

1

1999	5	24	1999	8	16	.
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1)

2) (staining):
가 가 가
3) (dye collection): 가 32 (47%), 29 (43%), 24 (35%)
가
4) (fistula): 4 (29%), 2 (14%), 4 (29%),
가 9 (64%) 가 82 54
가 (Table 1).
(left circumflex artery), (left anterior de-
scending artery), (right coronary artery)
가 12 , 가
56 , 가 2
68 , 가 66 (%) 가
1 , 가 1
(sinus nodal branch)가 4
14 7 ,
2 가
47 (67%)
68 46 (68%)
14 4 (29%)
6 (43%)
429 98 88
10
90 (92%)
10 (11%) 4
4 , 2
98
70 (71.4%)
60
2 2 2
8

가 50 (74%),
32 (47%), 29 (43%), 24 (35%)
가
4 (29%), 2 (14%), 4 (29%),
9 (64%) 가 82 54
가 (Table 1).
가 12 , 가
56 , 가 2
68 , 가 66 (%) 가
1 , 가 1
(sinus nodal branch)가 4
14 7 ,
2 가
47 (67%)
68 46 (68%)
14 4 (29%)
6 (43%)

Table 1. Coronary Angiographic Findings of Left Atrial Thrombi

Morphology	N*	Fistula	Collection	Staining	Neovascularity
LCA	68	50	32	29	24
RCA	14	4	2	4	9
Total	82	54	34	33	33

Total number of patients is 70

*Number of origin of abnormal vasculature

LCA= left coronary artery, RCA= right coronary artery.

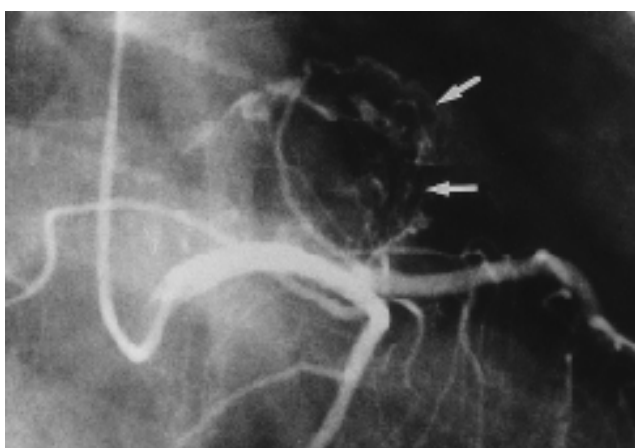
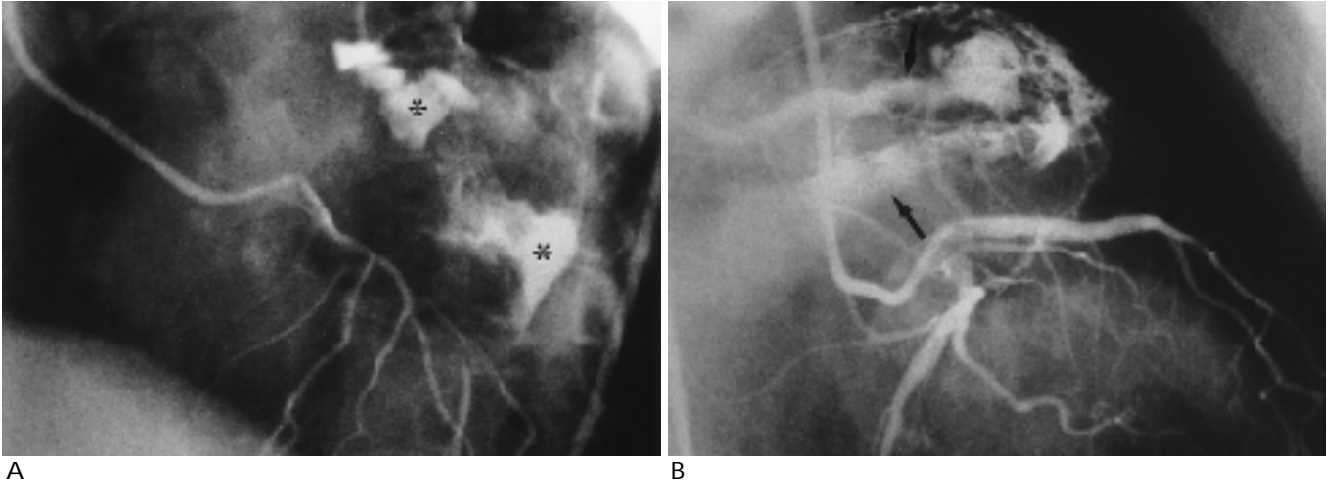


Fig. 1. Neovascularity. Left coronary angiogram in elongated right anterior oblique view of 60-year-old woman shows numerous fine vascular networks(white arrows) arising from the left circumflex coronary artery. Thrombus was confirmed by repeated transesophageal echocardiography.



Fig. 2. Staining. Left coronary angiogram in a 53-year-old man shows homogenous increased opacity(arrowheads) due to contrast enhancement arising from the left circumflex coronary artery. Thrombus was confirmed by operation.



A B
Fig. 3. Dye collection and Fistula seen on left coronary angiograms of 57-year-old woman.
A.Long axial oblique view shows well-circumscribed puddling of contrast material(asterisks), representing dye collection, which arises from left circumflex coronary artery.
B.Elongated right anterior oblique view shows contrast leakage via the abnormal communication between left circumflex coronary artery and left atrial cavity(black arrows), representing fistula. Thrombus was confirmed by operation.

88 28 가 40 (2,13,17,18).
24 , 가 5 , 가 4 , (2,14,15,19).
가 3 , 가 5 , 가 7 , 가 2 , 가 (14,15,17,19). 1975 Standen (15),
가 5 , 4 1 , (2,3,13,14, 19).
2 2 가 가 66% 가
가 가 (2,5). 83% 가 가 66% 가
(6-10), 가 가 80% Russo (1) 95%, Sakamoto (17) 82.3% 가
(16). 가 67%

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Coronary Angiographic Findings of Left Atrial Thrombi in Mitral Stenosis¹

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Purpose : To investigate the coronary angiographic findings of left atrial thrombi associated with mitral stenosis.

Materials and Methods : In 98 patients who had undergone coronary angiography and in whom the presence of left atrial thrombi was confirmed by surgery or repeated transesophageal echocardiography, evaluated the pattern, origin and location of abnormal vasculature suggestive of left atrial thrombi such; abnormalities included neovascularity, staining, dye collection and fistula.

Results : Abnormal vasculature was observed in 70 patients (71.4 %). It arose from the left circumflex artery in 66 patients (including the sinus nodal branch in four), the right coronary artery in 14 (including the sinus nodal branch in 7 and conal branch in 2), the left anterior descending artery in one, and the left main coronary artery in one. The patterns of abnormal vasculature arising from the left coronary artery were fistula in 50, dye collection in 32, staining in 29 and neovascularity in 24; those arising from the right coronary artery were fistula in four, dye collection in two, staining in four and neovascularity in nine. Abnormal vasculature located at the anterior third of the left atrium in 50 cases, the middle in 20, and the posterior region in 12.

Conclusion : The abnormal vasculature suggested by left atrial thrombi most commonly arose from the left circumflex artery and was located at the anterior one-third of the left atrial cavity. Fistula was the most common finding of left atrial thrombi, and for that these detection of the abnormal vasculature thrombi give rise to, selective coronary angiography was the useful modality.

Index words : Coronary angiography
Left atrium, thrombosis
Mitral valve, stenosis

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