

Clinical Consideration of Obese Infertile Women

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Objective: To analyze the clinical characteristics of obese infertile women.

Material and Method: Height, weight, body mass index, menstrual pattern, glucose, insulin, glucose / insulin ratio, dehydroepiandrosterone sulfate (DHEA -S), testosterone, free testosterone and plasminogen activator inhibitor (PAI-1) of 15 obese infertile women were tested.

Results: Of 15 obese infertile women, the number of diabetes mellitus, hyperinsulinemia, and insulin resistance was 2 (13%), 2 (13%), 2 (13%), respectively. The incidence of increased DHEA -S, testosterone, and free testosterone was 7 (47%), 1 (7%), 6 (40%), respectively. Notably, all patients showed increased PAI-1.

Conclusions: Obesity is associated with infertility as well as many kinds of health problems. Obesity is closely related to insulin resistance and it also causes hyperandrogenism. Increased PAI-1 is one of the important causes of thrombophilia. Consequently, in the workup of obese infertile patient, many aspects of health problems should be considered.

Key Words: Obesity, Infertility

(obesity) (visceral obesity) (insulin resistance)
(adiposity) (hyperinsulinemia)
(overweightness)
(sex hormone binding globulin: SHBG)
testosterone 가
가 가 (body mass index: (clearance rate) 가
BMI) (kg) (m)
가 25 , (aromatization) 가
30
(upper body obesity)

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Table 1. Clinical characteristics of obese infertile women

	Height	Weight	BMI	Glucose	Insulin	G / I	DS	T	Free T	PAI-1
1	159	71	28.1	91	3.1	29.3	N	N		
2	152	70	30.4	88	9.4	9.4	N	N	N	
3	160	76	29.7	81	1.0	81.0	N		N	
4	157	74	30.1	294	5.6	52.5		N	N	
5	162	73	27.9	83	26.7	3.1				
6	158	70	28.0	91	10.8	8.43	N	N	N	
7	161	90	34.7	136	32.8	4.15		N		
8	167	92	33.0	85	16.0	5.3		N		
9	171	75	25.7	118	7.7	15.3		N	N	
10	168	73	25.9	93	16.1	5.8	N	N		
11	158	78	31.2	100	6.5	15.4	N	N	N	
12	157	82	33.3	111	15.1	7.4	N	N		
13	163	70	26.3	81	1.0	81.0		N	N	
14	160	82	32.0	83	5.3	15.7	N	N	N	
15	158	85	34.0	93	4.7	19.8		N	N	

BMI: body mass index, G / I: glucose / insulin, DS: dehydroepiandrosterone sulfate, T: testosterone, PAI-1: plasminogen activator inhibitor-1

factor 1: IGF-1)
 가
 1 (insulin-like growth factor)
 leptin
 가
 1.
 2001 1 1 2001 12 31
 가
 25 15
 2.
 가
 (hyperlipidemia) 가
 (glucose intolerance) 가
 , dehydroepiandrosterone sulfate (DHEA-S), testosterone, testosterone, plasminogen activator inhibitor (PAI-1)
 가
 가
 15 가 2 (13%)

sterone 1 (7%),
 15 가

2 (13%)
 2 (13%)
 DHEA-S 7 (47%), testosterone 6 (40%)
 PAI-1 (Table 1).

(gonadotropin releasing hormone: GnRH) (agonist) 6

(hyperandrogenism),
 (hyperinsulinemia) 10,11

(upper body obesity) 1 가
 (insulin resistance)

(gynecoid obesity)
 (waist-to-hip ratio) 가 가 12
 (sex hormone binding globulin: SHBG) testosterone 가 가 3 13,14

가 가 4

가 5

가 가 6 16,17

mal cell) (stro-) 18

(euglycemic hyperinsulinemic clamp procedure) testosterone 8 19

(antiandrogen)

가 (intravenous insulin tolerance test) .
 가 30~45 5~10 가
 .
 20 가
 .
 가
 .
 21 가
 .
 22,23 가
 .
 가 24 가 가
 .
 가
 (glucose tolerance test)
 , 가
 ,
 가 ,
 .
 가
 (oral glucose tolerance test)
 (reproducibility)
 .
 25
 Plasminogen activator inhibitor (PAI-1)
 (fibrinolysis) . PAI-1 an-
 tithrombin heparin cofactor II가 protease
 inhibitor serpin . PAI-1 ,
 .
 PAI-1 가
 26,27
 plasminogen
 activator가 plasminogen activator inhibitor
 가 28,29 PAI-1
 가 18%
 48% 30

PAI-1 가

가

가

가

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