Poster Number: EP 416   Name: Dr Poonam Kashyap
Title: Genetic Analysis of AXIN1 gene in Ovarian Cancer among Indian Population

Introduction

Ovarian cancer is a complex and heterogenous disease characterized by the uncontrolled growth of abnormal cells in the ovaries.

AXIN1 is a multidomain scaffolding protein that interacts with multiple proteins and serves as a key negative regulator of Wnt signaling pathway. Impaired regulation of the Wnt-dependent target genes is involved in the occurrence of several other human cancers and its abnormal expression has been associated with tumorigenesis and OC.

Objective

To investigate the Correlation between the polymorphisms in *AXIN1* with susceptibility to Epithelial Ovarian Carcinoma

Materials and Methods

❖Case-control study involving 70 Ovarian cancer patients and 70 ethnically matched controls

❖DNA was extracted by Qiagen. AX1N1 gene polymorphism was examined by examined by PCR/RFLP

❖ Ovarian cancer risk was evaluated using Fisher's two tailed test at 95% significance level. A *P* value <0.05 was considered statistically significant.

❖Statistical analysis was performed with the Statistical Package for the Social Sciences(SPSS for windows v10)

Results

		rs1805105)					rs370681					rs12921862				
	70	TT	CT	CC	p value	OR(CI)	CC	TC	TT	P value	OR (95% CI)	CC	AC	AA	P value	OR (95% CI)
Tumor Grade																
High	49	31	12	6	0.43	1.56(0.55-4.40)	37	10	2	0.02	3.39(1.15-9.9)	28	16	5	0.79	0.82(0.28-2.33)
Low	21	11	8	2			10	9	2			13	6	2		
Tumor Stage																
I-II	32	21	8	3	0.6237	1.38(0.52-3.67)	20	8	4	0.8	0.86(0.32-2.31)	20	10	2	0.1	2.29(0.87-6.0)
III-IV	38	22	11	5			25	9	4			16	18	4		
Histology																
Serous	33	22	8	3	0.23	1.89(0.71-4.99)	13	17	3	0.02	0.31(0.11--.83)	19	12	2	0.44	0.59 (0.21-1.62)
Others	37	19	12	6			25	8	4			23	8	2		
Age																
<45	22	11	5	6	0.434	0.60(0.21-1.66)	9	8	5	0.2	0.49(0.17-`1.37)	10	8	4	0.03	0.30(0.10-0.88)
>45	48	30	10	8			31	9	8			35	11	2		

P value<0.05 significant

Discussion

❖Stratification analysis of genotype and allele distributions in OC patients with different FIGO stages (I+II and III+IV), tumor grades (G1+G2and G3), histological types (serous and others)and ages(<45and≥45years old) was performed.

❖Significant association was observed in rs370681, Histology [P value =0.02; OR, 0.31(0.11--.83) (and Tumor Grades (p-value 0.02 (OR 3.39 (95% CI 1.15-9.9).

Conclusion

Genetic variations in AX1N1 gene (rs 370681 and rs 12921862) contribute to the etiology of ovarian cancer among north Indians

Results

❖Significant differences (p < 0.05) in genotype frequencies of AX1N1 [rs1805105, and rs370681] were observed between both the groups. Significant association