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ORIGINAL ARTICLE

Comparison between preoperative and postoperative depression scores among genitourinary fistula patients.

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ABSTRACT… Objective: To compare depression scores in genitourinary fistula patients according to Glasgow depression scale pre and postoperatively in tertiary care hospital. **Study Design:** Prospective Cohort study. **Setting:** Inpatient and Outpatient Department of Gynecology and Obstetrics, Isra University Hospital Hyderabad. **Period:** December 2018 to December 2019. **Material & Methods:** Patients with confirmed genitourinary fistulas undergoing corrective surgery were included. Glasgow Depression scale questionnaire was filled in Gynae ward at time of admission, postoperatively at discharge (14-21 days after surgery) and at 6 months follow-up after discharge in Urogynaecological Out Patient Department. In Glasgow depression scale 20 questions were asked from patients scoring 0,1 and 2 according to answers. Those scored greater than 13 were referred to primary mental health care center and Psychologist. **Results:** Total of 164 patients had successful genitourinary fistula repair. The average age of women was 47.63 (SD = ±17.1) years. Mean of depression scores preoperatively, at time of discharge and after 6 months of discharge was 19.69 (SD= ±2.61), 14.90 (SD= ±2.22) and 11.34 (SD= ±2.01) respectively. Mean decrease in depression score from preoperative to six months after discharge was 8.35 units, considered statistically significant with p-value less than 0.01. **Conclusion:** There is significant difference in depression scores preoperatively and postoperatively. Psychological symptoms decreases after surgical correction of fistulas.

Key words: Depression, Genitourinary Fistulas, Glasgow Depression Scale.

INTRODUCTION

A genitourinary fistula is defined as an abnormal communication of ureters, urinary bladder, urethra with either uterus, cervix or vagina. It is one of the most distressing and disturbing complication which occurs mostly after difficult vaginal deliveries, poor surgical techniques and difficult gynaecological and obstetrical surgeries. Women and their families are affected socially as well as psychologically. It also has great impact on sexual life of affected females.[1]

History of genitourinary fistulas dates back to 1923 in which earliest case was reported in a mummified body. The reported incidence of Vesicovaginal fistulas (VVF) in developed countries is 0.3-2% Numerous cases are being reported in developing countries on a daily basis but the exact number is not known due to under reporting and improper statistical analyses.[2,3] A study estimated the prevalence of VVF in the reproductive age group as 1.60 per 1000 women in South Asia.[4]

Psychological and mental health disorders have been studied mainly in obstetric fistula patients at various platforms but very few researches are done on Psychological problems in iatrogenic fistulas that occur due to surgical traumas. A study conducted on quality of life and mental health of genitourinary fistula patients showed 97% of patients screened positive for severe mental health issues and 30% were reported to have severe depression.[5] Among all mental disorders, depression is the most common, affecting around 98% of fistula patients with an estimated prevalence of 25 to 98%.[6] There are several reasons for poor mental health in fistula

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patients however commonest are lack of familial, social support and morbidities associated with improper referrals and delay in repair.[7,8]

Postoperatively and at follow up visits women report significant improvements in quality of life, familial, social and psychological aspects with few reporting persistent sexual and fertility issues if followed for longer time.[9] Even after corrective surgeries fertility issues causes women to develop Psychological symptoms and disturbed mental health.[10]

As the number of genitourinary fistulas is rising in Pakistan, Psychological problems are increasing as well. Many affected women from rural areas do not report to hospitals due to ignorance and being outcasted. This study is done to understand the difference in mental health status preoperatively and postoperatively as well as to know the importance of early presentation after developing fistulas and referral to Psychologist and Primary health care services if needed. This can prevent women from suffering with severe Psychological problems and suicidal thoughts.

