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# PERIOPERATIVE NIGHTMARES

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## ABSTRACT

Anesthetic procedures are frequently performed at the operating rooms in our hospitals. Beyond the medical aspects, the nursing staff pays more attention to the aspects experienced by patients subject to these anesthesia.
Our work aims to exercise the often psychological component neglected, patients candidates for anesthetic procedures during the different preoperative, intraoperative and postoperative periods.
This is a prospective study which focused on a population of 126 patients interested for different surgical reasons for a period of three month from September 1st to December 1st, 2021. Data collection was carried out in the 48 hours following the surgical procedure.
We report in this study the incidence of this phenomenon in our hospital and some recommendations that can help reduce this incidence.

## KEYWORDS

nightmares, anesthesia, memorization incidents,confusion.

# MAIN ARTICLE

## Introduction

Each patient scheduled for surgery must be subject anesthesia. The vast majority of patients requiring surgery will benefit from general anesthesia. Then it's epidural anesthesia and In third place comes loco anesthesia peripheral region which stands out as an excellent alternative for limb surgeries.

Perioperative nightmares or sleep disturbances in one way general are the consequences of a stressful experience whether preoperatively, intraoperatively or postoperatively. These are complications therefore, multifactorial and complex.

In this complicated atmosphere, we wanted to carry out a prospective study within the different surgical departments of Moulay Ismail military hospital, with the aim of seeing the incidence of psychological disorders, intraoperative memorization phenomena and sleep disorders in patients who have undergone surgical procedures under general anesthesia mainly but also under spinal anesthesia with or without epidural analgesia or still under peripheral locoregional anesthesia. Furthermore, we will seek to through an operating sheet all the risk factors related to these grievances.

## Methods

This is a prospective study carried out in different surgical departments of the Moulay Ismail military hospital in Meknes for three months from September 1st to December 1st, 2021.

Through this study, we will address the often neglected psychological side, either in the preoperative, intraoperative or postoperative period, with the aim of to improve patient care.

Inclusion criteria : Any patient who received anesthesia for surgical reasons

Exclusion criteria:

- Any patient under the age of 16
- Patient having difficulty communicating
- Ambulatory surgeries
- Patient refusing to be part of this study

All data was collected from a questionnaire (form operating procedure) which was offered to postoperative patients within a time limit of not exceeding 48 hours of their surgical procedure.

Our study lands in a special period, characterized by decline progression of the 3rd wave of Covid-19 and the parallel resumption of anesthetic activity in the central operating room of the Hospital. It should be noted that during this wave, our anesthetic activity increased considerably reduced to cover only 4 operating rooms instead of 10 previously, this is due to the mobilization of material and human resources for the benefit of the various activities related to said wave.

We took into consideration respect for anonymity as well as the confidentiality of our patients when collecting our data.

## Results

### 1. Preoperative period

Among 161 patients who experienced study-related phenomena during the study period, only 126 patients responded to the questionnaire that we proposed to them.

The young age group predominated in our study with 66.66% of patients. under 60 years old. The average age is 49.7 years with extremes ranging from 18 to 86 years old.

We note a male predominance with a sex ratio M/F = 1.63 with 61.9% of male and 38.1% of female (be explained essentially by the military vocation of our establishment.)

In our series, 54 patients did not present medical ATCD (42.86%), on the other hand 72 patients ( 57.14%) had medical ATCD

48 patients had anesthetic ATCD, 54 presented addictions

### 2. Intraoperative

All patients were satisfied with the quality of their installation in the operating room and 95% of patients estimated their contact with healthcare staff as easy

Sleep quality was judged good to excellent in 63.46%.

98.4%, or the vast majority of patients, said their transportation was excellent and fast.

We must be very attentive to our patients and therefore offer them the most comfort. possible so that their anesthetic and surgical procedure is not a source of stress and of trauma. This is why we sought to find out if the modesty of our patients was respected.

Last memory before anesthetic induction 47.62% say they remember nothing During spinal anesthesia, the patient remains conscious and therefore is not often the best possible scenario

for him, especially if it is a very anxious patient. THE patient listens to the comments of the staff responsible for his operation and sometimes little increased his stress level. This is why we sought to know the complaints of our patients towards this anesthetic aspect.

We received a complaint from a patient who experienced hypotension during his surgical gesture, as the scope was visible to the patient and he knew the values normal blood pressure, his stress level increased significantly. He tried to inform the staff of his discomfort but found himself unable to speak. What this patient was concerned about was the quality of his anesthesia in more of an unpleasant emotional feeling. The patient did not report anything to his anesthetist doctor.

