

Risk Factors & Outcome of Operative Procedures of Genital Prolapse in Shaheed Tajuddin Ahmad Medical College Hospital, Gazipur, Bangladesh

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Abstract

Background: Genital prolapse is a very common gynaecological disorder in Bangladesh but women do not admit this problem due to shame, ignorance, social taboo and insolvency. The rural scenario is much more disastrous. **Objective:** To determine the risk factors & outcome of operative procedures of genital prolapse. **Material & Methods:** It was a cross sectional study. The research work had been carried out from July, 2019 to December, 2019 in the department of Obstetrics and Gynaecology at Shaheed Taj Uddin Ahmad Medical College Hospital, Gazipur, Bangladesh. Hospital women patients had been caring with genital prolapse were considered in this study and asked for proper history. Data was collected by using pre-design questionnaire. All the patients included in the study were evaluated by detailed history, through physical examination and relevant laboratory investigations. The maximum extend of the prolapse was clinically measured during a valsalva maneuver or coughing and was confirmed by the patient as being the most severe protrusion. Written informed consent to participate in this study was taken. **Result:** The mean age was found 59±5.4 years with range from 50 to 70 years. Educational status of the patients, 85(85%) patients were illiterate & marital status more than half 52 (52%) Patients were living with husband and 47 (47%) patients were widow. Regarding occupational status, Three forth 72 (72%) Patients were housewives, 18(18%) were day laborer and 10 (10%) were worker. 23% patients were underweight, 67% patients had average body weight and 10 % were obese. Primi para were found 2(2%) multipara were 53 (53%) and grand multi para were 45 (45%). Number of living child of the patients. 1-2 child were found 10(10%) patients, 3-4 child were 48 (48%) and ≥5 child were 42 (42%) patients. History of abdominal surgery was found in 6(6%) patients, vaginal delivery was found in 100 (100%) Patients, home delivery was in 90 (90%), majority 44(44%) patients had prolong labour during delivery and 2% had instrumental delivery. 60% patients did heavy work during puerperium, 32% did moderate work and only 8% did light work. 31% patients were engaged in heavy physical activities, 20% suffered from chronic cough and 15 % suffered from chronic constipation. 85% patients were delivered by untrained birth attendant. 100(100%) patients had felling of something coming down, 20(20%) had retention of urine, 92(92%) had frequency of micturition, 51(51%) had backache, 53(53%) had difficulty in emptying bladder, 41(41%) had burning during micturition, 45(45%) had constipation, 38(38%) had stress incontinence, 25(25%) had dragging pain in lower abdomen, 22 (22.0%) had white discharge and 5 (5%) had irreducible prolapse. 80(80%) patients had 2nd degree of uterine prolapses, 15(15%) patients had 1st degree & only 5(5%) patients had 3rd degree of uterine prolapses. 90 (90%) patients had moderate cystocele, 69(69%) patients had moderate rectocele, 27(27%) patients had urethrocele, 36(36%) had decubitus ulcer, 40(40%) had stress incontinence and 17 (17%) had elongation of cervix. management of the study population by vaginal hysterectomy with anterior colporrhaphy and posterior colpoperineorrhaphy 70(70%), anterior colporrhaphy 15(15%), posterior colpoperineorrhaphy 5(5%), pelvic floor repair 10(10%). 20(20%) had pyrexia, 5(5%) had hemorrhage, 15(15%) had urinary infection, 4 (4%) had local sepsis and 3(3%) had urinary retention. complete relief was found 93(93%) and 7 (7%) had partial relief. **Conclusion:** Genital Prolapse has a very high prevalence in multiparous women. There is a significant association between genital prolapse, history of collagen disease and childbirth-related pelvic floor trauma. Pyrexia and urinary infection were more common complication after surgical procedures of genital prolapse. Complete relief was found 93.0% of the patients.

