

Patient centered communication and anxiety in the postoperative

Marta Morais Ms^{1,2}, Raquel Ribeiro-Silva MD^{1,3}, Rui Mota-Cardoso MD PhD¹

¹Department of Clinical Neurosciences, Porto University Medical Faculty, Porto, Portugal

²Gynecological and Reproductive Medicine Unit, Hospital São João, Porto, Portugal

³Department of Psychiatry, Centro Hospitalar de Vila Nova Gaia/Espinho, Porto, Portugal

Abstract

Objective: Gynaecologic surgery in addition to the common concerns to all surgical procedures, involves psychological and emotional issues. Anxiety is a common outcome. Studies indicate that systematic preoperative information contributes to decreased levels of anxiety and to a faster postoperative recovery, with no complications.

In the present clinical study we evaluated the impact of systematic patient centered preoperative information on the levels of postoperative anxiety, in patients with gynaecological cancer diagnosis.

Methods: Patients with gynaecological cancer diagnosis admitted to the Gynaecologic Department of São João Hospital Oporto from 15th May to 31st August 2011 were randomly submitted to either patient centered systematic information or a routine nursing care. Patients were assessed on admission, immediately before and after surgery. The assessment included the State-Trait Anxiety Inventory (STAI II) and Hospital Anxiety and Depression Scale (HADS).

Results: It was found that the patients of the study group felt less anxious on the day of surgery than those of the control group ($p < 0.05$). However, the rates of postoperative anxiety level score of the study group slightly increased. In the control group, this level remained stable throughout hospitalization.

Conclusion: Systematic patient centered preoperative information appears to be a potentially beneficial intervention for gynaecologic cancer patients. Further research,

with larger samples, is clearly needed to better understand the potential benefits of this intervention and to clarify the unexpected increased levels of postoperative anxiety.

Keywords: Gynaecological cancer, oncology, anxiety, preoperative, postoperative, information preoperative.

Introduction

Surgery remains a disturbing moment for humans, despite the technical improvements and increased quality of interventions [1]. Experiencing surgery causes the patient, and his family, stress and anxiety, not only due to the anaesthetic act and the inherent fear of the unknown, but also because of all the doubts and uncertainties. "Surgery is a trigger for stress, both psychological (...) and physiological (...)" [2], and is perceived by the patient as a threat to his physical integrity.

Surgery tends to raise a certain level of anxiety despite the type of operation [3]. About 11% to 80% of adult patients submitted to surgery have anxiety caused by anticipation of pain, separation from family, loss of independence, fear of surgery, body image change and death [4, 5]. Anxiety is a human response to situations of threat, a "psychological reaction to stress factors, with psychological and physiological components"[6].

In addition to these concerns common to all surgical procedures, gynaecologic surgery also involves other psychological and emotional issues. A woman faced with a diagnosis of gynaecological cancer, sees surgery as a threat to her identity, fertility, femininity, attractiveness, intimacy and sexuality. Issues related to sexuality and intimacies are important and have major impact on quality of life of patients with gynaecological cancer, causing changes in their self-concept and intimate relationships [7]. Anxiety is one of the most frequent and widespread psychosocial problems, and is seen particularly in gynaecologic cancers [3].

Studies in psycho-neuro-immunology have shown that preoperative anxiety is associated with a slower, more complicated and more painful postoperative recovery. The use of preoperative intervention programs (psychological techniques) has provided positive results in reducing anxiety, quicker recovery, lesser need of analgesics /

sedatives and fewer complications. Patients who are given systematic instruction will obtain adequate and sufficient information, and will develop a more positive attitude. Nursing staff can help the patient understand the surgical experience, giving patients information about what they will have to face on the operation day and on the infirmary, offering expertise to a change in beliefs and behaviours [8], giving them confidence and security through a calm environment, reducing uncertainty, one of anxiety most significant causes.

The present clinical study aims to evaluate the impact of systematic patient centered preoperative information, provided by the nursing staff, on the levels of postoperative anxiety in patients with gynaecologic cancer diagnosis. This information includes the communication of inpatients and surgery routines and answering questions, concerns and fears. This communication is based on active listening, demonstrating availability and giving encouragement.

Methods

This is a prospective randomized blinded trial, conducted at the Gynaecologic Department of São João Hospital Oporto, a public general hospital, from 15th May to 31st August 2011.

Sample

Thirty one patients admitted to this Department, with the diagnosis of gynaecological cancer and indication for surgery, were recruited consecutively. This sample was divided into an experimental and a control group, each comprising fifteen patients.

