ABSTRACT

Objectives: identifying the occurrence of risk for delirium among patients using sedatives in an ICU of the State of Rio de Janeiro and describing the findings more reported by the health team, suggestive of delirium in patients using sedatives and hypnotics, according to the CAM-ICU. Method: a retrospective study with adults in the ICU, in a public hospital in the State of Rio de Janeiro, based on documentary sources, during the months of February to April 2012. The sample consisted of 128 records. The study was approved by the Research Ethics Committee, CAAE 01135312.0.0000.5285. Results: we observed clinical findings suggestive of delirium in 69.53% however, only two patients diagnosed. Conclusion: the results seem to suggest the fact how common underdiagnosis of delirium among patients using sedatives in the ICU. Descriptors: Nursing; Nursing Care; Patient Safety.

RESUMO

Objetivos: identificar a ocorrência de risco de delirium entre pacientes em uso de sedativos em uma UTI do Estado do Rio de Janeiro e descrescer os achados mais reportados pela equipe de saúde, sugestivos de delirium em pacientes em uso de sedativos e hipnóticos, de acordo com o CAM- ICU. Método: estudo retrospectivo transversal, realizado com adultos internados na UTI, em um hospital da rede pública do Estado do Rio de Janeiro, com base em fontes documentais, durante os meses de fevereiro a abril de 2012. A amostra composta de 128 prontuários. O estudo foi aprovado pelo Comitê de Ética em Pesquisa, CAAE 01135312.0.0000.5285. Resultados: foi possível observar achados clínicos sugestivos de delirium, em 69,53% no entanto, apenas dois pacientes diagnosticados. Conclusão: os resultados parecem sugerir de fato o quanto é comum o subdiagnóstico do delirium entre os pacientes em uso de sedativos na UTI. Descritores: Enfermagem; Cuidados de Enfermagem; Segurança do Paciente.

RESUMEN

Objetivos: identificar la ocurrencia de riesgo de delirio entre los pacientes que utilizan sedantes en una UCI del Estado de Río de Janeiro y describir los hallazgos más informados por el equipo de salud, sugestivos de delirio en pacientes que utilizan sedantes e hipnóticos, de acuerdo con el CAM-ICU. Método: un estudio retrospectivo con los adultos en la UCI, en un hospital público en el estado de Río de Janeiro, a partir de las fuentes documentales, durante los meses de febrero a abril de 2012. La muestra consistió en 128 registros. El estudio fue aprobado por el Comité de Ética en la Investigación, CAAE 01135312.0.0000.5285. Resultados: se observó hallazgos clínicos sugestivos de delirio en 69,53%, sin embargo, sólo dos pacientes diagnosticados. Conclusión: Los resultados parecen sugerir el hecho de cómo infradiagnóstico común de delirio entre los pacientes que utilizan sedantes en la UCI. Descriptores: Enfermería; Los cuidados de Enfermería; Seguridad del Paciente.
INTRODUCTION

Delirium is a neurological disorder often manifested by severe patients in Intensive Care Units (ICU). Its relevance is not only due to the high incidence, but above all its consequences such as impact on morbidity, mortality and prolong hospital stay that result in greater social and financial costs of treatment.

Delirium is a state of potentially reversible acute confusion that develops in a short period of time (hours or days). Occurs as a direct result of a medical condition, intoxication or withdrawal, medication, exposure to toxins, or combination thereof.1

In addition to these factors, the noises also have great influence in triggering delirium in ICU patients, since sleep protocols are proposed from 22:00 o’clock, aiming to minimizing the sounds.2 Intense and permanent noise can cause various disorders, significantly changing the mood and the ability to concentrate in daily activities, and make the individual a level of conditioning, which can be dangerous to its health.3

The clinical picture varies according to the type of delirium, if hypoactive or hyperactive. A hypoactive patient is sleepy while the hyperactive presents with important psychomotor agitation and hallucinations. The most common framework of delirium is hypoactive form, while hyperactive pure form is relatively rare, less than 5%.4

Risk factors for delirium can be classified as modifiable (fever, dehydration, high risk of death, use of sedatives and analgesics, use of invasive devices such as tubes and catheters etc.) and non-modifiable (age, gender, personal habits (eg, smoking, alcohol abuse), comorbidities, prior nervous system disorders, and dementia).5

In order to facilitate the observation and diagnosis of delirium in hospitalized patients instruments were created, such as the CAM-ICU - Confusion Assessment Method for the Intensive Care Unit (Mental Confusion Assessment Method in the Intensive Care Unit).