Keywords: Risk Factors, Outcome, Genital Prolapse, Bangladesh.**Copyright © 2022 The Author(s):** This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

Genital Prolapse is a common gynaecological problem specially in developing countries. According to World Health Organization approximately 33% of the total global burden of disease is related to reproductive health [1]. In the United Kingdom, genital prolapse accounts for 20% of women [2]. A cohort study with more than 17000 women (aged 25-39) carried out in England & Scotland shows that the incidence of prolapse (with at least one hospital admission with the prolapse problem) is 2.04 per 1000 person years observation. The annual incidence of surgery for prolapse is 16.2 per 10000 [3]. A study carried out by women health initiative in United States among 27342 participants, forty percent (40%) had some degree of prolapse and 14% were diagnosed with uterine prolapse [4]. Pelvic organ prolapse refers to the protrusions of the pelvic organs into or out of the vaginal canal [5]. POP is a disease in which one or more of the female pelvic organs, such as the bladder, uterus, vaginal cuff, rectum & intestine, descend through the vagina [6, 7]. POP is related with various symptoms such as urinary incontinence, voiding dysfunction, frequency, dyschezia, pelvic heaviness, prolapse sensation, vaginal pain & low back pain [8, 9]. These pelvic organs are held inside the pelvic cavity by various ligaments, muscles & connective tissue which are collectively known as the pelvic floor. Weakening or damaging of this pelvic floor by any means will usually result the prolapse. There are different types of prolapses such as urethrocele, cystocele, rectocele, enterocele and uterine prolapse. Various methods are being used to find out the severity of the pelvic organ prolapse. The severity of the uterine prolapse is divided into three degrees [10, 11]. Now-a-days, to make a more precise description, a quantitative measurement system of the pelvic organ prolapse (POP) is being used which is known as POP-Q system [11]. Uterine & genital prolapse may rarely be caused by congenital weakness of pelvic floor. The strongest risk factor for pelvic organ prolapse (POP) is parity [3], because childbirth can cause damage to the pudendal nerves [12], fascia & supporting structures as well as muscle [13]. Genital prolapse is caused by the damage of the pelvic floor during vaginal deliveries especially those with protracted labour, instrumental deliveries (forceps, vacuum extraction) & home vaginal delivery of large babies. Once the prolapse is established it is more difficult to control with only medication or exercise or pessaries. Ultimately surgical restoration of the vagina or the hysterectomy is required. So prevention of the risk factors play vital role. In this study an attempt has been made to find out the common etiology, risk factors & precipitating factors associated with development of genital prolapse. So, that effective preventive measures can be identified for reduction of incidence of genital prolapse in our country.

MATERIALS AND METHODS

Study design: Cross sectional study.

Place of study: Obstetrics and Gynaecological Department of Shaheed Taj Uddin Ahmad Medical College Hospital, Gazipur, Bangladesh.

Study period: July 2019 to December 2019.

Study population: During the study period, patients with genital prolapse attended in the Obstetrics and Gynaecological Department of Shaheed Taj Uddin Ahmad Medical College Hospital, Gazipur, Bangladesh.

Sample size: Sample size was calculated from following formula:

$$n = \frac{z^2 (p \times q)}{d^2}$$

The current study duration is only 6 months, so the targeted sample size cannot be collected during this study duration, therefore 100 patients with genital prolapse was taken in this study.

Inclusion & Exclusion criteria:

Inclusion criteria:

1. 50-70 years.
2. Patient with genital prolapse.

Exclusion criteria:

1. Vault prolapse.
2. Elongated cervix.
3. Patient who refuse to enroll in the study.

Operational definitions:

Uterine prolapse: Slipping or falling of pelvic organ through vagina is generally known as pelvic organ prolapse or uterine prolapse or uterovaginal prolapse [13].

