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Research Article

**ASSESSMENT OF STRESS URINARY INCONTINENCE AFTER
DELIVERY AMONG PRIMIPARAS****Dr Neelum Zahir, Dr Muhammad Nadeem, Dr Abu Baker**
Institute of Kidney Diseases, Hayatabad Medical Complex Peshawar**Article Received:** June 2019**Accepted:** July 2019**Published:** August 2019**Abstract:**

Objective: The aim of this research work is to evaluate the occurrence of SUI after child birth, the association between stress urinary incontinence & delivery mode and the relationship between stress urinary incontinence with the other obstetric features.

Methodology: This study is prospective research work, total 900 primiparas' females with no past background of urinary incontinence were the part of this research work and we followed those females for four months after their delivery. The calculation of the impacts of the nominal variables carried out with the utilization of the V2 & Fisher's exact methods.

Result: The incidence of the stress urinary incontinence was 12.8% and there was a strong association of the delivery mode with the SUI. The rate of occurrence was 13.88% after delivery through vagina, 8.68% after the delivery through elective CS (Cesarean Section) & 23.0% after cesarean section performed after the obstructed labor attempts. The occurrence of the SUI after child birth was same for delivery through vagina and cesarean section after an obstructed labor. In the meantime, elective cesarean section with no labor trial was present with an association with a considerably less occurrence of the SUI after the child birth. A BMI of the mother more than thirty before the pregnancy & weight of the fetal greater than 3 kg appeared to have association with high rate of occurrence of the stress urinary incontinence.

Conclusion: There is low occurrence of the stress urinary incontinence after the elective cesarean section.

Key Words: Incontinence, Occurrence, SUI, Urinary, Vagina, Delivery, Variables.

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INTRODUCTION:

UI (Urinary Incontinence) occurs in 51.0% nulliparous females with pregnancy, it is present in all three trimesters of the pregnancy periods. However, only 7.0% females have these complications after the child birth. The danger of facing the urinary incontinence increases with the obesity, delivery through vagina, high parity, long duration of labor & episiotomy. Delivery through vagina increases the risk of SUI twice greater than the CS. In various epidemiologic research works, urinary incontinence was present to have an association with the previous child birth and the obstetric methods. The delivery through vagina is one of the important reason of the urinary incontinence among females and repeated deliveries through vagina can lead to the severe injury or damage to the muscles of the pelvic floor.

In the year of 2001, Farrell stated that prevalence of the urinary incontinence after child birth was 10.0% after cesarean section & 22.0% after normal delivery through vagina. Analysis of various variables showed that cesarean section has the ability to decrease the occurrence of urinary incontinence and other factors as BMI, parity, episiotomy and weight of baby at the time of birth are not much significant. This research work aimed to provide a comparison of the incidence of the stress urinary incontinence among primiparas' females after four months of child birth.

METHODOLOGY:

This research work was carried out in Institute of Kidney Diseases, Hayatabad Medical Complex Peshawar in the duration of one year from June 2015 to June 2016. The recruitment of the healthy nulliparous females with pregnancy were the part of this research work. Residents of Peshawar, females with null parity, with no history of urinary incontinence and in their last three months of pregnancy were the part of this research work. The reported occurrence of SUI was 8.0%, so we included one thousand pregnant females in this research work. The inquiry of the urinary incontinence carried out with the use of organized questionnaire. The sensitivity of the questionnaire was 99.0% when provided to a group of eight females diagnosed with

the stress urinary incontinence. There were related questions in the questionnaire to inquire the complication of SUI. The administration of the questionnaire carried out for the very first time in 24th & 28th week of the pregnancy period. We obtained the data of the delivery of every female from the medical records of the hospital.

