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POST OPERATIVE QUALITY OF LIFE IN PATIENTS WITH COLORECTAL CARCINOMA

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Abstract:
Colorectal cancer is one of the most common cancers in India. Early detection and improved treatment options available today has let more people live with the consequences of colorectal cancer surgery. Hence the need arises to measure quality of life. However little is known about how it changes with time after surgery. Here we report an observational study conducted from June 2016- July2018 in a tertiary care hospital to assess how the quality of life of operated patients with colorectal cancer changes with time. A structured questionnaire was prepared in accordance with study objectives and its relevance tested by a pilot study. 50 patients meeting the inclusion criteria were included in the study, followed up at one month and 3 months with the questionnaire and the results were evaluated using chi-square test, P-value. We concluded that overall quality of life of colorectal Cancer patients becomes stabilized about three months after the operation though few patients still experience symptoms like constipation and diarrhoea. Hence Patients must be preoperatively counselled so that they are better prepared to cope up with the new situation. Also that quality of life data is helpful to improve after care of the patients, to plan what interventions are needed post operatively and to help patients anticipate side-effects.
Keywords: Colorectal carcinoma, Quality of life

Introduction:

Colorectal cancer is one of the most common cancers in India. The globocan 2018 estimates that colorectal cancer accounts to 10.2% in incidence among all the carcinoma and the total new cases were over 1.8 million all over world. The death due to colorectal carcinoma was 9.2% among all the carcinoma.(1)

Early detection and improved treatment options available today indicate that more people will be living with the consequences of colorectal cancer surgery. Quality of life assessment is regarded an important outcome measure in addition to traditional endpoints such as tumour recurrence and survival. However, although quality of life is dynamic, little is known about how it changes with time after surgery. (2-4)

Some studies have shown that quality of life scores may predict survival. These studies included patients who were having chemotherapy or best supportive care for malignant disease.(5,6)

The main aim of this case series is to assess how the quality of life of patients having surgery for colorectal cancer changes with time. A secondary aim was to determine to what extent preoperative socio-demographic and clinical variables predict survival after surgery.

MATERIALS & METHODS:

A hospital based prospective descriptive study with 2 post operative follow ups of colorectal cancer patients was conducted in our tertiary hospital for a two year duration. 50 Patients aged between 20-75 and diagnosed to have colorectal carcinoma, irrespective of sex were included in the study. Patients with T4 disease and those operated in acute setting/emergency were excluded.

Methods:

A structured questionnaire was prepared in accordance with study objectives.

Pilot study was done to test relevance and adequacy of questionnaire. The scale reliability coefficient was 0.8195 using Cronbach's alpha (Cronbach 1951). This questionnaire was thus deemed valid and reliable for the study.

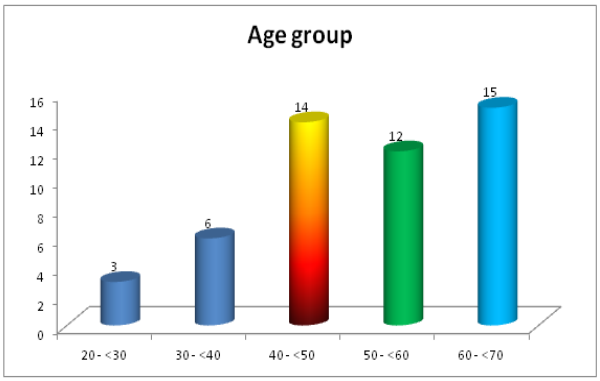
All patients underwent CECT, biopsy along with blood and serum investigations.All patients with colorectal cancer were interviewed before and after surgery. Post operative follow up was done at 1 month and 3 months with the questionnaire.

Data collected was analysed using chi-square test and P-value for statistical significance in the difference of outcomes observed and predicted. If P-value was > 0.05, it indicated no statistically significant difference between the observed and predicted outcomes thereby meaning that the scoring system was effective in predicting the outcomes and vis-a-versa.