Patients were randomly submitted to either patient centered systematic preoperative information or a routine nursing care. Patients were assessed on admission, immediately before and after surgery. Two self-completion questionnaires were used: the State-Trait Anxiety Inventory (STAI II) and Hospital Anxiety and Depression Scale (HADS).

Data collection and statistical analysis were performed using the software IBM SPSS[®] version 19.

Inclusion criteria: female patients, with gynaecological cancer diagnosis and indication for surgery, admitted to the Gynaecologic Department of São João Hospital, from 15th May to 31st August 2011. These patients had a good level of written and spoken Portuguese language, capacity to understand oral communication, and were able to provide written informed consent.

Exclusion criteria: patients with a diagnosis of psychiatric disorder and/or under psychotropic drugs, age less than 18 years or above 70 years and those patients who had already undergone gynaecologic surgery prior to admission or now scheduled to undergo vulvectomy (this type of surgery requires additional care).

Procedures

This study was approved by the ethical committee of the Porto University Medical Faculty. State-Trait Anxiety Inventory (STAI II) and Hospital Anxiety and Depression Scale (HADS) were applied in admission, in the morning of surgery and 48 hours after surgery, after explaining the purpose of the study and obtaining their written approvals. All the patients admitted to the department with eligible requirements were randomly included in the experimental group or in the control group. The instruction program, the written approvals and the first questionnaires to the 31 patients were conducted by the Chief Nurse.

The information provided to both experimental and control group was provided by one single person, the researcher nurse working in the gynaecological department and taking part in this study as a certified expert in the field. Instructions were given in the training room located in the department for 15 minutes per patient. The researcher first contact with the patients was in the preoperative preparation, on the afternoon before the day of surgery. Patients of both groups underwent a preoperative preparation (shaving) during a period of 15 minutes. In the experimental group, patients were shaved in the genital area, in addition to receiving information about the nursing procedures (administration of low molecular heparin, 24 hours fasting, the patient's journey on the day of surgery - operating room to the Post-Op Care Unit, return to service conscious and awake, analgesia in the immediate postoperative period) through a patient centered communication, based on showing availability, encouraging verbalization and a careful listening of the patient's questions and concerns. Patients in the control group were also subject to genital shaving, but received no information about the nursing procedures (as

usual). However, it was not denied any clarification on questions raised by these patients. The questionnaires were applied again on the morning of surgery and postoperatively (48h after surgery), by the nurse staff.

Results

Thirty one patients were requested authorization to participate in the study. One patient refused at the beginning for personal reasons and two patients (one from each group) did not complete the questionnaires in full. The 28 remaining patients were divided into an experimental group and a control group, each consisting of 14 patients. No statistically significant differences were found in terms of distributions of age, educational status and marital status between the two groups, so these two study groups had with similar characteristics and were comparable.

The population's age (mean + SD) were respectively 55,93 +14,918 and 53,07+20,326 in the experimental and control groups.

It was also possible to verify some important characteristics of the sample, namely the predominance of participants who were married or living with a companion (82,1%), the high rate of women without occupation at the time of admission (64,3%) and the extremely low educational level, with 57.1% of participants having only one full cycle of schooling or less, which means having the fourth grade less.

Finally, we found that ovarian cancer was predominant in our sample, having been diagnosed in 20 (71.4%) patients. The distribution of the two diseases within the two groups was equal, each with 10 diagnosed ovarian cancer and 4 cervical cancers.

In addition, none of the patients in either group had a previous surgical experience and none of them had been provided with the knowledge of how to reduce anxiety before.

In Table 2, we can find the levels of anxiety in both groups at the time of admission and prior to preoperative information. For the scale HADS, we found a slightly higher average score in the experimental group (11.14) compared to the control group (9.93).

In the case of the STAI scale at the time of admission, the experimental group anxiety levels were, on average, higher (48.79) compared to the control group (44.14). In both cases, the differences are not statistically significant ($p > 0.05$). The raw scores of the scales were used between groups comparisons. The cut points were not used, since the small sample size emptied some of the diagnostic categories.

Regarding marital status, none of the groups of variables showed statistically significant differences, the reason why we choose to divide the subjects between those with or without co-habitation. Thus, table 3 shows that for HADS scale, the scores were very close, with an average score of 11.800 for the group without co-habitation and 10.26 for the group in co-habitation. Similarly, the STAI scale showed higher anxiety levels for the group without co-habitation (49.40), when compared with the group with co-housing (45.83). Despite the discrepancy in the size of each group, the data seemed to indicate lower levels of stress for individuals who do not live alone. However, these differences were not statistically significant. Even taking into account the discrepancy in size of both groups, the values of anxiety appeared to be higher among patients not living with their partners. But again, these differences were not statistically significant ($p > 0.05$).