In the current research work, the delivery mode included the delivery through vagina, elective cesarean section & cesarean section after obstructed labor. We gave every female with the same questionnaire after 4 months of the child birth. The participants who gave no response were not the part of this research work. Nominal & interval variables were the independent variables. Delivery mode, episiotomy & indication of CS were the nominal variables. Circumference of head, weight at the time of birth, maternal age, BMI, delivery time & pregnancy duration were the interval variables. The calculations of the impacts of the nominal variables carried out with the utilization of the V2 & Fisher's exact methods.

RESULTS:

From June 2015 to June 2016, 900 females selected for this research work; however, 200 females lost the follow ups, so the rate of response was 68.18%. A sum of total seven hundred females completed the questionnaire four months after the birth of child. Among them, 48.88% (n: 360) females were present with delivery through vagina & 47.8% (n: 340) delivered child cesarean section, which was an elective procedure for 307 females (86.53%) & because of the obstructed labor in 8.40% (n: 34) females. Elective cesarean section carried out for various difficulties. After 4 months of child delivery, there were 12.8% (n: 97) patients suffering from stress urinary incontinence among total 700 females (Table-1). The occurrence of the SUI after child birth was similar in patients with delivery through vagina & cesarean section performed after an obstructed labor. In the meantime, elective cesarean section was present to have an association of the stress urinary incontinence after child birth.

Table 1 Frequency of SUI According to Mode of Delivery

Mode of delivery	SUI		OR (95% CI)		P value
	No	Percent	Value	Range	
Vaginal	55.0	13.88	1.58	(1-2.3)	0.038
Elective CS	31.0	8.68	0.43	(0.2-0.7)	0.005
CS for obstructed labor	7.0	23.0	1.46	(0.6-2.4)	0.168

We divided the females into two groups, the occurrence of the clinical stress urinary incontinence was much lower among females present with the elective cesarean section as compared to those who delivered child through vagina (Table-2). The occurrence of the stress urinary incontinence in accordance with the age, body mass index, and weight of child at the time of birth, pregnancy duration, circumference of head & duration of the 2nd labor stage is present in Figures 1-4.