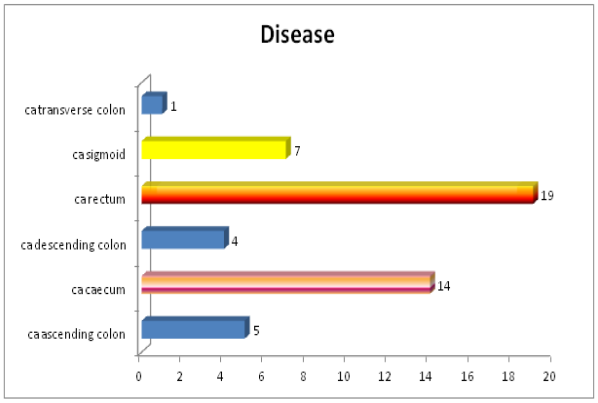
OBSERVAT IONS AND RESULTS

The studies include d 50 patients who had open colorectal surgeries for carcinoma.

Age distribution of patients:



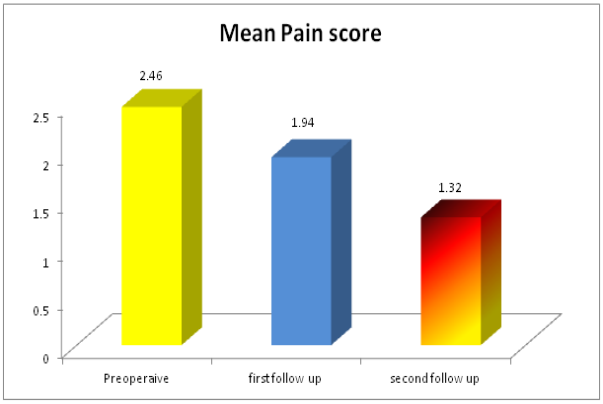
The most common age group was 60-70 years i.e. 15 (30%) and 20-30 years age group was least prevalent. 29(58.0%) were males and 21(42%) among them were females.



In our study carcinoma rectum 19(38%) was most common followed by carcinoma caecum 14(28%) and sigmoid colon carcinoma 7(14%). The least common among them was carcinoma transverse colon 1 (2.00%).

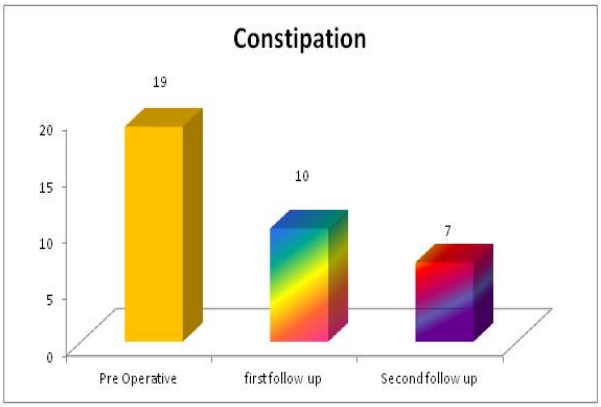
13(26%) patients underwent APR(abdominal Perineal Resection) 9(18%) patients underwent Anterior Resection. 19(38%) underwent Right hemicolectomy out of which one was extended right hemicolectomy. 9(18%) underwent left hemicolectomy.

Among all the patients diagnosed with colorectal carcinoma and operated (N=50), 29 (58%) had no stoma attached and rest 21 had stoma created.



