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COMMON RISK FACTORS OF SPONTANEOUS PRETERM LABOR WITH INTACT FETAL MEMBRANES AT VICTORIA HOSPITAL BWP

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Abstract:
Background- *Spontaneous preterm labour normally refers to the contraction of uterine once every 10 minutes which is associated with the cervical effacement. The purpose of this study is to analyze the relation between sPTL and risk factors with foetal membranes.*
Methods- *This is a control study conducted in bahawalpur Victoria hospital in which 262 samples were taken and divided into two groups. Normal considered BMI was lied between 18.5 and 24.9 Kg/m2 while low BMI was less than 18.5 Kg/m^2. SPSS-20 was taken for data analyzation. Percentage, frequencies and BMI was calculated for categorical variables whereas Mean ±SD and age was calculated for continuous variables.*
Results- *30 cases had low BMI whereas 48 cases had the preterm delivery while 4 from controls. There was significant difference found in the preterm delivery past history and BMI amongst controls and cases.*
Conclusion- *There was relation found between the past history of preterm delivery, low BMI and intact foetal membranes with sPTL*
Keywords: Spontaneous preterm labour, body mass index, BMI, risk factors

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INTRODUCTION:

Preterm birth is that birth in which neonate born before the period of 37 weeks and also is one of the leading reasons for the infant mortality, long-term disability and neonatal morbidity. The commencement of labor between the period of 24 weeks and 37 weeks is called spontaneous preterm labor i.e. sPTL. Annually 15 million of neonates born as preterm and due to its complication around 1.1 million children dies and most of these cases occur in North America and Africa.

According to world health organization there are some categories based on the BMI fatness obese greater than r equal to 30Kg/m2, overweight 25-29.9 kg/m2, normal weight 18.5-24.9 kg/m2 and underweight less than 18.5 kg/m2. However, there are some adjustment of weight according to height whereas the prevalence of obesity and underweight is increasing globally.

Moreover, two or more deliveries before 37 weeks is called recurrent preterm. The risk of sPTL and recurrence is greater in patients who have preterm birth history. The women who had 1st r 2nd live births before 34 weeks of gestation has higher recurrence of sPTB. In 2nd pregnancy the rate of recurrence is between the 19 to 26%.

METHODS:

This is a control study in which 262 samples were taken and divided into two groups. WHO software was used to calculate the size of sample with following assumptions: Proportion of exposure BV in full term and preterm is 11.3% and 25% respectively. Power of test is 90% whereas the confidence level is 95%. Two groups were made 131 controls and 11 cases. For collecting samples non-probability consecutives sampling were used. In cases group those women were selected who had 24 weeks of gestation wit sPTL while for control group those women were selected who had 37 weeks of gestation period and had normal pregnancy. For calculating period of gestation the first day of last menstrual cycle was considered. Normal considered BMI was lied between 18.5 and 24.9 Kg/m2 while low BMI was less than 18.5 Kg/m^2. SPSS-20 was taken for data analyzation. Percentage, frequencies and BMI was calculated for categorical variables whereas Mean ±SD and age was calculated for continuous variables. Spontaneous preterm labour normally refers to the contraction of uterine once every 10 minutes which is associated with the cervical effacement. The purpose of this study is to analyze the relation between sPTL and risk factors with foetal membranes. For calculating the maternal BMI weight (kg)/ height (m2) is used.

RESULTS:

30 cases had low BMI whereas 48 cases had the preterm delivery while 4 from controls. There was significant difference found in the preterm delivery past history and BMI amongst controls and cases. Mean age of controls was 27.85±5.55 years and mean age for cases 26.97±7.07 years

Table-1: Age in cases and controls

Age (Years)	Cases n=131	Controls n=131	Total n=262
Mean	26.97	27.85	27.41
SD	7.07	5.55	6.36

30 patients had low BMI while 4 patients from control BMI had low BMI. Odds ratio and 95% CI for past history of preterm delivery in cases and controls is shown in Table-2.

Table-2: Odds ratios (OR) and 95% confidence intervals (CI) for low maternal BMI and past history of preterm delivery in cases and controls [n (%)]

Variables	Cases	Controls	Total	*p*	Odds ratio	95% CI	
						Lower	Upper
Low BMI	30 (11.5)	4 (1.5)	34 (13)	0.000*	9.431	3.217	27.646
No	101 (38.5)	127 (48.5)	228 (87)				
Total	131 (50)	131 (50)	262 (100)				
Past history of preterm delivery	48 (36.6)	4 (3.1)	52 (19.8)	0.000*	18.361	6.382	52.831
No	83 (63.4)	127 (96.9)	210 (80.2)				
Total	131 (100)	131 (100)	262 (100)				

*Highly Significant

DISCUSSION:

Our research shows that sPTL is altogether present in cases with low BMI when contrasted with controls ($p<0.05$). Comparative outcomes were cited in an examination led by Bennett et al15 that shows occurrence of sPTL with flawless fetal films is more in low BMI as contrast with typical conveyance at term. In Pakistan, 13.1% conveyances happen before 37 weeks where low BMI has been related with low birth weight and preterm conveyances.

According to world health organization there are some categories based on the BMI fatness obese greater than r equal to 30Kg/m2, overweight 25-29.9 kg/m2, normal weight 18.5-24.9 kg/m2 and underweight less than 18.5 kg/m2. However, there are some adjustment of weight according to height whereas the prevalence of obesity and underweight is increasing globally.