One must also consider that the fact of delirium not be the primary reason for admission of patients in these units or the fact that it is generally considered as a trivial iatrogenic caused by drugs or psychosis in critically ill patients ("ICUpsychosis"), it seems to contribute to that, even though the patients using sedatives can present clinical manifestations suggestive of delirium, its diagnosis is rarely made, increasing, and its underdiagnosis.

From a clinical point of view, the underdiagnosis implies recognition of a disease or condition, making it impossible to take immediate remedial measures, which can in many cases, cost the patient’s life. Thus, delirium, to be underdiagnosed, is not treated, resulting in numerous personal, social and economic consequences, which is why we believe it is very timely investigation of this problem.

OBJECTIVES

- Identifying the occurrence of risk for delirium among patients using sedatives in the ICU of the State of Rio de Janeiro.
- Describing the most findings reported by the health team suggestive of delirium in patients using sedatives and hypnotics, according to the CAM-ICU I.

METHOD

Article drawn from the Dissertation << Delirium in Intensive Care - A Retrospective Study>> presented to the Post-Graduate Program of the Nursing School Alfredo Pinto, at the Federal University of Rio de Janeiro EEP/UNIRIO, Rio de Janeiro/RJ, Brazil, 2013

The research used the quantitative method with a retrospective study. For that, the medical records of patients assisted used in the period from 01/02/2012 to 30/04/2012, in an Intensive Care Unit of a public hospital in the state of Rio de Janeiro, composed of 35 beds in search medical reports and nursing who could fill clinical criteria suggestive of delirium according to the CAM-ICU or definite diagnosis.

This period was defined in order to finding the characteristic reports of signs and symptoms (agitation, disorientation, apathy among others) that show fluctuating level of consciousness for tables of delirium, correlating them with variables (gender, age, underlying disease, medications, sedatives, level of consciousness and psychomotor state) suggesting that favor its development in patients who were admitted to intensive care units. We sought this time to carefully examine the records and identify solid information that allowed us to interweave consistent data (variables) that were sufficient to make the diagnosis of delirium lock.

It is noteworthy that to compose the production data was built a tool that guided the collection of records. This instrument consisted of pre-selected criteria that are part of the CAM-ICU scale and some variables that meet factors that enable the identification of
the diagnosis of delirium, such as: sex, age, underlying disease, medications and detail sedation specifying which drugs, use of time, period and dose. As well as add relevant information as state of mood swings / aggression, moments of disorientation and use of inadequate/incoherently. All these criteria integrate information critical to the development of research. The exclusion criteria of the study were patients aged below 18 years old.

It is important to note that data collection began only after evaluation and approval by the Ethics and Research Committee of the Federal University of Rio de Janeiro State (UNIRIO), on the advice embodied No. 28590 on 30/05/2012.

For the treatment of the data it was used nonparametric statistics with simple frequency and organization of spreadsheets using Microsoft Excel version 2010® program. Whichever is the crossover appeal of the variables for the PivotTable.

We can see the profile of the sample (Table 1), with respect to age group there was a predominance of patients at ages groups above 58 years old (62%), and, in the range above 68, above, therefore the indicated range as predisposing to delirium (65 years old), the frequency of the sample was 39%. In this sense, without considering other factors predisposing to the development of delirium, we must consider that at least 39% of these patients would be likely to develop delirium.

Studies present their results in the most vulnerable patients develop delirium by CAM-ICU assessment are those aged over 65, outlining a prevalence that can fluctuate between 10 and 30%⁶. This same prevalence is also observed in other studies.⁷,⁸

When you cross the gender and age, considering only the males and the age group above 59 years, we found that the highest concentration of the sample of patients that sex is in the age group above 69 years (63,2%), whereas in women have such an approximation results represented by 62,5%.