ANOVA P value 0.0025

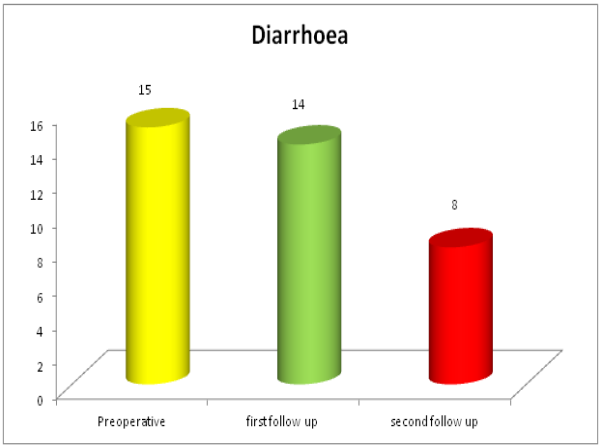
The mean pain scores preoperatively, at 1 month follow up and 3 months follow up differed significantly from each other (ANOVA p value 0.0025).



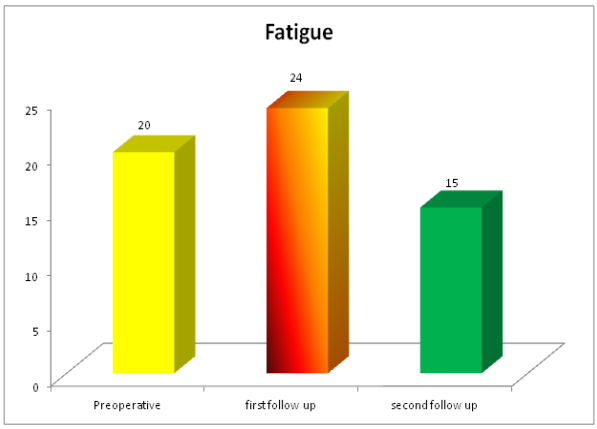
Chi square test P value 0.015

19 (38%) patients were constipated pre operatively followed by 10 patients (20%) who still experienced constipation in 1 month follow up and 7 patients (14.29%) at 3 month which was statistically significantly.

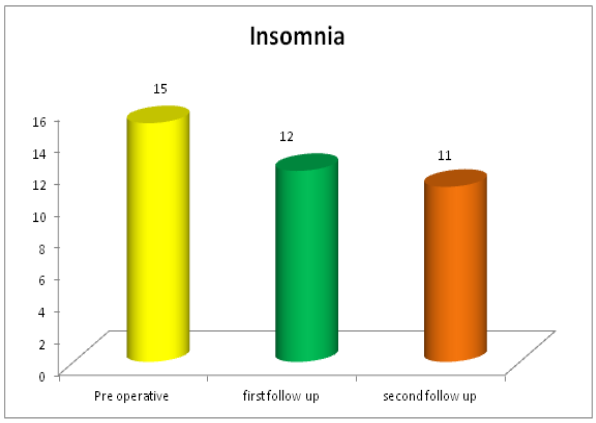
The improvement in constipation among the females was not significant (p value 0.81) but among the males the improvement was significant (p value 0.005).



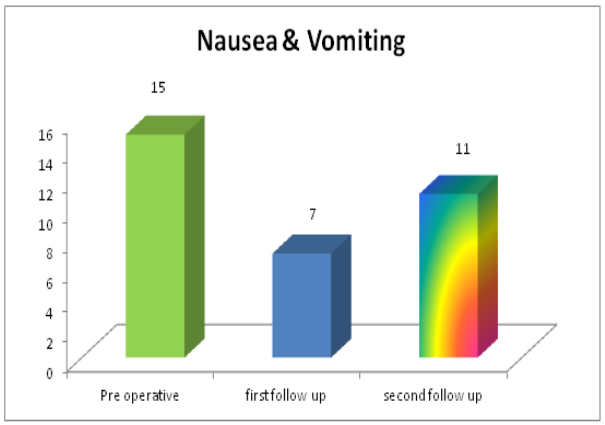
The events of diarrhoea among the patients did not differ significantly among the patients post operatively (chi square p value 0.19. It did not improve significantly in any of the gender (female's p value 0.5 & males p value 0.33)