Procedures of collecting data:

- a) Women with genital prolapse attended in the outdoor or indoor, admitted for surgery in the Department of Obstetrics and Gynaecology Shaheed Taj Uddin Ahmad Medical College Hospital, Gazipur, be asked for proper history. Data will be collected by face to face interview by using a pre-design questionnaire.
- b) A specially designed proforma will be used to record the relevant data of each patient. It contain variables such as age, risk factors, vaginal, urinary & bowel sign & symptoms. All the patients taken in this study will be admitted in the hospital both in wards & emergency rooms. The patients will be evaluated by detailed history, thorough physical examination & relevant laboratory investigations. The maximum extent of prolapse will be clinically measured during a Valsalva maneuver or coughing & will be confirmed by the patients as being the most severe protrusion. Written informed consent to participate in this study will be taken.

Data analysis and assurance strategy:

Statistical analysis will be done by statistical package for social science (SPSS) software. At every step of data collection, processing & analysis, suggestion from a statistician will be sought and the

data collected will be rechecked to avoid entry of wrong data and ensure analysis using appropriate statistics.

RESULTS**Table-1: Socio-demographic status of the patients (n=100)**

Particular of the Patients	Number of Patients	Percentage
Age (in Year)		
51-60	65	65
61-70	35	35
Mean \pm SD	59.0 \pm 5.4	
Range (min, max)	(50,70)	
Educational Status		
Illiterate	85	85
Signature	14	14
Primary	1	1
Marital Status		
Living with Husband	52	52
Husband Living Abroad	1	1
Widow	47	47
Occupational Status		
House Wife	72	72
Day Labor	18	18
Worker	10	10
Parity		
1 (Primi)	2	2
2-4 (multi)	53	53
\geq 5(Grand Multi)	45	45
Number of living Child		
1-2	10	10
3-4	48	48
\geq 5	42	42
Mean \pm SD	4.98 \pm 2.3	
Range (min, max)	(1,10)	

Table 1 shows particular of patients. It was observed that 65 (65%) patients belonged to 51-60 years. The mean age was found 59 \pm 5.4 years with range from 50 to 70 years. Regarding Educational status of the patients, 85(85%) patients were illiterate. Regarding Marital Status more than half 52 (52%) Patients were living with husband and 47 (47%) patients were widow. Regarding occupational status, Three Forth 72 (72%) Patients were Housewives,

18(18%) were day laborer and 10 (10%) were worker. Table 3 shows parity of the patients. It was observed that primi para were found 2(2%) multipara were 53 (53%) and grand multi para were 45 (45%). Shows number of living child of the patients. 1-2 child were found 10(10%) patients, 3-4 child were 48 (48%) and \geq 5 child were 42 (42%) patients. The mean number of living child was found 4.98 \pm 2.3.

Table-2: Distribution of the study population by clinical characteristics (n=100)

Clinical characteristics	Number of Patients	Percentage
Abdominal Surgery History	6	6
Mode of Delivery		
Vaginal	100	100
Caesarean Section	0	0
Place of delivery		
Home	90	90
Hospital	10	10
Complication during delivery		
Prolong Labour	44	44

Clinical characteristics	Number of Patients	Percentage
Obstructed Labour	12	12
Precipitate Labour	24	24
Instrumental Delivery	02	02
Obesity	10	10

Table-2 shows clinical characteristics of the patients. It was observed that history of abdominal surgery was found in 6(6%) patients, vaginal delivery was found in 100 (100%) Patients, home delivery was

in 90 (90%), majority 44(44%) patients had prolong labour during delivery and 2% had instrumental delivery.