No local studies are done so far that could tell the impact of early recognition and proper treatment of fistulas on Psychological health of women however limited work is done in western countries. This is not a common practice in our setup to involve a Psychologist for proper mental health assessment of fistula patients that is why this study has been conducted in a tertiary care hospital in Hyderabad Sindh to compare changes in depression scores in genitourinary fistula patients preoperatively and postoperatively via Glasgow depression scale.[11]

MATERIAL & METHODS

This Prospective Cohort study was done in Department of Gynaecology and Obstetrics and Urogynaecological Outpatient Department, Isra Hospital Hyderabad from 15th December 2018 to 10th December 2019. Ethical approval was taken under letter reference number 1187/09. Total sample size was 164. The Non-Probability Consecutive Sampling was used to include females aged between 12 to 80 years, confirmed Genitourinary fistulas by dye test, Cystoscopy, examination under anesthesia and fistulas due to Gynaecological iatrogenic and Obstetrical causes while females with unsuccessful fistula repair and Urinary incontinence due to urge, stress and neurogenic causes were Excluded. Glassgow Depression Scale[11] questionnaire was filled by the Principle Investigator in Gynaecological ward at time of admission and discharge (14-21 days after surgery) and at follow-up 6 months after discharge in Urogynaecological Out Patient Department. In this scale 20 questions were asked from patients scoring 0, 1 and 2 according to answers after translating it in local language. Those scored greater than 13 were referred to primary mental health care center and Psychologist. Demographic details including (name, age, contact) were obtained and recorded on specific data collection forms. At follow-up in Out Patient Department Patients were assessed for Urinary leaking by history and on Clinical Vaginal examination by coughing and straining. Majority of patients failed to show up for longer follow-ups due to which telephonic communication was done.

Data was analyzed using IBM-SPSS version 23.0. Qualitative variables like Depression were calculated by percentages. Quantitative variables like age and BMI were presented by mean and standard deviation. Paired sample t-test was used to compare the mean differences of preoperative depression scores, at time of discharge and after six months of discharge and p value < 0.05 was considered significant.

Confounders such as age, parity, education, marital status, BMI, smoking, hypertension and endocrinological disorders were controlled by stratification. Independent sample t-test and one way ANOVA was also used to compare these depression scores across other studied factors

RESULT

A total of 164 patients were recruited. Majority 40.2% (n=66) of patients were in range of 18_40 years. Mean age was 47.63 years (SD= ±17.1). The mean BMI of samples was 21.65 (SD = ±4.9) kg/m2. Majority of patients (59.8%) were of normal

weight, followed by overweight samples (26.8%). Overall success rate of genitourinary fistula repair irrespective of type of repair was 94.5% with 9 (5.48%) failures. Out of 164 five patients were referred to psychiatrist for further management.

Table-I gives the mean comparison of Depression scores from preoperative to discharge, results showing, mean of preoperative depression scores was 19.69 (SD= ±2.61) and at time of discharge it was 14.90 (SD= ±2.22), the mean decrease in depression score from preoperative to discharge was 4.79 units, considered statistically significant with p-value less than 0.01.

Table-II gives the mean comparison of Depression scores from preoperative to after six month of treatment, results showed, mean of preoperative depression scores was 19.69 (SD= ±2.61) and after six months it was 11.34 (SD= ±2.01), the mean decrease in depression score from preoperative to six month of treatment was 8.35 units, considered statistically significant with p-value less than 0.01.

Table-III gives the mean comparison of Depression scores from discharge to after six months of treatment, results showed, at time of discharge mean was 14.90 (SD= ±2.22) and after six months it was 11.34 (SD= ±2.01), the mean decrease in depression score from discharge to six months of treatment was 3.56 units, considered statistically significant with p-value less than 0.01.

Stratification of Depression scores with respect to Age shows that there was no significant difference in mean depression scores with respect to age preoperatively, at discharge and 6 months after discharge follow-up. (P> 0.05)

Stratification of depression scores with respect to BMI shows that there was significant difference in mean preoperative depression scores across BMI levels, the mean preoperative depression score of underweight samples was 20.65 (SD=±2.54), overweight samples was 18.75 (SD= ±2.79) and obese samples was 20.13 (SD=±1.96) as compared to normal weigh samples having mean preoperative depression scores 19.95 (SD=±2.54, considered statistically significant using one way ANOVA, (p=0.03). (Table-III) However no significant difference in mean depression scores with respect to B.M.I was observed at discharge and 6 months after discharge follow-up.

