



Evaluation and Descriptive Study of Pre- and Postoperative Anxiety and Depression in General Surgery (Prospective Study over 6 Months)

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Study Protocol

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ABSTRACT

Introduction: Hospitalization is a common experience today. According to the World Health Organization (WHO), in 2012, the global volume of surgical procedures performed was estimated at 312.9 million operations. Addition to the physical consequences of surgery, patients may also experience anxiety and depression. The primary objective of our study is to assess pre- and postoperative anxiety and depression on general surgery wards and to identify possible associations between the anxiety and depression component and the characteristics of the population.

Materials and Methods: This is a prospective study following 130 patients of the general surgery department of the Ibn Rochd center of Casablanca over a 6 months period from January 2017 to June 2017.

Results and Discussion: The average age of our patients was 52.88 +/- 14.22 years with a female

predominance of 60.8% against 39.2% male, that is to say a sex-ratio of 0.6. According to the Hamilton Anxiety Rating Scale, the majority of our patients were more anxious preoperatively than postoperatively, 48.5% of patients had moderate to severe anxiety preoperatively and 46.2 had mild anxiety postoperatively. According to the Amsterdam Preoperative Anxiety and Information Scale (APAIS), a large proportion of patients (75.4%) were anxious about surgery and anesthesia and 24.6% were non-anxious, 50.8% had an avid desire to have necessary information related to the surgery they were going to undergo and the course of the anesthesia, 23.3% had a moderate desire and 16.9% of patients refused to have information. Regarding depression, the majority of patients were depressed preoperatively compared to postoperatively, according to HAM-D, 59.2% of patients had a depressive disorder preoperatively and 49.2% were depressed postoperatively.

Conclusion: Anxiety and depression had a high prevalence in the general surgery department which is due to several factors such as age, diagnosis, surgical history, length of hospitalization, etc. This requires ongoing assessment and management because of the direct impact of this component on patient recovery.

Keywords: Pre- and postoperative anxiety and depression; anxiety; depression; general surgery.

1. INTRODUCTION

Hospitalization is a common experience today. The majority of the population will be confronted with it on several occasions. Surgery is the part of therapeutic medicine that involves manual or instrumental intervention by the practitioner. According to the World Health Organization (WHO), in 2012, the global volume of surgical procedures performed was estimated at 312.9 million operations [1]. Patients scheduled for surgery experience many challenges when admitted to the hospital. In addition to the physical consequences of surgery, patients may also experience anxiety and depression. The primary objective of our study is to assess pre- and postoperative anxiety and depression on general surgery wards and to identify possible associations between the anxiety and depression component and the characteristics of the population.

2. MATERIELS AND METHODS

This is a prospective study following 130 patients of the general surgery department of the Ibn Rochd center of Casablanca over a 6 months period from January 2017 to June 2017.

Was included in our study all the patient over 18 years old informed about their condition and whom accepted to be part of the study.

3. RESULTS

During 6 months, 130 patients were included in our study with an age between 19 and 85 years with an average of 52.88 +/- 14.22 years with a female predominance of 60.8% against 39.2% male, that is to say a sex-ratio of 0.6.

According to the Hamilton Anxiety Rating Scale, the majority of patients were more anxious preoperatively than postoperatively, 48.5% of patients had moderate to severe anxiety preoperatively and 46.2 had mild anxiety postoperatively. According to the Amsterdam Preoperative Anxiety and Information Scale (APAIS), a large proportion of patients (75.4%) were anxious about surgery and anesthesia and 24.6% were non-anxious, 50.8% had an avid desire to have necessary information related to the surgery they were going to undergo and the course of the anesthesia, 23.3% had a moderate desire and 16.9% of patients refused to have information. Regarding depression, the majority of patients were depressed preoperatively compared to postoperatively, according to HAM-D, 59.2% of patients had a depressive disorder preoperatively and 49.2% were depressed postoperatively.

4. DISCUSSION

Anxiety is part of the normal emotional register of the human being: it is defined as a "fear without object", the fear of an imprecise danger, a painful feeling of expectation. Its possible pathological character must be evaluated using diagnostic criteria that are as precise as possible [2]. There are several levels of anxiety: mild, moderate, severe and panic anxiety [3]. Rating scales help to identify and diagnose anxiety. There are hetero-reporting tools such as the Covi Anxiety Scale and the Beck Anxiety Inventory (BAI), and self-reporting tools such as the Hospital Anxiety and Depression Scale (HADS) and the Spielberger Anxiety Inventory and Treatment (IASTA).