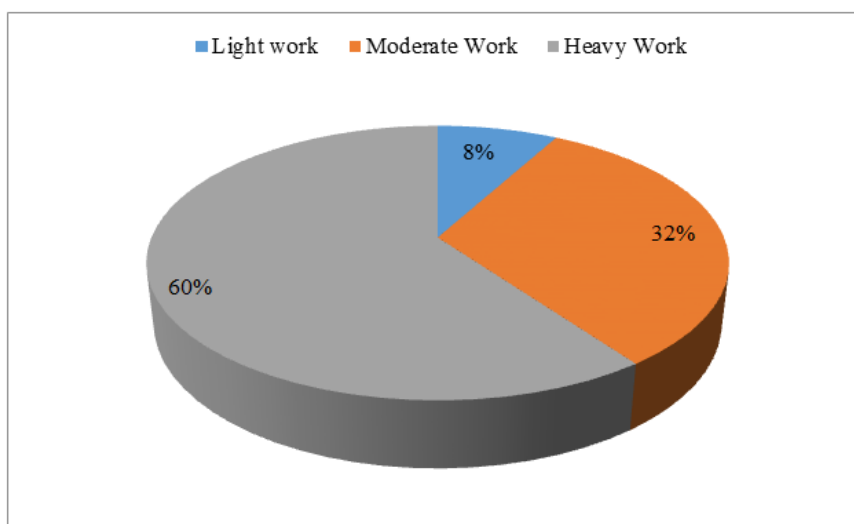


Fig-1: Type of work done by the patient during puerperium (n=100)

Fig-1 shows 60% patients did heavy work during puerperium, 32% did moderate work and only 8% did light work.

Table-3: Distribution of the study population by presenting symptom (n=100)

Presenting symptom	Number of Patients	Percentage
Something coming down	100	100
Frequency of micturition	92	92
Burning During Micturition	41	41
Retention of Urine	20	20
Difficulty in emptying bladder	53	53
Stress Incontinence	38	38
Constipation	45	45
Backache	51	51
Dragging Pain in lower abdomen	25	25
White discharge	22	22
Irreducible Prolapse	5	5

Table-3 shows presenting symptoms of the patients. It was observed that 100(100%) patients had felling of something coming down, 20(20%) had retention of urine, 92(92%) had frequency of micturition, 51(51%) had backache, 53(53%) had difficulty in emptying bladder, 41(41%) had burning during micturition, 45(45%) had constipation, 38(38%) had stress incontinence, 25(25%) had dragging pain in

lower abdomen, 22 (22.0%) had white discharge and 5 (5%) had irreducible prolapse. 31% patients were engaged in heavy physical activities, 22% patients gave family history of genital prolapse, 20% suffered from chronic cough and 15 % suffered from chronic constipation. Among 85% patients were delivered by untrained birth attendant and only 15% were attended by trained person.

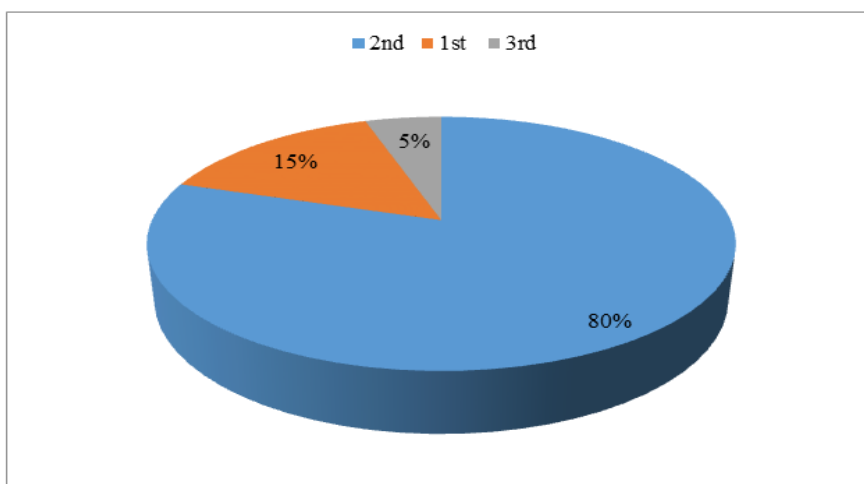


Fig-2: Distribution of the study population by degree of prolapse (n=100)

Fig-2 shows degree of uterine prolapses of patients. It was observed that 80(80%) patients had 2nd degree of uterine prolapses, 15(15%) patients had 1st

degree & only 5(5%) patients had 3rd degree of uterine prolapses.