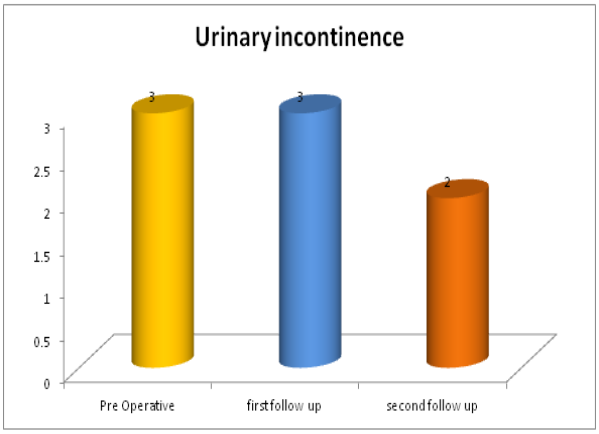
The difference of fatigue in pre & post operative period was not different significantly (p value 0.17).



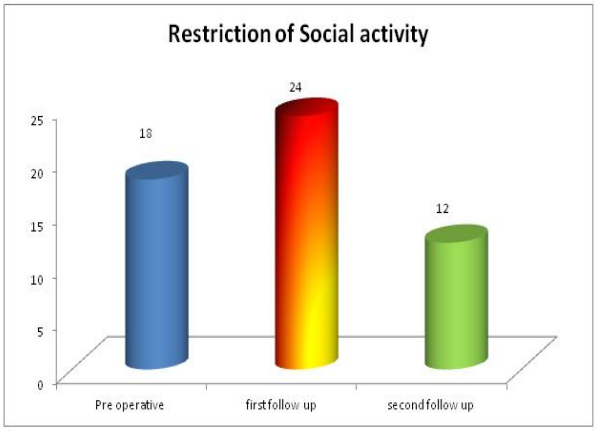
Assessment of insomnia among the patients did not reveal any significant improvement post operatively as well as among both the genders (male p value 0.74 and female p value 0.8)



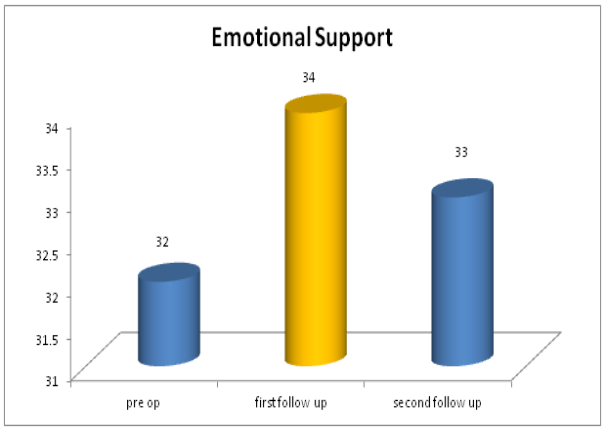
15 (30%) experienced nausea & vomiting in the pre operative period which reduced to 7 (14%) in the first month and finally 11(22%) people experienced nausea & vomiting in 3rd month which was mainly seen in people undergoing chemotherapy. The improvement of nausea & vomiting was not significant statistically (chi square p value 0.15)



Only 3 (6%) of the patients experienced urinary incontinence which significantly did not improve post operatively (chi square p value 0.87)

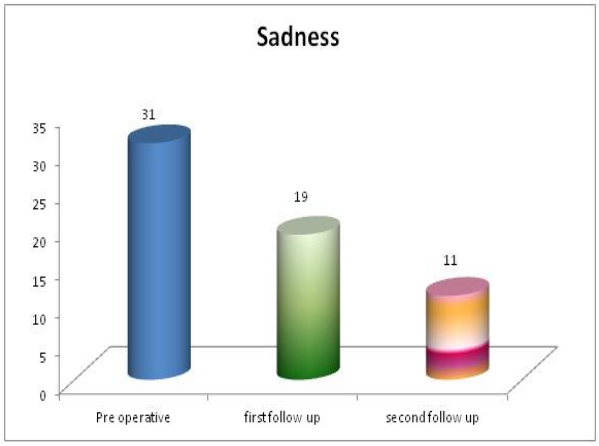


Among all the patients , 18 (36%) experienced a restriction of social activity, while at 1 month follow up post operatively 24 (48%) experienced the same followed by 12 (24%) in 3 month follow up. The improvement of restriction of social activity was significant (chi square p value 0.04).