As a comment, our patient asked to pay more attention to patients during surgical procedures and if possible position the screens in such a way ,that the patient does not see them.

Awakening and intraoperative memorization: waking up during general anesthesia is a real nightmare that everyone resuscitators-anesthetists and patients fear. This is why we sought the possibility of this phenomenon occurring during the daily practice of our resuscitators-anesthetists. During our investigation, only one patient reported distressing memorization intraoperative: This is a patient initially operated for phlebectomy under spinal anesthesia. An hour and a half later, the patient complained of pain at the site operative: controlled by conversion to intravenous general anesthesia according to the what the patient says. On the anesthetic file, additional sedation was noted. to finish the surgical procedure. The patient reports to us all the events experienced around him, all the words and comments from the anesthetic and surgical teams. He emphasizes to us that it was a unpleasant and very distressing ordeal which he did not dare to speak to the doctor about anesthetic or to your surgeon. For our study we then retain one case of perioperative memorization (1.26%).

### 3. Postoperative period

Postoperative pain is a very interesting phenomenon to study, because all patients are systematically put on an analgesic drip postoperatively to minimize patients' pain, but despite this each patient has a feeling different from the others.

Postoperative sleep quality is essential for recovery early in our patients; thus its impact is significant on postoperative outcomes (including anxiety, number of days of hospitalization required and medication postoperative).

| | | | |
|---|---|---|---|
| **NOM :** | **Prénom :** | **Age :** | **Sexe :** |
| **Type d'intervention chirurgicale :** | | **Bloc :** | |
| **Date de l'acte opératoire :** | | **Investigateur :** | |

| | INTERROGATOIRE DU PATIENT à j1 ou j2 | OUI | NON |
|---|---|---|---|
| Q1 | Acceptez-vous de répondre à un questionnaire concernant votre anesthésie ? | ☐ | ☐ |
| Q2 | Quel est votre dernier souvenir avant de vous endormir ? | | |
| Q3 | Quel est votre premier souvenir après votre réveil ? | | |
| Q4 | Vous souvenez-vous de quelque chose pendant l'opération ? (l'évocation doit être spontanée) | ☐ | ☐ |
| | - Douleur ? | ☐ | ☐ |
| | - Impossibilité de bouger ? | ☐ | ☐ |
| | - Propos des personnes présentes ? | ☐ | ☐ |
| | - Bruits ? | ☐ | ☐ |
| | - Autre perception (toucher, vue,...) ? | ☐ | ☐ |
| | - Autre gêne ? | ☐ | ☐ |
| | En cas de mémorisation : | | |
| | - Pensez-vous avoir rêvé de tout cela ? | ☐ | ☐ |
| | - Cela a-t-il duré longtemps ? | ☐ | ☐ |
| | - Qu'avez-vous ressenti ? | | |
| Q5 | Dans l'affirmative avez-vous parlé de ces souvenirs au médecin anesthésiste ? | ☐ | ☐ |
| Q6 | Avez-vous un commentaire à faire sur votre anesthésie ? | | |

*Standardized questionnaire offered to patients*

## Discussion

Any surgical procedure requires anesthesia, the criteria of which are known. worldwide and which must be ensured for the comfort of the patient in the first place and of the surgeon operating secondarily. Having to be operated on, the patient is subject to a high threshold of stress (anxiety towards his illness, his operation, his anesthesia and his post-operative outcome). This aspect is often neglected or rather referred to pharmacological medication sometimes excessive.

Following an operation carried out under epidural anesthesia and spinal anesthesia, the patient remains aware of everything that is happening around him which increases his stress

level. We must not neglect the possibility that the gesture surgery lasts longer than expected and the effects of this type of anesthesia start to get up.

Intraoperative memorization is a particular entity, which is only possible if loss of consciousness is absent for all or part of the duration of anesthesia (regarding general anesthesia). As well as the unpleasant feeling of pain is only possible if the quantity of anesthetic products injected at the beginning are not appropriate for the duration of the intervention (speaking of epidural anesthesia and spinal anesthesia).

In the absence of studies carried out concerning this problem under our skies (Morocco), we refer to various Western publications. On this subject; alone the theme of intraoperative awareness and/or intraoperative memorization has some statistical figures. Anglo-Saxon and Scandinavian publications mention an incidence between 0.2 and 2%, knowing that even with these figures it undoubtedly remains underestimated (1).

