

Research Article

Accidents and Incidents in the Recovering Room of the Niamey National Hospital

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- SSPI
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Summary

Objective: To describe accidents and incidents in the recovering room of the Niamey National Hospital.

Patients and method: This was a prospective study, carried out in recovering room of the central block of the Niamey National Hospital in scheduled surgery from December 15, 2021 to January 15, 2022; or a duration of one month. Were included all patients admitted to the post- interventional monitoring room after general, local regional anesthesia. The variables studied were: age, sex, history, American Society of Anesthesiologist status, type of anesthesia, type of surgery, duration, intraoperative incidents and accidents, nature of post- operative incidents and accidents . The data was studied and analyzed with Word 2017 and Epi Info 7.2 software.

Results: During the study period 248 patients were included . The mean age of our patients was 29.53 years with extremes of 2 months and 83 years. The male sex predominated at 59% with a sex ratio was 1.43. Of our patients 67.34% were ASA1 and 32.66% ASA2. Surgical activities were dominated by trauma surgery with 39.88% followed by visceral surgery with 29.83%, and neurological surgery with 11.29%. General anesthesia was performed in 62.5% followed by spinal anesthesia with 37.5%. In the cardiovascular recovery room events were the most frequent with 21.13% followed by thermoregulation (12.68%) and respiratory events (8.73%). The main cardiovascular event was tachycardia with 45.09% followed by hypertension with 37.26%. Respiratory complication was dominated by desaturation with 42.30%. Agitation was the most observed complication of neurological incidents with 42.85%. In our series 0.75% of our patients had postoperative nausea and vomiting.

Conclusion: In the postoperative period complications are very frequent; it is therefore imperative to maintain increased surveillance in order to better prevent them to avoid disaster consequences.

INTRODUCTION

The awakening period is a critical phase during which nearly half of the incidents and accidents attributable to anesthesia occur. The passage to the Post-Interventional Monitoring Room (PTMS) is systematic and mandatory for all operated patients, regardless of anesthesia. This room occupies a privileged place in the monitoring of the reversibility of anesthesia, the appearance of possible complications and their treatment. In Africa, this practice is still not systematically applicable due to numerous organizational, infrastructure and/or human resource problems [1-3]. The objective of our study is to describe the incidents at accidents in Post Surveillance Room Interventional (SSPI) of the National Hospital of Niamey.

PATIENTS AND METHOD

This was a prospective analytical study, carried out in the

SSPI of the central block of the National Hospital of Niamey in scheduled surgery from December 15, 2021 to January 15, 2022; a duration of one month. All patients admitted to the Post-Procedural Monitoring Room after general, locoregional anesthesia in the central block were included. The variables studied were: age, sex, history, ASA class, type of anesthesia, type of surgery, duration of anesthesia, intraoperative incidents and accidents, nature of postoperative incidents and accidents, length of stay in SSPI . The data were processed and studied with Word 2017 and Epi info 7.2 software.

RESULTS

During the study period, 248 patients were included. The mean age of our patients was 29.53 years with extremes of 2 months and 83 years. The male sex predominated at 59% with a sex ratio of 1.43. Our patients were classified ASA1 in 67.34% and ASA2 in 32.66% (Figure 1).

Surgical activities were dominated by trauma surgery with 39.88%, followed by visceral surgery with 29.83%, and neurological with 11.29% (Figure 2).

In SSPI, no accidents were observed but incidents in 54.08% of cases, dominated by cardiovascular incidents with 21.13%, followed by thermoregulation incidents (12.68%) and respiratory incidents (8.73%) (Figure 3).

The main cardiovascular incident was tachycardia with 45.09%, followed by HTA with 37.26%, hypothermia was the main incident for thermoregulation. Respiratory complications were dominated by desaturation with 42.30%. From a neurological point of view, agitation was the most observed complication with 39.14% (Table 1).

In our study, incidents were highest in visceral surgery with 11.69 %, followed by trauma surgery with 10.08% (Table 2).

Incidents occurred in 25% of cases in patients who underwent general anesthesia (Table 3). In our study, the incidence of complications was higher in patients aged over 60 years and in ASA2 classes (Table 4).

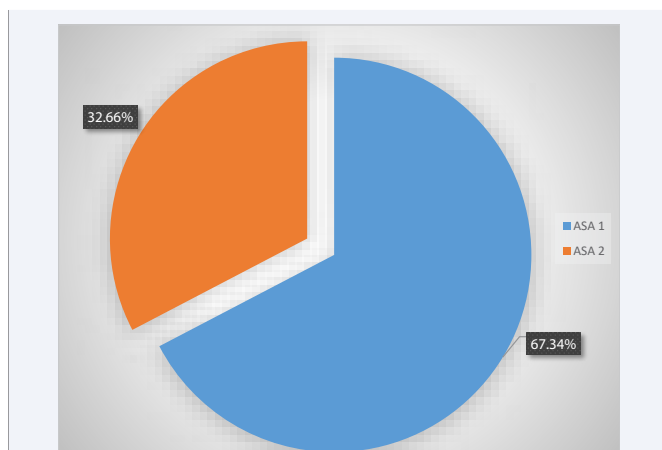


Figure 1 Distribution of patients according to ASA Class.