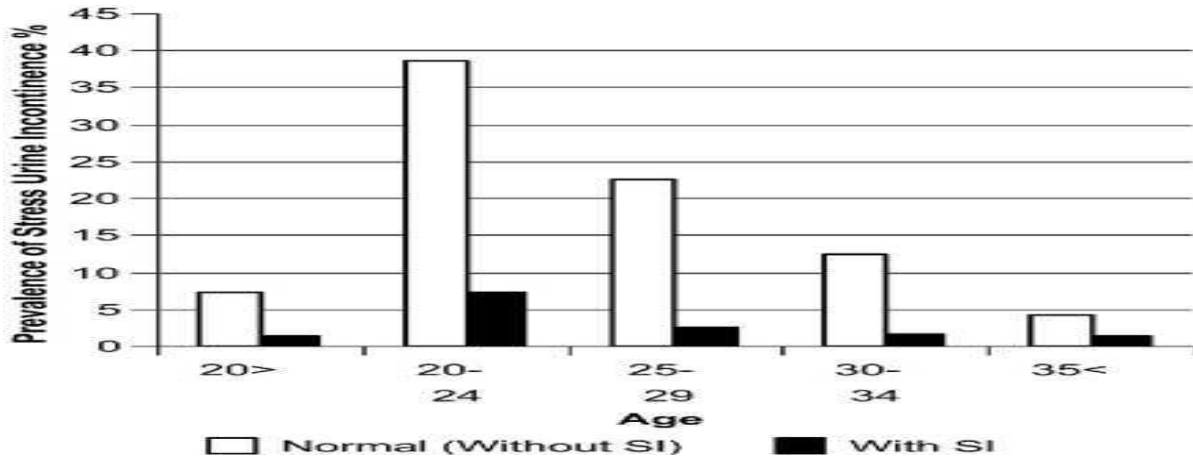


Figure 1

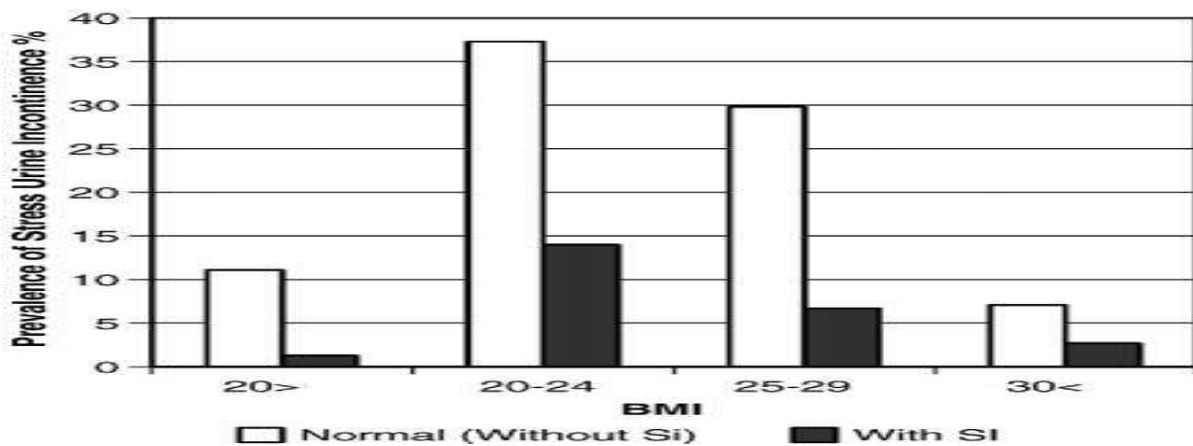


Figure 2

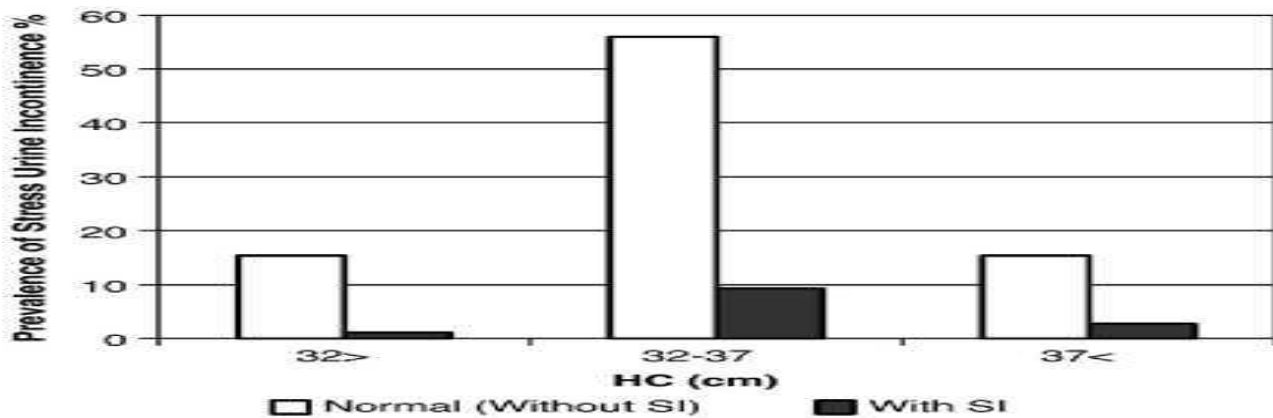


Figure 3

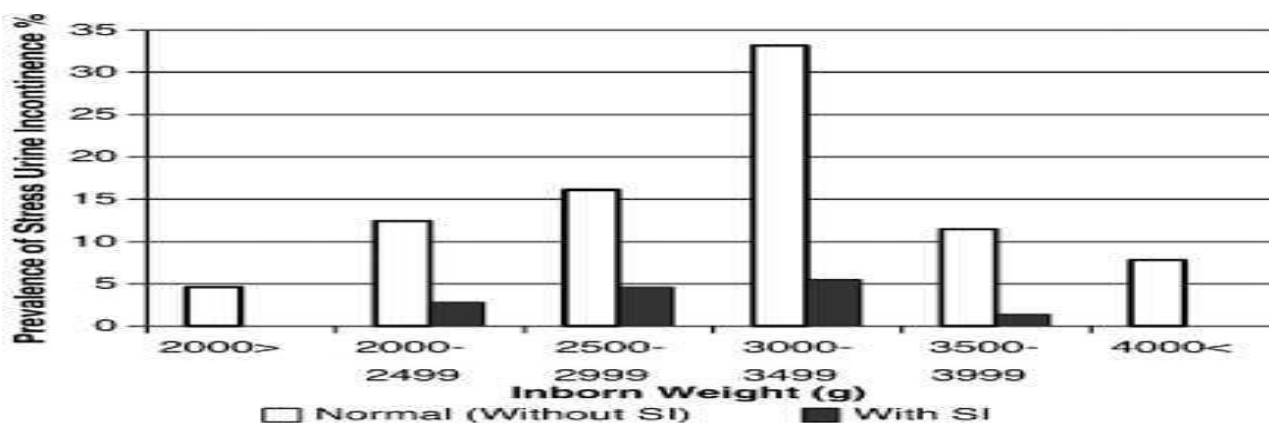


Figure 4

The incidence of the stress urinary incontinence was very high among women having more than 33 years of age & very low among females from 23-27 years of age. (Figure-1). There was no relationship between occurrence of SUI & circumference of head of the fetal.

Table 2 Frequency of Clinical And Insignificant SUI According to Delivery Mode

Mode of delivery	Clinical		Insignificant	
	No	Percent	No	Percent
Vaginal	22.0	40.8	31.0	55.87
Elective CS	22.0	71.00	7.0	25.00
CS for obstructed labor	4.0	68.00	1.0	28.00

DISCUSSION:

The association mode of delivery & stress urinary incontinence is the subject of many discussions. In this current research work, the occurrence of the SUI was within range as mentioned in the research works of the past, which ranges from 4.0% in a research work by Viktrup to 34.30% in the research work of Wilson. In current research work, the incidence of the stress urinary incontinence was 12.8%, with 14.0% as a result of normal delivery through vagina & 10.18% following cesarean section. After a follow up of three months, Viktrup discovered that most of the patients were free from symptoms reporting a 7.0% rate of de-novo incontinence & 4.0% rate of persistent incontinence. In a research work conducted by Chaliha discovered that after three months of child birth, the rate of UI was 14.60%, & that rate reduced to only 4.60% 6 months of the child birth. This show that the time required to pelvic to return its normal function is much high. So, the duration is very vital factor for the resolution of the complication of urinary incontinence.

Farrell discovered in his research work that CS has the ability to decrease the urinary incontinence after child birth. In other research work, Lal examined that the recent evidences are not well enough to support the utilization of the elective cesarean section for the

prevention of the urinary incontinence. Groutz also discovered that the incidence of SUI after child birth was similar in all modes of delivery. Various authors have various opinions regarding the part of the parturition in the occurrence of the stress urinary incontinence. Scott discovered same outcome about the maternal age as recent work, but in the research works of Chaliha & Fritel, maternal age was an important risk factors for the stress urinary incontinence. Some other research works as conducted by Goldberg stated that obesity is an important risk factor for the stress urinary incontinence even after the control the mode of delivery. In his research work as similar to some other research works, there was no evidence about the relationship between the circumference of head of the fetal and the rate of occurrence of stress urinary incontinence.

CONCLUSION

The findings of this research work showed that elective cesarean section is an effective mode of delivery to decrease the rate of occurrence of stress urinary incontinence after child birth. Body mass index of mother higher than thirty & weight of fetal higher than 3 kg were the main factors linked with the SUI after child birth.

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