

The familial pattern of spontaneous preterm birth: a case control study

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Objective. To investigate the role of family history of preterm birth (PTB) as an individual risk factor for spontaneous preterm delivery.

Materials and Methods. This was a retrospective case-control study. 354 patients (Cases n = 177, Controls n = 177) were enrolled between 2018-2020. Cases were defined as women with history of spontaneous PTB and controls as women with history of full-term delivery. A telephone questionnaire was administered to investigate the family history of PTB of both the patient and her partner. Cases and controls were matched for the anamnestic risk factors for PTB.

Results. 17 of 173 women (9.8%) in the PTB group reported being born before term, compared to 5 of 169 women (2.9%) in the control group, with odds ratio (OR) of 3.57 (95%CI 1.29-9.92). Women who had preterm delivery also reported more frequently having a sibling who was born preterm (12.35% versus 4.24%) with OR of 3.18 (95%CI 1.31-7.7). Patients whose partner was born prematurely did not have increased risk of delivering their child prematurely. Similarly, no other associa-

tion were found between partner's family history of PTB and risk of preterm delivery in the present pregnancy.

Conclusions. Pregnant patients who were born prematurely or have siblings born in a similar manner have an increased risk of PTB in their own pregnancies. Assessment of female family history of PTB at pre-conception or at the first antenatal appointment should be used to identify woman at risk of having a PTB in the present pregnancy and for appropriate counselling and follow-up.

Results

	Case Group	Control Group	Odds Ratio (CI 95%)	P value
Patient family history				
Personal history of premature birth	17/173 (9.82%)	5/169 (2.96%)	3.57 (1.29-9.92)	0.0145
Sibling born prematurely	21/170 (12.35%)	7/165 (4.24%)	3.18 (1.31-7.7)	0.0103
Other first/second degree relatives born prematurely	24/146 (16.44%)	15/134 (11.19%)	1.56 (0.78-3.12)	0.207
Partner family history				
Personal history of premature birth	11/169 (6.51%)	14/160 (8.75%)	0.72 (0.32-1.65)	0.44
Sibling born prematurely	6/141 (4.26%)	6/122 (4.91%)	0.86 (0.27-2.73)	0.797
Other first/second degree relatives born prematurely	9/141 (6.38%)	8/122 (6.56%)	0.97 (0.36-2.6)	0.954

Bold values are statistically significant (p-value < 0.05)