Turning to comparisons on the basis of occupation, we also found no statistically significant differences. Despite this, there were substantially lower levels of stress in women with occupation (41.90) compared to women without occupation (49.00), in the STAI scale. HADS yielded very similar results between the two groups. Finally, in terms of the level of education, it was not possible to calculate any relations due to the dispersion of the data, which did not allow a reliable statistical treatment.

In the experimental group, for the HADS questionnaire, there was a statistically significant difference between the three moments of instrument application ($F(2) = 4.382$, $p < 0.05$). There was a variation of the mean scores (4.32), this difference being statistically significant ($p = 0.038$). The difference in scores between the day of surgery and postoperative (9.56 ± 4.36) was not statistically significant ($p = 0.775$), the same for the scores between the admission and post-operative ($p = 0.35$).

For the STAI scale, the ANOVA test determined that the results obtained in the experimental group did not differ significantly between the three measuring points. However, post hoc tests showed a statistically significant decrease ($p < 0.05$) in anxiety levels between the day of admission on the hospital, (48.79 ± 3.70) and the day of surgery, when preoperative information was provided (43.29 ± 5.06). Postoperatively, we saw a new rise (45.50 ± 9.89) which was not statistically significant ($p > 0.05$).

In the control group, there were no statistically significant variations between the application of the HADS questionnaire at admission, the day of surgery ($p = 1.00$) or postoperatively ($p = 0.326$). Thus, while in the experimental group we witnessed statistically significant decrease in anxiety levels after the time of deliverance of

preoperative information, in the control group anxiety levels remained relatively unchanged. The evolution of anxiety levels in both groups did not follow the same tendency: the experimental group showed a decrease in anxiety levels after the deliverance of information, with a slight increase postoperatively, while in the control group, the levels increased slightly with the approach of the surgical moment, and decreased postoperatively.

Since there was an increase in anxiety levels postoperatively in the experimental group, we proceeded to analyzing the data related with treatment and / or follow-up after hospital discharge. The patient were therefore divided in those who were discharged from the clinic (without further monitoring by specialist) those who received adjuvant treatment (chemotherapy and radiotherapy) and those who remained on clinical oncology follow-up.

There were no statistically significant differences in anxiety levels related to the type of follow-up of patients after hospital discharge or between the two groups postoperatively. Of the 16 patients discharged without clinical surveillance after surgery, only 6 (37.5%) were in the experimental group. Conversely, the majority of patients that have undergone chemotherapy, radiotherapy or remained on clinical oncology follow-up (8 patients - 66.7%) belonged to the experimental group. In the end, these differences were not statistically significant ($p = 0.127$).

Discussion

In our population sample, admission to the hospital led to higher levels of anxiety in the experimental group than in the control group. However, these differences were not statistically significant ($p > 0.05$).

Although social factors such as age or education have been shown in some studies to influence levels of anxiety [9], in this study we have not obtained significant differences, perhaps due to the small size of our sample.

This study showed a decrease in anxiety levels from admission to surgery day, in patients in the experimental group. The difference was found to be significant ($p < 0,005$). The patients who received only routine nursing care showed stable levels of anxiety. Thus, our study suggests that information provided to the patient on the day

before surgery has advantages, resulting in less anxiety when finally going to the operating room.

Unexpected to us was the slight increase in anxiety levels seen in the experimental group 48 hours after surgery. This increase was not statistically significant compared to the levels of anxiety on surgery day. This increase can be justified by the fact that in the day after the surgery, patients were informed by medical team about their follow-up after surgery and the severity of their disease. The patients were therefore divided between those who were discharged from the clinic (without further monitoring by the specialty), those who received adjuvant treatment (chemotherapy and radiotherapy) and those that are in clinical oncological follow up. Of the 14 patients in the experimental group, 8 (57.1%) were subjected to some form of adjuvant treatment or clinical oncological follow-up. In the control group, only 4 (28,6%) patients had that follow-up. This may explain de stable levels of anxiety in the control group and the slight increase in anxiety levels seen in the experimental group 48 hours after surgery.

Clinical limitations

This study has several limitations. The main one is the small sample size, not allowing definite, significant conclusions. The data collection gathered by means of questionnaires, which can fail to represent all patients' experience, is another limitation of this study.

Conclusion

In this study, the gynaecologic patients who received systematic patient centered preoperative information showed lower anxiety on the day of surgery compared to patients who only received routine nursing care. This reinforces the importance of the systematic patient centered preoperative information in order to lessen anxiety, doubts and emotional changes, thus better preparing the patient for the surgical procedure [10]. Nurses can perform an important role in this preoperative moment, patient-focused, taking into account their emotional state and hearing them accurately.