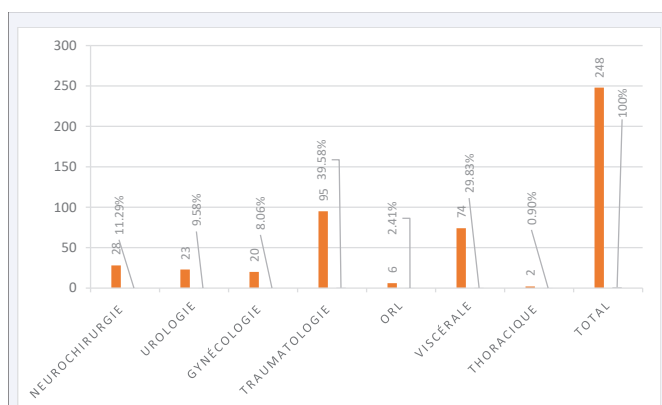


Figure 2 Distribution of patients according to the type of surgery. General anesthesia was performed in 62.50% followed by RA with 37.50%.

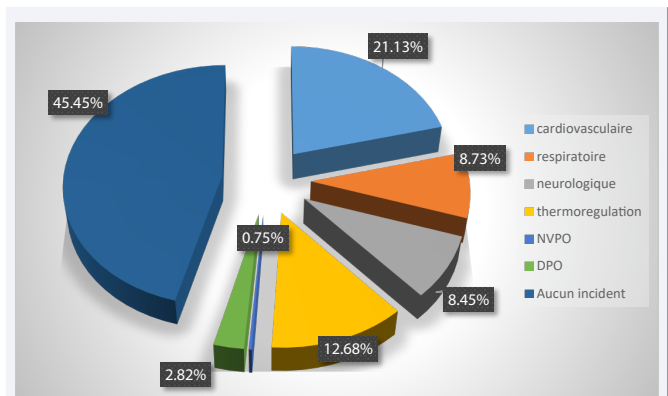


Figure 3 Distribution of patients according to the type of incident in SSPI.

Table 1: Distribution of patients according to incidents in SSPI.

Incidents	Number	Percentage (%)
Cardiovascular		
Tachycardia	23	45.09
HTA	19	37.26
Low blood pressure	08	15.68
Bradycardia	01	1.97
Total	51	100
Thermoregulation		
Hypothermia	29	90.62
Hyperthermia	03	9.38
Total	32	100
Respiratory		
Desaturation	11	42.30
Polypnea	07	26.92
Cough	05	19.24
Bradypnea	03	11.54
Total	26	100
Neurological		
Hustle	09	39.14
Anxiety	07	30.43
Wake-up delay	05	21.73
DPO	02	8.70
Total	23	100
NVPO	01	0.75

Table 2: Distribution of patients by incident according to the type of surgery.

Type of Surgery	Patients (n, %)		Total
	Incidents (yes)	Incidents (no)	
Visceral	29 (11.69%)	45 (18.14%)	74 (29.83%)
Traumatology	25 (10.08%)	70 (29.5%)	95 (39.58%)
Neurosurgery	13 (5.2%)	15 (6.09%)	28 (11.29%)
Gynecology	9 (3.62%)	11 (4.44%)	20 (8.06%)
Urology	8 (3.22%)	15 (6.36%)	23 (9.58%)
ENT	1 (0.40)	5 (2.01)	6 (2.41%)
Thoracic	0 (0%)	2 (0.90%)	2 (0.90%)
Total	85 (34.27%)	163 (65.73)	248 (100%)

Table 3: Distribution of patients by incident according to the type of anesthesia.

Anesthesia Patient (n %) Total		
Presence of incidents Absence of incidents		
AG 62 (25%)	93 (37.50%)	155 (62.50%)
RA 23 (9.27%)	70 (28.15%)	93 (36.50%)
Total 85 (34.27%)	163 (65.73%)	248 (100%)

Table 4: Distribution of patients by incident according to age and ASA class.