Table-4: Distribution of the study population by examination findings (n=100)

Condition	Number of Patients	Percentage
Cystocele		
Mild	3	3
Moderate	90	90
Severe	7	7
Rectocele		
Mild	31	31
Moderate	69	69
Severe	0	0
Urethrocele	27	27
Decubitus Ulcer	36	36
Stress Incontinence	40	40
Elongation of cervix	17	17

Table-4 shows condition of the patients. It was observed that 90 (90%) patients had moderate cystocele, 69(69%) patients had moderate restocele,

27(27%) patients had urethrocele, 36(36%) had decubitus ulcer, 40(40%) had stress incontinence and 17 (17%) had elongation of cervix.

Table-5: Surgical management of the study population (n=100)

Name of operation	Number of Patients	Percentage
Vaginal hysterectomy with anterior Colporrhaphy and posterior Colpoperineorrhaphy	70	70%
Anterior colporrhaphy	15	15%
Posterior Colpoperineorrhaphy	5	5%
Pelvic Floor Repair	10	10%

Table-5 shows management of the study population by vaginal hysterectomy with anterior colporrhaphy and posterior colpoperineorrhaphy

70(70%), anterior colporrhaphy 15(15%), posterior colpoperineorrhaphy 5(5%), pelvic floor repair 10(10%).

Table-6: Distribution of the study population by type of complication after operation (n=100)

Type of complication after operation	Number of Patients	Percentage
Pyrexia	20	20
Hemorrhage	5	5
Urinary Infection	15	15
Local Sepsis	1	1
Urinary retention	3	3
Urine incontinence	1	1
Pelvic cellulitis	-	-
Pulmonary embolism	-	-
Mortality	-	-

Table-6 shows that mortality was nil. It was observed that 20(20%) had pyrexia, 5(5%) had

hemorrhage, 15(15%) had urinary infection, 4 (4%) had local sepsis and 3(3%) had urinary retention.

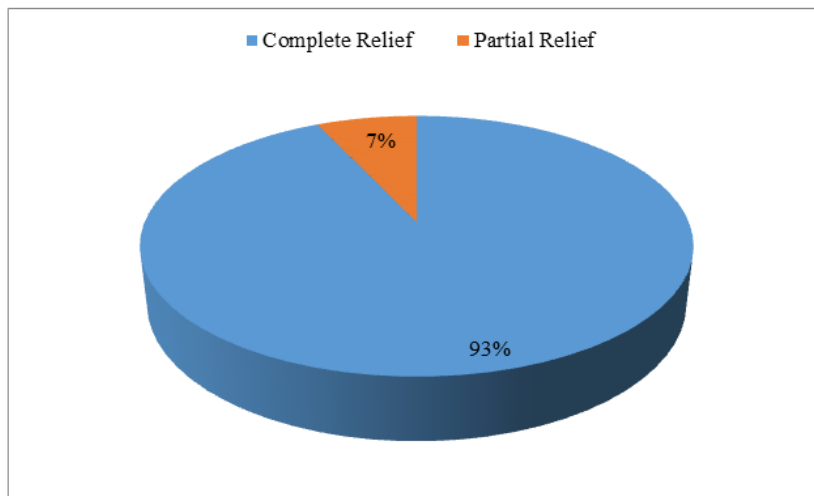
**Fig-3: Distribution of the study population by relief of symptoms after operation (n=100)**

Fig-3 shows relief of symptoms after operation of the patient. It was observed that complete relief was found 93(93%) and 7 (7%) had partial relief.

