

A Study of Factor XII Deficiency in Recurrent Spontaneous Abortion

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Objective: To evaluate factor XII deficiency in patients with recurrent spontaneous abortion and its relation to aPTT.

Material and Method: Factor XII was analyzed by clotting method.

Results: Of 70 patients with recurrent spontaneous abortion, there were 35 cases of factor XII deficiency. Among them, there were only 3 cases of prolonged aPTT.

Conclusions: It is still unclear whether factor XII deficiency is related to recurrent spontaneous abortion. Molecular approaches should be used to understand further the causal relationship. But based on this result, in the workup of patients with recurrent spontaneous abortion, factor XII should be included. aPTT is not likely to represent the abnormality of factor XII.

Key Words: Factor XII deficiency, aPTT, Recurrent spontaneous abortion

12 (intrinsic (lupus an-
 pathway) ticoagulant), 8
 (protease) (fibrinolysis) bradykinin .
 50~70 12
 . 12 1 , 8 , 13 (thromboembolism) . 12
 12 가
 가 12
 (acti- . 12
 vated partial thromboplastin time: aPTT)
 . 12
 12 (syncytiotrophoblast) (spiral
 1.5~3.0% artery)
 12 aPTT가 120 가
 0.3% . aPTT가

Table 1. The prevalence of decreased FXII in patients with recurrent spontaneous abortion

Normal FXII	35
Decreased FXII	35
Total	70

Table 2. The prevalence of prolonged aPTT in patients with decreased FXII

Normal aPTT	32
Prolonged aPTT	3
Total	35

fibrinogen 13 가
12
aPTT

4.
% 12

1998 1 1 2000 12 31
70
12
ACL 3000 plus (Italy)

70 12
35 50% (Ta-
ble 1). aPTT가 3 12
aPTT
(Table 2).

1. kit
Dade Factor 12 Deficient Plasma
2. kit
Dade International Inc
3.
1) PT, PTT
2) 0.2 ml Owerns beronal buffer 0.8 ml (5).
3) Normal calibrator 0.2 ml Owerns beronal buffer 0.8 ml (5).
4) normal calibrator pool position tray
5) Single mode high curve 12
6) 가 15% high curve
low curve
7) 5
8) Normal calibrator 80 pool position

12
serine protease
(intrinsic pathway), (fibrinolysis), bradykinin
(complement system) 12
COOH (catalytic domain),
2 fibronectin, (epidermal growth factor),
kringle
12
(thrombophilia)
가 12
12 5 12 Kb
13 intron
(zymogen)
NH₂ putative signal
1 exon 2 exon

collagen 2 4 exon 5 exon 12 2 가
 wp1 10-12
 fibrin fin- 12
 ger가 6 exon 7 exon 8 ,9 exon PTT가 13,14
 kringle
 proline 12 Cys571 Ser
 light chain 5 exon (10~14) (homozygote) 12
 14 가 serine protease 55 3%
 3'-untranslated end 150 bp 12 가 PTT가 15,16
 2
 12 intron / exon
 (tissue-type) plasminogen (uro- 17 (heterozygote) 가
 kinase-type) plasminogen serine pro- 10%
 tease 12 가 18,19 가
 31+8 µg/mL (0.375 µM) 3,4
 12 mRNA 가 12
 12 가 20 (deep vein thrombosis)
 12 가 가 Estrogen pro- 가
 lactin 12 가
 가 6 12 DNA 17β-estradiol 가
 estrogen (promoter) 가 21
 가
 12 kinin 가 가
 12
 kallikrein 12 12 12
 prekallikrein 11
 12 가 aPTT가
 1985 12 12
 7 12 cDNA 가 22,23
 mRNA 2,045 (nucleotide) 가 12
 615 12 2.9~9.4% 24,25 12
 가 clone (hypofibrinolysis)
 12 kb 14 exon 가
 12 5 von Willebrand ,
 33 89 (fibrinogen deficiency), antithrombin , C
 12 가 , S

12
 (lupus anticoagulant)가
 12 가
 20.9% 12 가
 12 가
 12 가
 12 가
 12
 12 exon-intron
 (hepatocyte growth fac-
 tor: HGF) plasminogen serine pro-
 tease
 28 12 가
 29
 가 (trophoblast)
 30,31 12
 25 12
 12

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