On the other hand, North American studies mention an incidence of awakening and extremely variable intraoperative memorization from 0.1% to more than 40% depending on the evaluation methods, the type of patients considered, the time of evaluation and the country (2)–(3). Anxiety about an intervention is a very common manifestation. The subjects operated on are on average 20% more anxious than the general population(4) and we detect anxiety in 40% of patients(5). The fear mainly concerns surgery, more than on anesthesia(6) and preoperative anxiety is the 5th factor judged as undesirable by anesthesiologists(7). Anxiety has been the subject of particular attention in anesthesia in adults as well as children(8). We will be interested in our context and given the military vocation of our structure to anxiety in adults.

In adults, the risk factors for anxiety that have been determined on large cohorts: Cancer, smoking, mental disorders, the weak outlook for the future, background anxiety, the pain, ntermediate-heaviness surgery and the female gender. These risk factors were reported by the study by L. Beydon et al[8]. significant anxiety conditions the intraoperative experience: it reduces the degree of satisfaction with Patient Controlled Analgesia (PCA)(9) and prolongs hospitalization(10). It is important to try to determine the anxiety profile and strategies that our patients adopt to face.

We often wonder when is the best time to act regarding anxiety. We can say that there is not a single moment but rather several moments or occasions presenting themselves before medical practitioners (doctors and nurses whether in surgery or anesthesiology).

The different occasions can be schematized as follows:

-The moment of the interventional proposal by the treating surgeon

-The pre-anesthetic consultation (CPA)

-The pre-anesthetic visit (VPA)

-Contact with nursing staff preoperatively

The patient who is going to have general anesthesia expects to lose consciousness, so not to experience the stressful event that constitutes his intervention and the pain that is associated. This wish for loss of consciousness is often shared by the surgeon and the anesthetist because it allows them to accomplish their task with peace of mind and material comfort that they would not necessarily have under the permanent judgment of the patient(2).

In this context, a recovery of consciousness during the intervention can be experienced by the patient as a breach of contract with the anesthesiologist to whom he granted his confidence, especially if he did not warn him of this possibility(2). Waking up is often associated with memorizing the perioperative period and it is this memorization that fuels the whole procession of postoperative complications.

When waking up is accompanied by paralysis (which prevents the patient from showing that he is conscious) or pain, it can generate real panic. Postoperative which could lead to a medicolegal complaint(11) or to sometimes severe psychological disorders: it is Post Traumatic Stress Disorder which can associate nightmares, an anxious and irritable state or even an authentic state neurotic(12), (13).

Our work has mainly focused on this anesthetic aspect, which has never been studied under our sky (in Morocco). This is then the first study carried out at the faculty of medicine and pharmacy in Fez and at the Moulay Ismail military hospital in Meknes which was interested, among other things, in this incident which was so damaging to the patient certainly but also sometimes for anesthetic and surgical safety. According to our study, memorization is only possible if there is no loss of consciousness for all or part of the duration of anesthesia (awakening or awakening per anesthetic). She is said to be explicit when the restitution of memories is spontaneous or requested by the interrogation. Its study allows an assessment of the quality of anesthesia care. The neuropsychological consequences linked to the experience of intraoperative awakening can be severe and lasting. In addition, the medicolegal implications, still limited to certain countries, warrant particular attention(1).

In this sense, we wanted to know if intraoperative awakening is an event common in our context. Among the 126 patients who responded to the questionnaire; 79 patients received general anesthesia (alone or after regional anesthesia). Single patient had authentic intraoperative memories. The course of his anesthesia was like the following: our patient was

put under spinal anesthesia, the effect of which did not did not last long and therefore general anesthesia (sedation) was proposed for complete the surgical procedure. This was a young male patient aged 24 years old with ATCD of smoking and narcotics addiction. He was operated on for phlebectomy (removal of varicose veins). The explanation for the intraoperative awakening was probably due to the insensitivity of the patient at the threshold of the anesthetic doses used for his anesthesia or rather at a under dosage relative to the desire of the nurse anesthetist to shorten the awakening postoperative. This patient had memories of pain and felt during performing the sutures and said he listened to the comments of the staff present during his intervention. Our patient did not spontaneously express these memories before the quiz.

The overall incidence of MPO (intraoperative memory) in this work was of 1.26%, which is similar to results observed in studies using comparable collectives and methodology(14)–(15). Similar to our study, it is possible that, among the patients who refused to answer the questionnaire, some did not wish to discuss such a painful experience(16).