Depression is defined as a medical condition marked by sadness with emotional pain, loss of self-esteem and psychomotor retardation. It is a common psychological illness which, through its mood disorders, greatly disrupts daily life [4]. There are also several scales for evaluating depression: hetero-evaluation tools such as the Montgomery and Asberg scale (MADRS), which is the second most widely used hetero-evaluation scale, and the Inventory of Depressive Symptomatology (IDS). The self-report tools represent the patients' experiences and feelings and are mainly represented by the Beck Depression Inventory (BDI), the Geriatric Depression Scale (GDS) and the Edinburgh Postpartum Depression Scale (EPDS).

We compared our results with those of series using the same instrument to screen for anxiety and depressive disorders: a study performed at Gentofte Hospital in Denmark for the assessment of generalized anxiety measured by the Hamilton scale in patients before and after cardiac surgery at 1, 3, and 6 months after surgery, the results showed that anxiety was frequent preoperatively (60% of patients presented with severe anxiety) with a fall in scores with follow-up [5]. In another study carried out at the Institute of Clinical Oncology and Cancer Research, University of Messina, Italy, involving 149 patients, 108 of whom were admitted to hospital with operable breast cancer and 41 with benign breast disease (control group), depression was assessed before surgery using the HAM-D scale, 62% of the patients hospitalized for breast cancer and 34% of the control group showed depressive symptoms [6]. This is similar to our results.

In adults, the prevalence of preoperative anxiety is reported to vary between 60 and 80% [7]. The experiences depend on many factors, these include age, type and extent of proposed surgery, previous surgical experience and personal susceptibility to stressful situations [7]. A study by Atanassova M et al. showed that patients aged 50-59 and >60 years, with previous anesthetic experience, less educated, and nonsmokers had a higher frequency of preoperative anxiety [8]. In another study, by Jalowiecki et al [9], it was observed that anxiety was not related to the level of education or the profession of the patient. A Brazilian study came to the same conclusion. Our study agrees with these results.

The need for information is part of a subject's coping strategies in the face of the stress he or she is experiencing or will experience. Individuals

manifest two types of behaviour, the first consists of seeking information in order to eliminate their uncertainty and the resulting distress, these subjects are called "vigilant". The second type of patient, "passive", uses avoidance strategies even when information is available. According to some studies, avoidance-type strategies are effective in adapting to the context, thus reducing the level of anxiety and stress [10].

There is a link between anxiety and post-operative pain [11]. Anxious patients require more hypnotics for sedation in minor surgery and express pain at the injection site more easily, and anxiety and preoperative distress are also factors favoring lack of compliance with treatment [12]. Tully et al. observed that high anxiety conditions the preoperative experience, decreases the degree of satisfaction of the preanesthetic consultation and prolongs hospitalization in cardiac surgery [13].

Depression is common in patients before and after major surgery. It can have significant effects in surgical patients. De Cosmo et al. found that patients with preoperative anxiety and depression had higher pain intensity after surgery and greater consumption of analgesics [14]. They would also increase the risk of death according to Abrams et al [15]. Cuijpers et al. also reported an increased risk of all causes of mortality in a meta-analysis, several causes of increased mortality have been suggested, one is non-adherence to medical recommendations by depressed patients, another factor is the tendency of depressed patients to lead a less healthy lifestyle, for example smoking and excessive alcohol consumption [16].

5. CONCLUSION

Anxiety and depression had a high prevalence in the general surgery department which is due to several factors such as age, diagnosis, surgical history, length of hospitalization, etc. This requires ongoing assessment and management because of the direct impact of this component on patient recovery.

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CONSENT

Written informed consent was obtained from the patient for publication of this case report and

accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

ETHICAL APPROVAL

This case report is exempt from ethical approval at our institution.

REGISTRATION OF RESEARCH STUDIES

The datasets in this article are available in the repository of the general surgery database, CHU Ibn Rochd, upon request, from the corresponding author.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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