Age ASA	Patients (n, %)		Total
	Presence of Incidents	Absence of Incidents	
Age <5ans	11 (4.4%)	14 (5.68%)	25 (10.08%)
5-14 years old	18 (7.25%)	28 (11.35%)	46 (18.6%)
15-25 years old	8 (3.22%)	38 (15.38%)	46 (18.6%)
26-40 years old	19 (7.66%)	32 (12.94%)	51 (20.66%)
41-60 years old	19 (7.66%)	46 (18.54%)	65 (26.2%)
61-80 years old	6 (2.41%)	5 (45.46%)	11 (2.01%)
>80 years old	4 (1.61%)	0	4 (1.61%)
Total	85 (34.27%)	163 (65.73%)	248 (100%)
ASA Class			
ASA 1	44 (17.74%)	123 (49.6%)	168 (67.34%)
ASA 2	41 (16.53%)	40 (49.4%)	81 (16.13%)
Total	85 (34.27%)	163 (65.73%)	248 (100%)

DISCUSSION

During our study period, 248 patients were collected, the mean age of our patients was 29.53 years with extremes of 2 months and 83 years. This result is similar to that of Hicham K, et al. in Morocco who found a mean age of 28 years and higher than that of Otiobanda GF, et al. [3] in Congo who reported 20 years. We have a male predominance with a sex ratio of 1.34. This male predominance could be explained by the relatively high frequency of fractures in young people and cases of hernias in boys. This frequency is found in the series of Hicham K, et al. [4] Bawa B, et al. [5] in Niger on the other hand Diallo B, et al. [6] in Mali had reported a female predominance. In our series, the majority of our patients had no history. Most of our patients were classified ASA1 in 67.34% and 32.66% of ASA2; this is probably related to the young age of our patients, given that the age pyramid in Niger noted the youth of the population. Otiobanda GF, et al. Diallo B, et al. [3,6] had reported respectively 67.5% and 63.1% of ASA1 patients. Contrary to the study of Pete Y et al, 46% of his patients were classified ASA2 [7].

In our series, general anesthesia represented 62.5% and spinal anesthesia 37.5%, this could be explained not only by a common practice of digestive surgery [8]. In our series, 54.08% of our patients in SSPI had presented at least one incident but no case of accident had been observed. According to the literature, complications occur in the immediate postoperative period during recovery (14% of patients) [2]. In the prospective study conducted in Congo in SSPI of the University Hospital Center of Brazzaville, the rate of postoperative complications is 33.75% and 28.6% in the Moroccan series [2-4]. Chaibou MS et al. in Niger had reported an incident rate of 11.70% dominated by cardiovascular and respiratory incidents [9]. In our study, the respiratory incident rate is 8.45% dominated by desaturation 42.30 %. This result is higher than that of Akodjenou J, et al. [10] who reported a rate of 11.57%; in the Moroccan study, this rate is 7%. The majority of complications recorded are during general anesthesia; this observation is often found in the literature. In a study carried out in the United States, covering more than 80,000 operations, respiratory incidents are 3.6% during the first postoperative hour [1,2,4].

Cardiovascular complications were 21.13%, dominated by tachycardia with 45.09%, followed by HTA 37.26%. Our result is lower than that of Otiobanda GF, et al. [3] who reported a rate of 51.8% (HTA 57.2%). Eibalbal M [8]. reported a predominance of tachycardia with 58.33%. The incidence of complications was higher in patients aged over 60 years and in ASA2 classes. Nya Sah S, et al. [11] reported that 19.4% of their patients had a hypertensive crisis [10-12]. In our series, neurological complications were 8.45% dominated by agitation 39.14%, anxiety 30.43% and delayed awakening 21.73%; Otiobanda GF, et al. [3] reported that neurological complications were 7.4% dominated by agitation and delayed awakening. According to the literature, the frequency of clinically evident postoperative neurological disorders is 0.04 to 0.6%, dominated by delayed awakening. In our series, 12.68% of our patients had a thermoregulation disorder dominated by hypothermia with 90.62%; a prospective observational survey carried out in 2015 on 893 patients in 52 centers in France; 53.5% of patients had hypothermia. In the series of the University Hospital of Congo Brazzaville, this rate is 29.7%. This rate in our series could be explained by the cold season and the lack of means of peroperative and postoperative warming [3,13]. In our series, NVPO represented 0.75%. This result is lower than that of Otiobanda GF, et al. [3] who reported 3.7%; in the study of Malangue B, et al. [14] this rate is 22.2% [3].

CONCLUSION

Incidents and accidents are very frequent in the postoperative period, and can have harmful consequences for the patient; their management requires a good preoperative assessment, the use of appropriate drugs in the perioperative period and increased monitoring. In the postoperative period in order to minimize their occurrence and, above all, to treat them as soon as possible. Training of staff throughout the anesthesia chain will help improve the quality of care.

Conflicts of Interest

None.

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