Indeed, even high BMI is fundamentally connected with endocrine and cardiovascular issue and diabetes in women. Another examination directed in Pakistan showed that large ladies are at 1.5 occasions more danger of conveying preterm babies. However, some remote investigations yield dubious outcomes on relationship among sPTB and BMI. An investigation inferred that underweight, overweight, and large ladies are bound to convey preterm when contrasted with typical women. Other examinations presumed that nulliparity, serious underweight BMI, and heftiness are related with higher danger of sPTL at <37 weeks. The higher danger of sPTL in ladies with high BMI can be decreased by utilizing 17-OHPC. Hernesch et al reasoned that BMI is essentially connected with sPTL all through pregnancy in all gestational age gatherings. Large II+ (≥35 Kg/m2) ladies are essentially more averse to create sPTL while underweight ladies are altogether bound to create sPTL. Multiple investigations led on term of pregnancy announced that higher BMI is related with low paces of sPTL while others revealed unaltered paces of sPTL. Be that as it may, a large portion of studies detailed noteworthy relationship among sPTL and low BMI.

CONCLUSION:

There was relation found between the past history of preterm delivery, low BMI and intact foetal membranes with sPTL

REFERENCE:

1. Saadia Z, Farrukh R, Asghar S. Bacterial vaginosis as a risk factor for preterm labor — an analysis of age and duration of marriage. J Gynecol Obstet 2016; 4(6): 68–71.
2. Simmons LE, Rubens CE, Darmstadt GL, Gravett MG. Preventing preterm birth and neonatal mortality: exploring the epidemiology, causes, and interventions. Semin Perinatol 2010; 34(6):408–15.
3. Howson CP, Kinney MV, Lawn JE. March of Dimes, PMNCH, Save the Children, and WHO, Born Too Soon: The Global Action Report on Preterm Birth. WHO, Geneva, Switzerland, 2012.
4. Blencowe H, Cousens S, Oestergaard MZ, Chou D, Moller AB, Narwal R, *et al*. National, regional, and worldwide estimates of preterm birth rates in the year 2010 with time trends since 1990 for selected countries: a systematic analysis and implications. Lancet 2012; 379(9832):2162–72.
5. Mwaniki MK, Atieno M, Lawn JE, Newton CR. Long-term neurodevelopmental outcomes after intrauterine and neonatal insults: a systematic review. Lancet 2012;379(9814):445–52.
6. Cobo T, Kacerovsky M, Jacobsson B. Noninvasive sampling of the intrauterine environment in women with preterm labor and intact membranes. Fetal Diagn Ther 2018;43:241–249.
7. World Health Organization. Obesity: preventing and managing the global epidemic. Report of a WHO Consultation (WHO Technical Report Series 894). Geneva: World Health Organization; 2000.
8. Sperrin M, Marshall AD, Higgins V, Renehan AG, Buchan IE. Body mass index relates weight to height differently in women and older adults: serial cross-sectional surveys in England (1992– 2011). J Public Health (Oxf) 2016;38(3):607–13.
9. NCD Risk Factor Collaboration. Worldwide trends in body-mass index, underweight, overweight, and obesity from 1975 to 2016: a pooled analysis of 2416 population-based measurement studies in
10. 128.9 million children, adolescents, and adults. Lancet 2017. doi: 10.1016/S0140-6736(17)32129-3.
11. Mazaki-Tovi S, Romero R, Kusanovic JP, Erez O, Pineles BL, Gotsch F, et al. Recurrent Preterm Birth. Seminars in Perinatology 2007;31(3):142–58.
12. Esplin MS, Elizabeth O, Alison F, kerber RA, Erin C, Simonsen SERN, et al. Estimating recurrence of spontaneous preterm delivery. Obstet Gynecol 2008;112(3):516–23.
13. Adams MM, Elam-Evans LD, Wilson HG, Gilbertz DA. Rates of and factors associated with recurrence of preterm delivery. JAMA 2000;283:1591–6.
14. Yang J, Baer RJ, Berghella V, Chambers C, Chung P, Coker T, Currier RJ, Druzin ML, Kuppermann M, Muglia LJ, Norton ME, Rand M, Ryckman K, Shaw GM, Stevenson

D, Jelliffe- Pawlowski LL. Recurrence of preterm birth and early term birth. Obstet Gynecol 2016;128(2):364–72.
15. Temu TB, Masenga G, Obure J, Mosha D, Mahande MJ. Maternal and obstetric risk factors associated with preterm delivery at a referral hospital in northern-eastern Tanzania. Asian Pacific J Reproduction 2016;5(5);365–70.
16. Bennett P. Preterm labour. In: Edmonds KD, (Ed). Dewhurst's Textbook of Obstetrics & Gynaecology. 17th ed. London: Blackwell; 2007. pp 177–8.
17. Urooj U, Ansari A, Baqai S. Pregnant women with low BMI (<19): frequency of preterm labor and low birth weight. Professional Med J 2011;18(4):592–7.
18. Moll U, Olsson H, Landin-Olsson M. Impact of pregestational weight and weight gain during pregnancy on long-term risk for diseases. PLoS ONE 2017;12(1):e0168543.
19. Munim S, Maheen H. Association of gestational weight gain and pre-pregnancy body mass index with adverse pregnancy outcome. J Coll Physicians Surgeons Pak 2012;22(11):694–8.
20. Sharashova EE, Anda EE, Grjibovski AM. Early pregnancy body mass index and spontaneous preterm birth in Northwest Russia: a registry-based study. BMC Pregnancy and Childbirth 2014;14(303);1–8.