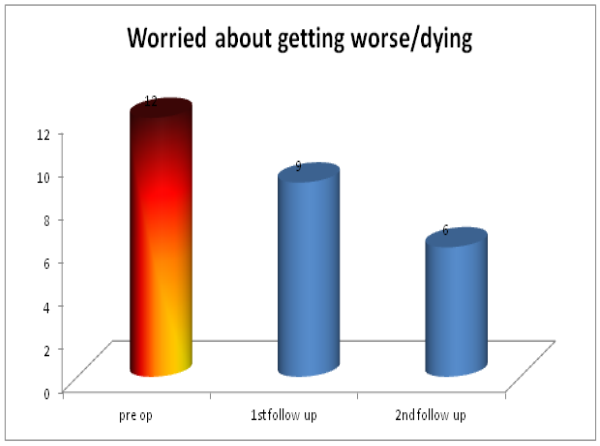


There was not much variation in people getting emotional support from family.

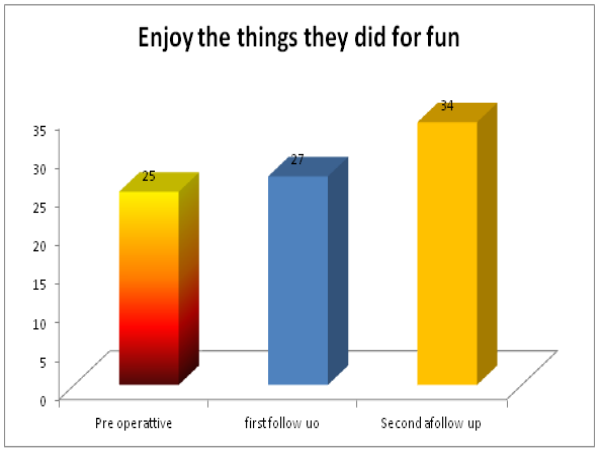
The figures varied from 32 (64%) pre operatively to 34 (68%) at one month and 33(66%) at three months. (Chi square test p value 0.91).



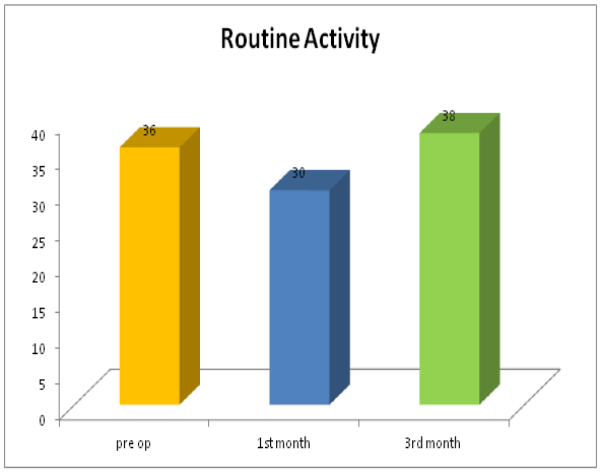
The improvement in terms of experiencing sadness among the patients was significant (Chi square test p value 0.0002).



