stroke	Survived	56 months			
11	54	F	CT, TEE	II	Medical	Shock	Death				
12	48	M	CT, TEE, MRI	II	Surgery		Survived	6 months			
13	75	F	CT, TEE	I	Surgery		Survived	37 months			
14	68	F	CT, TEE	II	Surgery		Survived	30 months			
15	72	F	CT, TEE	I	Surgery		Survived	25 months	TEE		
16	62	F	CT, TEE	I	Surgery		Survived	68 months	CT, TEE		
17	66	M	CT, TEE	I	Surgery		Survived	19 months	CT, TEE		
18	68	F	TEE	I	Surgery		Death				

F : female ; M : male ; CT : computed tomography ; TEE : transesophageal echocardiography ; MRI : magnetic resonance imaging ; Tx : treatment

(42%)가 12 5 (noncommunicating aortic dis-
section)가
가¹³⁾
30
80%(4/5) 가 (11% vs. 33%, p<0.05),¹⁴⁾
가
가
, 1920 Krukenberg⁹⁾ (70% vs. 8%, p<0.05).¹⁵⁾
가
가
(morbidity)
¹⁰⁻¹²⁾
가

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39% 가
 가 (17% vs. 11%)
 9%
 66%
 3) 가 76 26
 3 가 3 75
 $\pm 6\%$ $89 \pm 7\%$
 4) 가 가 8
 4 가 4
 가 (DeBakey type I/II/III =
 1/2/1).
 결 론 :

가
 가
 중심 단어 :

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