Prevalence of inherited thrombophilia in severe OHSS

Machač Š.[1], Ľubuški M.[2], Procházka M.[2], Slavík L.[3]

Unica, Institute of reproductive medicine, Brno, Czech Republic [1]
Dept. of Obstetrics and Gynaecology, Palacký University Hospital, Olomouc, Czech Republic [2]
Dept. of Hemato-oncology, Palacký University Hospital, Olomouc, Czech Republic [3]

INTRODUCTION

Inherited thrombophilia consists of a group of disorders presenting with increased tendency to thrombosis. Includes protein C and protein S deficiencies, resistance to activated protein C (factor V Leiden mutation), mutation of prothrombin G20210A and polymorphism in the methylentetrahydropholat reductase gene (MTHFR 677T). Aim of the study was to determine the prevalence of markers of inherited thrombophilia among women with severe OHSS (ovarian hyperstimulation syndrome).

MATERIAL AND METHODS

Women undergoing controlled ovarian hyperstimulation for IVF complicated by severe OHSS (group A, n = 50), were compared with two control groups. Group of women undergoing ovarian hyperstimulation for IVF without development of OHSS (group B, n = 93) and group of healthy pregnant women with no history of infertility (group C, n = 196). Blood samples were analysed for markers of inherited thrombophilia.

RESULTS

We found 7 out of 50 patients from group A positive for Leiden mutation (heterozygots) in comparison with 11 out of 93 patients from group B (heterozygot), p = 0,71 OR 1,21 (0,39 3,7) and 10 out of 198 from group C (heterozygots), p = 0,03 OR 3,03 (0,97 9,28). The polymorphism of MTHFR 677T gene was detected in 17 patients (17/50) in group A (heterozygots), in 35 (35/93) patients in group B (34 heterzygots, 1 homozygot) and in 86 (86/196) patients in group C (79 heterozygots, 7 homozygots) with no statistical significance. One patient from group A and two patients from group B had protein S deficiency, non of them protein C deficiency. One patient from control group B had mutation of prothrombin.

CONCLUSION

We found statistically significant increased prevalence of factor V Leiden mutation in Czech infertile women. Carriers of Leiden mutation have no increased risk of development severe form of OHSS during stimulation in IVF.

	Study Group A n = 50	Control Group B n = 93	p	Odds ratio
FV Leiden mutation	7	11	0,71	1,21 (0,39-3,7)
MTHFR 677 heterozygot	17	36	0,58	0,82 (0,37-1,78)
homozygot	0	1	0,66	not estim.

	Study Group A n = 50	Control Group C n = 196	p	Odds ratio
FV Leiden mutation	7	10	0,03	3,03 (0,97-9,28)
MTHFR 677 heterozygot	17	86	0,21	0,66 (0,33-1,32)
homozygot	0	7	0,56	not estim.

	Control Group B n = 93	Control Group C n = 196	P	Odds ratio
FV Leiden mutation	11	10	0,03	2,50 (0,94-6,65)
MTHFR 677 heterozygot	36	86	0,41	0,81 (0,47-1,38)
heterozygot	1	7	0,23	0,29 (0,01-2,42)

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