Among all the patients , 12 (24%) were worried about their condition getting worse/dying .While at 1 month follow up post operatively this decreased to 9(18 %) followed by 6 (12%) at 3 months follow up. The improvement was not significant in post operative period (chi square p value 0.29)



Among all the patients , 25 (50%) could seek enjoyment in the things they normally did for fun, while at 1 month follow up post operatively it increased to 27(54 %) followed by 34 (68%) in 3 months follow up. The improvement was not significant in post operative period (chi square p value 0.64)



The improvement in restriction of routine activity was not significant in post operative period (chi square p value 0.19)

Stoma : In stoma patients, 14(66.6%) patients suffered financial constraint in first month and 16(76%) in third month.13 (61.9%)suffered from infection in first month and 11 patients(52.3%) suffered in third month .13 (61.9%) suffered from embarrassment at one month and 9 patients(42.86%) in 3 months.9 patients(42.86%) suffered from leakage at one month and 3 months

	Colon	Rectum	P value
Diarrhoea	6(19.35%)	2(10.53%)	0.408
Constipation	5(16.13%)	2(11.11%)	0.62
Fatigue	7(22.58%)	8(42.11%)	0.14
Urinary complaint	1(3.23%)	2(10.53%)	0.29

The difference of (preoperative)symptoms like diarrhoea, constipation and fatigue among patients of colon carcinoma and rectal carcinoma was not statistically significant (p value 0.4 & 0.14 respectively).

	COLON(n29)	RECTUM (n21)
Diarrhoea		
Pre op	3	11
I month	6	7
3 months	4	3
P value 0.54		
Constipation		
Pre op	8	9
I month	3	7
3 months	2	4
P value 0.99		

The increasing or decreasing trend of bowel complaints post operatively in rectal and colon patients was not significant.

Comparison of Stoma Vs Non Stoma

	No Stoma	Stoma	P value
Sadness			
Pre test	19(61.29%)	12(38.71%)	0.54
FU1	9(47.37%)	10(52.63%)	0.23
FU2	5 (45.45%)	6(54.55%)	0.33
Social activity restriction			
Pre test	9(50%)	9(50%)	0.39
FU1	10(41.67%)	14(58.33%)	0.024
FU2	5(41.67%)	7(58.33%)	0.18
Emotional support			
Pre test	22(66.67%)	11(33.33%)	0.08
FU1	23(67.67%)	11(32.35%)	0.04
FU2	18(56.25%)	14(43.75%)	0.73
Routine activity			
Pre test	22(75.86%)	14(66.67%)	0.47
FU1	21(72.41%)	9(42.86%)	0.03
FU2	25(86.21%)	13(61.90%)	0.04

Assessment of psychological function of sadness among the patients with stoma & without stoma did not reveal any significant difference in pre operative patients and follow up patients at 1 month and 3 months (p value 0.54, 0.23 and 0.33 respectively).

There was significant difference in social functioning among two groups only in first month post operative follow up (p value 0.024) wherein people with stoma experienced restriction in socializing. There was no difference in pre operative patients and during 3 month follow up

Assessment of emotional support outcome showed there was significant difference during 1 month post operative follow up (p value 0.04) wherein people with stoma received less emotional support from family. There was no significant difference among the patients during pre operative and 3 months post operative period (p value 0.08 and 0.73 respectively)

Assessment of routine activity among the patients with stoma & without stoma also revealed significant difference at follow up patients at 1 month and 3 months (p value 0.03 and 0.04 respectively).

DISCUSSION

Health-related quality of life (QoL) is a multidimensional measure. It is considered a subjective measure and is consequently most reliable when reported from the patients themselves. As long-term survival in cancer patients has improved, the focus on treatment effects on QoL has increased. In this study we focussed on the change in quality of life over one month and 3 months after operation.

In our study, apart from constipation wherein the improvement is significant among males and not females, there was no statistically significant difference between both genders, i.e. Gender was not a significant determinant in patients' QoL.

Dr Hudson et al in 1995 did a study on health related quality of life of colorectal carcinoma patients and concluded Gender has not been reported as significant determinant in patients' QoL. (Hudson, 1995) (9)

Comparison of clinical events: Among the physical complaints the mean pain scores differed significantly from each other (ANOVA p value 0.0025) preoperatively, at 1 month follow up and 3 months follow up. The same were for constipation.

On the other hand the change in events of diarrhoea, insomnia, nausea & vomiting did not differ significantly among the patients post operatively.

