

## Antithrombin III

### The Study of Antithrombin III Deficiency in Patients with Recurrent Spontaneous Abortion

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**Objective:** To analyze the antithrombin II deficiency in patients with recurrent spontaneous abortion.

**Material and Method:** The blood samples were tested by chromogenic assay to evaluate the activity of antithrombin III.

**Results:** There was only one case of antithrombin III deficiency. This patient experienced one neonatal death after delivery and one FDIU (fetal death in utero). And also this patient showed a lupus anticoagulant and the prolongation of PTT.

**Conclusions:** Women with recurrent miscarriage who have no obvious identified cause should consider hematologic screening. Antithrombin III deficiency could be a cause of recurrent spontaneous abortion. But the incidence is very rare in Korean patients.

**Key Words:** Recurrent spontaneous abortion, Antithrombin III deficiency

Antithrombin inhibitor)	thrombin	(serine protease Xa, IXa, XIa, XIIa	50%	(heterozygote)	1 antithrom-
			bin III		gene deletion, frameshift muta-
		가 40 ×	tion		truncated protein
10 <sup>3</sup>		antith-	2		(point mutation)가
rombin III		heparin-binding domain			thrombin-binding do-
Antithrombin III	80	main	가		
				antithrombin III	1/2,000
Antithrombin III		antithrombin III	~1/5,000		
가		( 1 )	antithrombin III		3~8%
		( 2 ) 가		antithrombin III	
1		antithrombin			(disseminated intrava-
III	가		scular coagulation: DIC),		(nephrotic

syndrome), , L-asparaginase ,

Antithrombin III 10~35  
가 가 antithrombin III 80~120% 100  
(deep vein thrombosis) (pulmonary embolism) antithrombin III  
가 71.8% antithrombin  
가  
PTT가 35.4 sec

Antithrombin III chromogenic assay  
(heparin cofactor activity)  
70~130% . Anti-  
thrombin III M-partigen antithrombin III (thromboembolism)  
bin III (immunodiffusion) (thrombophilia) (deep vein thrombosis) 5  
antithrombin III 가 Virchow (hypercoaguability),  
tithrombin III an- (stasis), (endothelial injury) 가  
가  
가

1. Antithrombin III serpin  
(serine protease inhibitor) 58,200 dalton  
1998 1 1 2001 12 31 가 4 (oligosaccharide chain)가 432  
100  
2 5 alpha 2 (glycoprotein)  
antithrombin III  
2. 2.7 μM (15 mg/dL)  
trisodium citrate (Becton Dickinson (high affinity) 80% an-  
Vacutainer Systems, USA) tithrombin III . Antithrombin III 가  
9 : 1 2 3,500 rpm 가  
5 antithrombin III antithrombin  
ACL Futra plus (Instrumentation Laboratory, III 가  
USA) chromogenic assay antithrombin III  
가  
Antithrombin III 1

<sup>1</sup> antithrombin III (heterozygosity)  
 가 antithrombin III 25~60% antithrombin III  
 antithrombin III가  
<sup>2</sup> antithrombin III 1  
 antithrombin III  
<sup>3</sup> antithrombin III  
 6 antithrombin III  
<sup>4</sup> Antithrombin III  
 가 60% <sup>9</sup> 2 antithrom-  
 0.3 units/mL antithrombin III 가 39% bin III  
 , 49% , 11% 가  
 antithrombin III <sup>5</sup> 40 <sup>10</sup>  
 Antithrombin III 60~70 antithrombin III  
 antithrombin III <sup>11</sup> Antithrom-  
 가 가 bin III Glasgow (Arg-393 Cys) antithrombin III  
 가 <sup>67</sup> Antithrom- Northwick Park (Arg-393 His)  
 bin III (co-  
 antithrombin III 가 valent complex)  
 Antithrombin III 가 antithrombin III  
 Antithrombin III 가 Anti-  
 100 antithrombin III Denver (Ser-394 Leu)  
 rombin III antithrombin III 60% <sup>9</sup>  
 bin III antithrombin III 가  
 , 가 가 antithrombin III 가  
 antithrombin III Antithrombin III Rouen I  
 (Arg-47 His), Rouen II (Arg-47 Ser), Toyama  
 (Arg-47 Cys) antithrombin III 가  
 Antithrombin  
 III Basel (Pro-41 Leu) 가 an-  
 tithrombin III가 3  
 III 1/500 antithrombin  
 45 가 가 6% <sup>9</sup>  
 4.5% antithrombin III  
 2% <sup>8</sup> (iliac vein) 가  
 6~60% <sup>9</sup> (mesenteric vein)  
 (homozygosity) 가

(disseminated intravascular coagulation: DIC)  
antithrombin III 가  
antithrombin III 가  
가 가 7,10  
Antithrombin III 가  
antithrombin III 9  
70%가 12 3  
3~4  
antithrombin III 13 an-  
tithrombin III  
14,15 An-  
tithrombin III 15,16  
가  
50% (pasteurization) antithrom-  
bin III  
51% 가 antithrombin III  
5.2 가 anti-  
antithrombin III thrombin III  
Antithrombin III  
가  
activated partial 17,18  
thromboplastin time, prothrombin time, thrombin time antithrombin III 가  
antithrombin III antithrombin III 가  
가 가  
antithrombin III 가 antithrombin III  
1 Antithrombin III  
antithrombin III antithrombin III 1  
antithrombin III  
antithrombin III  
가 L-asparaginase antithrom-  
rombin III가 antithrom-  
bin III 가  
(nephrotic syndrome)  
antithrombin III 가 가 antithrom-  
bin III가 , ,

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