For this work the choice of patients covered all surgical specialties except ophthalmology and pediatric surgery (children under 16 years old were excluded). Outpatients were excluded given the possibility of discomfort to our evaluation by the residual effects of anesthetic products in addition to their course stay at the hospital level which makes filling out the questionnaire quite difficult. We opted for open questions to better assess relevance and authenticity. memories. Being the doctor responsible for collecting the questionnaires, I assumed the workload to collect well-completed questionnaires and exploitable. According to our work, we have found that patients do not report to their anesthetists their unpleasant experiences at the theater level operative and this confirms that the incidence of MPO is undoubtedly underestimated, such as that other studies point to. In our investigation, we looked for the presence of hallucinations/illusions/dreams after anesthetic induction until full recovery of consciousness postoperatively. A patient therefore reported having dreamed before waking up and finding themselves at the SSPI (Post-interventional intervention room). The patient had a dream vague where she finds herself faced with the impossibility of reacting to a hazard. This represented 1.26% of cases (one patient among 79 who had received a GA). No dreams with sexual content were noted secondary to the anesthetics used in our sample, it remains probable that the patients do not report this type of information to us for fear of being judged, it is therefore difficult to say that our study can represent the reality of the experience of operated patients in general.

**Recommendations**

From the outset, we must emphasize the evolving and dynamic nature that our investigation experienced.

Initially reserved for the study of sleep disorders and nightmares perioperative, we were led to discuss anxiety problems preoperative, intraoperative memorization incidents and finally the postoperative confusion, as interrelated risk factors inevitably influencing the quality of sleep of our dying patients operatives.

A size limitation in our study is the reduced sampling more or less selective; mainly due to the reduction in anesthetic activity course of the 3rd Covid-19 wave. Nevertheless, this work allowed us to bring out several observations which deserve in-depth reflection to provide answers and/or daily recommendations. All aimed, presumably, improving the quality of care provided perioperatively generally but in anesthesiology particularly: strengthen the time allocated to the anesthetic consultation for more information in reference to the various grievances and/or fears reported and specific to each patient.

The pre-anesthetic visit; practically absent in our establishment for reasons of workforce reduction in relation to with said pandemic. It constitutes an ultimate evaluation preoperative but also a complementary source of information and/or anxiolysis. In turn, it must be encouraged and strengthened.

Pharmacological anxiolysis may be necessary if the approach behavior proves insufficient, particularly among certain profiles of patients. We must then provide our pharmacy with medicines recognized as effective for this purpose: Hydroxyzine initially withdrawn from the market is back with a new business name. Benzodiazepines are an alternative but must be personalized decision and above all titled for initialization effective but above all efficient. Improvement in the condition of premises and hygiene. In this regard, an update level of the different hospital services is underway like this which was accomplished in the emergency department. What emerges above all is the creation of a single room or a maximum of 2 beds with bathrooms substantial (toilets, sinks and shower).

Fight against the cold in the operating room. Same as what was decided,for services. A major rehabilitation and renovation program of the central operating theater is in the final stages before the effective start of work.

Although rare, to overcome peri-memorization problems operative; monitoring the depth of anesthesia is a safe and effective way to provide rationality while avoiding excess source of overdose and deficiency source of memorization. This monitoring such that the bispectral index must be present at least in the different rooms where general anesthesia is the rule.

Promote outpatient surgery, particularly among elderly people can only improve their postoperative experience and reduce the incidence of postoperative confusion.

At the end, a parameter not the least, not to say the room cornerstone of the prevention of postoperative sleep disorders is the installation of effective and lasting analgesia.

To this end it is necessary: enrich the therapeutic arsenal in different classes pharmacological analgesics , establish clear protocols adapted to each specialty surgical,

encourage means of evaluating analgesia by paramedical staff and strengthen loco-regional analgesic means and especially that where we involve the patient (PCA)

This type of investigation is a laudable exercise which must be encouraged to take on a periodic character because it allows:

-To make the observation

-To evaluate the actions taken

-Formulate other recommendations and/or measures Fixes

## Conclusion

Studying these psychological aspects of perioperative care involves of capital importance. Being attentive to different grievances allows, in addition, to avoid medico-legal aspects related to memorization problems fortunately exceptional intraoperative in our practice, it also allows realize many hidden sides of our overall care whether anesthetic or surgical.

This often neglected approach is essential because it improves the quality of perioperative care and to avoid psychological consequences that can cause anesthetic and surgical trauma.

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