There was an increase in diarrhoea among rectal patients and decrease in colon patients but that was statistically not significant. Both rectal and colon patients reported decrease in constipation over subsequent follow up.

Dr Ulander et al in 1997 did a study on quality of life in colorectal cancer patients. The patients with rectal cancer had significantly more constipation than those with colon cancer. And patients with colon cancer (n = 39) had significantly less constipation at follow-up compared with preoperative (n = 47). (7)

Emotional attributes like sadness and restriction in social activity showed statistically significant improvement .On the other hand, improvement in attributes like 'worrying about their condition getting worse/dying', emotional support from family and restriction in routine activity was not significant in post operative period.

The present study compares the quality of life in patients postoperatively with that preoperatively and we can conclude that most of the attributes improve at 3 months though some may not be significant statistically. The quality of life gradually improves and attains the preoperative status in most patients in a period of 3 months

Dr Tsunoda et al in 2007 did prospective analysis of life in the first year after colorectal cancer surgery and concluded that the scores of five QOL dimensions

(physical function, role function, fatigue, pain, and dyspnoea) dropped significantly below the preoperative values at one month following the operation. The scores returned to the preoperative values within three months following the operation. The scores of seven QOL dimensions (global QOL, emotional function, social function, insomnia, appetite loss, diarrhoea, and financial difficulties) had improved within three months after the operation. Other scores, including cognitive function, nausea and vomiting, and constipation remained unchanged. (Tsunoda *et al.*, 2007) (8)

Dr Ulander et al in 1997 concluded that the results showed a significant improvement in the patients' scores for emotional functioning, appetite and global QL and a significant increase in financial impact at follow-up at 3 months (7)

Hudson et al in 1995 did a study on health related quality of life of colorectal carcinoma patients concluded that patients undergoing surgical procedures experimented a rapid QoL decline after surgery with a gradually restore about 3 month after. (9)

Presence of stoma:

Stoma has a significant effect on social and physical functioning of a person. Most of the patients in our study were poorly informed about stoma and its subsequent complications .Our study concluded that stoma patient's routine activities are limited (role functioning) and their social and family life disrupted (social functioning).The stoma patients are comparatively less able to look after themselves (physical functioning).

Dr Sharma et al in 2007 assessed predictors of early post operative quality of life in colorectal cancer patients and concluded patients who had a stoma had significantly lower scores on the FACTC EW(emotional well being) (10)

Based on the modern concepts of health related quality of life (HR-QOL), the principle criteria guiding the patient's acceptance of treatment most often is the patients' subjective feelings i.e. the quality of their lives after, either surgical, medical or palliative intervention for colorectal disease (11). It is becoming very important to measure the quality of functional outcomes granted to patients after every surgical treatment.

HR-QOL is helping the surgeons to open doors to show more sensitivity and leading to better communication with their patients and their families. A free, open, polite and frank discussion, about HR-QOL gains, as a benefit of surgery, at the time of counselling will go a long way in ensuring that the patients' perspectives get their rightful place in decision making (12).

CONCLUSION

We may conclude that overall QOL (quality of life) of colorectal Cancer patients becomes stabilized about three months after the operation though few patients still experience symptoms like constipation and diarrhoea. Hence Patients must be preoperatively counselled that they may still have the preoperative symptoms after the surgery or may develop new ones.

In our study gender and site of cancer (rectum/colon) has not been found as a significant determinant in patients' QoL but Stoma has a significant effect on social and physical functioning of a person. Probably If the patients are counselled in details preoperatively about the stoma and its complications they will have fewer symptoms, less anxiety and sadness and be better prepared to cope up with new situation. Interventions are required to address poor self esteem and sadness in stoma patients. Thus, quality of life data is helpful to improve after care of the patients, to plan what interventions are needed post operatively and to help patients anticipate side-effects.

Quality of life should be incorporated into the decisions of clinicians and policy-makers in almost every speciality of medicine and surgery

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