Age (Years	18-30	31-50	51-70
	55 (33.5%)	66 (40.2%)	43 (26.2%)
Education	Uneducated	Primary	Secondary or higher
	135 (82.3%)	20(12%)	9 (5.4%)
Parity	0	1_2	≥3
	5 (3%)	90 (54 .8%)	69 (42%)
Marital status	Married	Divorced	Separated
	50 (30.4%)	80 (48%)	34 (20%)

Table-I. Distribution of patients according to age, parity, level of literacy and marital status.

Depression Scores	Mean	SD	Mean Difference	P-Value
Score preoperatively	19.69	2.61	4.79	<0.01*
Score at discharge	14.90	2.22		
Score after 6 months	11.34	2.01	8.35	<0.01*
*p<0.05 was considered significant using Paired Sample t-test				

Table-II. Depression scores preoperatively and at discharge.

Depression Scores	Mean	SD	Mean Difference	P-Value
Score at discharge	14.90	2.22	3.56	<0.01*
Score after six months	11.34	2.01		
*p<0.05 was considered significant using Paired Sample t-test				

Table-III. Depression scores at discharge and at six month follow-up.

DISCUSSION

Women with genitourinary fistulas remain socially deprived, abandoned and suffer lack of familial support. These are the major reasons behind depression and suicidal thoughts in them. Psychological symptoms associated with genitourinary fistulas also results due to certain physical discomforts including repeated urinary infections, fever, skin excoriation and disturbed sexual life. Inability of women to fulfil religious obligations also results in depression.[13]

The current study sought to compare changes in depressive symptoms following surgical repair for genitourinary fistula patients, at discharge and follow-up. Results showed that at discharge and follow-up fistula patients showed significant improvements in their mental health and social relations.

The results shows similarity with prior international studies that demonstrated improvements in social functioning and mental health following both iatrogenic and obstetric fistula repair.[15-20]

Similar findings were observed in another study conducted by Singh et al. They enrolled 101 women of genitourinary fistulas. There was significant difference in preoperative and postoperative psychological health after 3 months (preoperative score 16.42±4.49, post-operative score 75.79± 6.33, p-value 0.01)[15], which is similar to what we noted in our study p value, <0.01. Majority of women 56.4% in their study fall between age group 31_40 years, uneducated and are multiparas as we experienced in our study.

A longitudinal study conducted in Ethiopia also showed 73% reduction in depressive symptoms postoperatively and detected association between severity of depression and leaking in postoperative patients.[16] However they reported 20% divorced genitourinary fistula patients in their study which is in contrast to our results showing 48% divorced patients. Previous studies also showed lower social support from partners as a possible explanation of elevation in psychological symptoms.[17] Few studies showed that women with support from partners are less likely to develop depressive symptoms.[18]

Alio et al reviewed psychological impact of VVF in women and observed social consequences like isolation and separation from husband in many cases.[19]

Chimamaise et al also reported significant improvement in quality of life scores in all domains in obstetric fistula patients before and after surgery and improvement in interpersonal relationships after fistula repair. However majority of fistula patients in their study are educated in contrast to our study showing 82.3% uneducated females presenting with fistulas.[20] illiteracy and unawareness due to lack of education results in late presentations and favours increase prevalence of depression. This is also favoured by Watt et al, showing 80% females presenting with genitourinary fistulas and psychological symptoms received no formal education.[21] A study conducted in Uganda also shows strong association between poor quality of life and disturbed mental health in fistula patients with no formal education.[22]

Previous studies indicates that fistula patients with psychological symptoms presents with certain physical changes including weight loss.[22] This favours our findings showing increase mean depression scores in underweight samples as compared to normal weight females however no significant difference has been observed postoperatively.

In the best of our knowledge no national study comparing psychological symptoms in genitourinary fistula patients pre and postoperatively has been conducted yet.

However there are certain limitations in our study. The sample size was small as study was conducted in one center only. Patients could not be followed for longer time period as majority of patients were from interior Sindh who failed to come for follow-up and most of them had no mobile phones to be communicated. Follow-up for longer time period can help in further assessing the quality of life and psychological problems.

CONCLUSION

This study demonstrates that there is significant difference in depression scores preoperatively, at time of discharge and after six months after discharge. According to our study psychological symptoms decreases after surgical correction of fistulas.

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