DISCUSSION

This cross sectional study was carried out with an aim to give emphasis to find out the common etiology and risk factors of genital prolapse and to explore the outcome of operative procedures of genital prolapse. Patients having age range varied from 50-70 years and genital prolapse were enrolled in this study. The present study findings were discussed and compared with previously published relevant studies. Begum and Tahera *et al.*, [14] stated that the genital prolapse is the 4th commonest gynaecological disorder in Bangladesh. In this present study it was observed that 65.0% patients were in 6th decade and the mean age was 59±5.4 years varied from 50 to 70 years. Similarly, Kishwara *et al.*, [15] showed 46% genital prolapse belonged to 30-49 years age group. Akhter *et al.*, [16] found that 74.0% of patients were in >40 years age group. Begum *et al.*, [17] found that 90% of cases belonged to >50 years age group. The global prevalence of genital prolapse is 2 to 20% under age 45 years obtained by WHO¹. Regarding educational status of the

current study patients it was observed that 85.0% patients were illiterate. In our country Kishwara *et al.*, [15] found that most (78.5%) of the women were having no education. In this study more than half 52(52.0%) patients were living with husband and 47.0% were widows. Similar observations also observed by Puri *et al.*, [18] and Kishwara *et al.*, [15]. It was observed that 72(72.0%) of patients were housewives, 18.0% day labourer and 10.0% were worker. Puri *et al.*, [18] study revealed that 66.6 % of the women performed normal house wife work, 27.4% were involved in hard work like farming, livestock rearing and load carrying and only 6.0% of the women had office work. The present study showed that 23% patients were under weight, 67% had average body weight & 10% patients were obese. In our country Kishwara *et al.*, [15] study revealed a strong association between grand multiparity and prevalence of genital prolapse. The result is quite consistent with the current study, where the present study found primi para were 2.0%, multipara 53.0% and grand multipara were 45.0%, which indicates that genital prolapse was predominant in multipara and grand multipara. Similar association also observed by Chauvin *et al.*, [19], Marcelli *et al.*, [20] and Onwude *et al.*, [8]. The mean number of living child was found 4.98 ± 2.3 varied

from 1-10. Similarly, Puri *et al.*, [18] observed that 48.0% of the women had 3-5 children. Women having 1-2 children were 29.1 % and 12.9 % had more than 5 children and 9.9 % of the women had no children .The median number of children was 3. In this present study it was observed that majority 46(46.0%) patients had last child >18 years. The mean age of last child was found 16.69 ± 8.6 years with range from 3 to 30 years. Puri *et al.*, [18] found that 63.3% of the women gave birth to their first child at the age of 15 to 20 years. 31.0% gave birth between the age group of 20 to 25 years. 3.7% of the women became mother for the first time before 15 years and only 0.3% of the women above 30 years gave birth for the first time. The median age for the first child birth was 18 years, which is comparable with the current study. History of abdominal surgery was found 6(6.0%) patients, vaginal delivery was found 100(100.0%) patients, home delivery was 90(90%), majority 44(44%) patients had prolong labour during delivery & 2% had instrumental delivery. Puri *et al.*, [18] found that the majority (80.2%) of women delivered vaginally, while only 0.8 % women delivered their child by surgical methods and 0.5% experienced both vaginal and surgical methods, 68.8% of women delivered at home and 13% at the hospital. 22% patient had family history of genital prolapse which correlate with the statement of jeffcoate that prolapse has a strong familial incidence. Also this may indicate the presence of common risk factors; they are exposed, living in same socioeconomic and cultural community. 6% patient were engaged in heavy physical work, during puerperium about 20% patient gave history of chronic cough and 15% had constipation. All these are risk factors for developing prolapse. In this series it was observed that 100(100.0%) patients had something coming down, 20(20.0%) had retention of urine, 92(92.0%) had frequency of micturation, 51(51.0%) had backache, 41(41.0%) had burning during micturation, 45(45.0%) had constipation, 38(38.0%) had stress incontinence, 25(25%) had dragging pain in lower abdomen, 22(22.0%) had white discharge and 5(5.0%) had irreducible prolapse. Marcelli *et al.*, [20] found 25.0% women had a stress urinary incontinence. In another study Dietz and Simpson (2008) [5] observed that women reported stress incontinence 76.0%, urge incontinence 69.0%, frequency 47.0%, nocturia 49.0% and symptoms of prolapse 38.0%. Majority 80(80.0%) of the patients had 2nd degree of uterine prolapse, 15 (15%) had 1st degree prolapse & only 5(5%) had 3rd degree prolapse. Durnea *et al.*, [21] observed for uterine prolapse, the figures were 14% in women without uterine descent, 40% in first-degree, 60% in second- degree and 42% in third-degree uterine prolapse. Mitra *et al.*, [22] observed that 27.9% cases had first degree of genital prolapse, 46.7% cases had 2nd degree of genital prolapse 25.4% had third degree of genital. 90(90.0%) patients had moderate cystocele, 69(69.0%) patients had moderate rectocele, 27(27.0%) patients had urethrocele, 36(36.0%) had decubitus ulcer, 40(40.0%) had stress