Several studies have shown that hospitalization implies a change in emotional status of a patient when it involves a surgical intervention, causing high anxiety rates. This study also verified the existence of elevated levels of anxiety in patients on admission.

The literature reveals that chemotherapy treatment can cause increased vulnerability in patients [11]. In our sample too, the knowledge of an adjuvant treatment after surgery led to an increased anxiety.

Further research, with larger samples, is clearly needed to better understand the potential benefits of this intervention and to clarify the unexpected increased levels of postoperative anxiety.

Table 1 Findings Related to Socio-demographic: Characteristics

Socio-demographic Characteristics	Groups				Total		Teste <i>t</i>
	Study (n=14)		Control (n=14)				
Age	Mean	Mean					<i>t</i> =-0,424 P=0,675
	n	%	n	%	n	%	
Marital Status							
With co-habitation	13	92,9	10	71,4	23	82,1	$\chi^2=2,191$
Without co-habitation	1	7,1	4	28,6	5	17,9	P=0,326
Working status							
With occupation	4	28,6	6	42,9	10	35,7	$\chi^2=0,622$
Without occupation	10	71,4	8	57,1	18	64,3	p=0,695
Educational Status							
1° Cycle or less	9	56,25	7	43,75	17	57,1	$\chi^2=7,143$
2° Cycle	2	14,3	0	0,0	2	7,1	p=0,210
3° Cycle	1	7,1	3	21,4	4	14,3	
High school	1	7,1	3	21,4	4	14,3	
University or more	1	7,1	1	7,1	2	7,1	
Diagnosis							
Ovarian Ca	10	71,4	10	71,4	20	71,4	-----
Cervical Ca	4	28,6	4	28,6	8	28,6	-----

Table 2- Levels of anxiety at the time of admission

Anxiety at the time of admission	Grupo		Total	Teste <i>t</i>
	Study (n=14)	Control (n=14)		
Scales	(Mean)	(Mean)		
HADS	11,14	9,93		<i>t</i> =-0,770 P=0,448
STAI	48,79	44,14		<i>t</i> =-1,126 p=0,213

Table 3- Treatment and / or follow-up after hospital discharge

	Group						Qui-quadrado (x2)
	Study (n=14)		Control (n=14)		Total		
	n	%	n	%	n	%	
Follow							
Primary care	6	37,5	10	62,5	16	100	x2=2,333
Therapy	8	66,7	4	33,3	12	100	P=0,127

References

- 1-Mendes CA, Silva A, Fonseca G. Influence of a pre-operative psycho-educative program in the levels of anxiety in the post operative patient. *Revista Referência* 2005; 9-14.
- 2- Long B. Preoperative nursing in PHIPPS W, et al. *Medical-Surgical Nursing: Concepts and Clinical Practice*. Lusodidacta 1999; 18:525-547.
- 3- Taskin L. *Maternal and Women Health Nursing*. Ankara: System Ofset Publ. Corp 2008; 124-128.
- 4- Marcolino JAM, Suzuki FM, Alii LAC. Measurement of Anxiety and Depression in Patients preoperatively. Comparative Study. *Revista Brasileira de Anestesiologia* 2007; 57:2.
- 5- Kiyohara LY, Kayano LK, Oliveira LM, et al. Surgery information reduces anxiety in the pre-operative period. *Rev Hosp Clin Fac Med* 2004, 59:51-6.
- 6- Cassmeyer V, Marantides D. Stress, stressors and Stress Management in *Medical-Surgical Nursing: Concepts and Clinical Practice*. Lusociência 2003; 6:121-143.
- 7- Dresdner, Nehama MD: Kurzman, Allison R. Preoperative evaluation and preparation of the gynecologic patient. *The global library of women's medicine* 2008. DOI 10.3843

- 8- Karayurt O. The effects of different preoperative teaching methods on state anxiety preoperative period and level of the pain postoperatively. *Journal of Cumhuriyet University School of Nursing* 1998; 2:20-26.
- 9- Beatrice SK, Toivo H, Marten K, Kaarlo L, Pirkko N. Depression, anxiety, hostility and hysterectomy. *Journal of Psychosomatic Obstetrics & Gynecology* 2005; 26:193-204.
- 10- Pinar G, Kurt A, Gungor T. The efficacy of preoperative instruction in reducing anxiety following gynecological surgery: a case control study. *World Journal Of Surgical Oncology* 2011; 9:38.
- 11- Kusahara DM, Peterlini MAS, Pedreira MLG. Human relations in nursing care towards cancer patients submitted to antineoplastic chemotherapy. *Acta Paul Enferm.* 2008. 2:77-83.