incontinence and 17(17.0%) had elongation of cervix. Durnea *et al.*, [21] study showed most prevalent was cystocele, present in 90.0% of participants, followed by uterine prolapse 89.0% and rectocele 70.0%. Majority 70 (70%) patients of study population underwent vaginal hysterectomy with anterior colpoorrhaphy and posterior colpoperineorrhaphy, 15(15%) patient had anterior colpoorrhaphy, 5(5%) had posterior colpoperineorrhaphy and 10(10%) had pelvic floor repair. Regarding the type of complication after operation it was observed in this study that 20(20.0%) had pyrexia, 5(5.0%) had hemorrhage, 15(15.0%) had urinary infection, 4(4.0%) had local sepsis, 3(3%) had urinary retention and 1(1%) had urine incontinence. Post-operative mortality was found nil in this study. Other complication was less and managed by conservative treatment. Complete relief was found 93(93.0%) and partial relief was 7(7.0%). In another study Mitra (1973) [22] found that the operation was successful in 90% with complete relief. In 10.3% there was no relief of symptoms, but anatomical success was 99%. In Hunter's *et al.*, [23] series 97% of patients had admitted that the operation was worthwhile and only 3% were doubtful about its success.

CONCLUSION

This study was undertaken to determine the risk factors and outcome of surgical procedure of prolapse. It shows that the most of the cases of genital prolapse were acquired in nature and mainly related to child birth injuries. The patient with genital prolapse mostly were in the 6th decade .Majority of the patient were illiterate and they were mostly housewives. Multiparity, more than two children, home delivery, prolong labour during delivery and the 2nd degree of prolapses were predominant. Conduction of labour by untrained birth attendant, lack of nutrition during pregnancy & after child birth, heavy physical work during puerperium, all these underlying factors proceeds to & development of genital prolapse. Moderate cystocele, moderate rectocele, urethrocele stress incontinence were more frequent condition of the patients. Pyrexia and urinary infection were more common complication after surgical procedures of genital prolapse. Complete relief was found 93.0% of the patients.

Limitation of the study

This study was carried out in the Department of Obstetrics and Gynaecology Shaheed Taj Uddin Ahmad Medical College Hospital, Gazipur from July 2019 to December 2019.

1. This study period is short and numbers of patients are too small and institution based, which does not represent the disease pattern of entire population of Bangladesh.
2. Only symptomatic patient who actively sought medical help were studied. Many asymptomatic patient and patient with mild symptoms who did not come to hospital were not included in the study.

Thus the study does not represent the disease pattern of entire population of Bangladesh.

RECOMMENDATIONS

1. Ensuring availability & improvement of services of the health workers at root level.
2. Implementation of laws which fully protect women from young marriage, frequent childbirth, domestic violence & gender discrimination.
3. Further study can be undertaken by including large number of patients.

Conflict of Interest: None.

Source of Fund: None.

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