In the results presented in a study, it was observed that about half (56,8%) were aged between 65 and 84 years, and 52,3% were male.⁹

With regard to underlying diseases in the literature, in particular, the CAM-ICU, as predisposing to delirium, and considering only the most vulnerable gender (male), we found the prevalence of patients with metabolic disorders (56%), followed of patients with hypertension - hypertension (39,3%). In view of the fact that the female not been reported as predisposing or precipitating delirium, especially in the CAM-ICU, it obtained better results for metabolic disorders (64,5%) and hypertension (41,9%) respectively.

Looking at the number of patients with metabolic disorders that had two or more underlying diseases, there has been, in Table 2, that hypertension was the most common underlying disease among male patients (48,6%) almost half of the sample, followed by neurological disorders (24,3%).

While in women resulted lower percentages with hypertension (40%) below the neurological disorders (15%).

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**RESULTS AND DISCUSSION**

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While in women resulted lower percentages with hypertension (40%) below the neurological disorders (15%).
Table 2. Distribution of male and female patients with metabolic disorders and major diseases associated with base. Rio de Janeiro, 2012.

<table>
<thead>
<tr>
<th>The underlying diseases</th>
<th>Male with metabolic disorder n = 37</th>
<th>Female with metabolic disorder n = 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>18 (48,6%)</td>
<td>16 (40%)</td>
</tr>
<tr>
<td>Neurological disorders</td>
<td>9 (24,3%)</td>
<td>6 (15%)</td>
</tr>
<tr>
<td>HIV</td>
<td>1 (2,7%)</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>1 (2,7%)</td>
<td>-</td>
</tr>
</tbody>
</table>

*The percentages relating to comorbidities in this table are explained in the light of the fact that a single patient may have presented more than one comorbidity.

Other studies have reported that among other factors associated with ICU delirium, include: advanced age, early cognitive impairment, metabolic diseases (such as sodium levels imbalances, calcium and blood urea nitrogen), acute infection, respiratory diseases, acidosis, anemia, and hypotension.4,10,11

The above results support the plurality of underlying diseases interfere directly in the development of delirium, as well as pointing the results shown in Table 2 of this study, identified by metabolic disorders in different genders.

After analyzing the medical records and nurses, we found that only 02 patients (1,56%), from the clinical evaluation were diagnosed closed for delirium, which seems rather worrying the case of a sample after analysis, we evidenced different situations might make it susceptible to delirium, with regard to the precipitation and predisposing factors, in particular, sex and age. Since the 2 patients with delirium, although not made use of sedatives during hospitalization, patients had multiple underlying diseases, had oscillation of psychomotor status and level of consciousness, and were treated with multiple medications.

Is strange and at the same time draws our attention, the fact that a single patient may have presented more than one comorbidity.

Despite the importance of delirium, it is often not diagnosed.1,2 It is estimated that 36% to 67% of the cases the diagnosis of delirium is not performed, usually being confused with other syndromes such as dementia, depression, or as part of aging process.

Regarding the prevalence by age, we identified a case in the range 49-58 years, which is well described in the literature, and a case in patients 59-68 years, which meets the references predisposing patients aged above 65. Note that the study sample has a range of 59 to 65 years.

The multiple underlying diseases were also common in diagnosed cases, which have also been described as a cause of the onset of delirium in developed studies. Although many authors say that much is known about the epidemiology of delirium, including predisposing factors such as preexisting dementia, old age and common precipitants, such as infection, drugs and large surgical event; however, very little is known about the neuropathological mechanisms that lead to the development of delirium.

Doing a reading in Table 3, which distributes the patients using sedatives with regard to gender, age and had clinical criteria for the diagnosis of delirium, we can identify that just over half of the men made use of sedative (51,7%) and of these, most often represented by (23,9%) in the ranges of ages 49-58 years old (21,7%) in the ranges of 59 to 68 years of age; recalling that it was precisely in these two periods of age that had the prevalence of delirium, represented by two cases.

In women, we observed results also characterized by 20,9% in the same age male, differing in the age range 69-78 years obtained better results 32,6% who used sedatives. Also occurred in males, women had the same proportions as they used sedatives and have clinical criteria for the diagnosis (48,3%).

Table 3. Distribution of male and female patients who used sedatives in relation to age and who had clinical criteria for establishing the diagnosis of delirium. Rio de Janeiro, 2012.

<table>
<thead>
<tr>
<th>Features</th>
<th>Use of Sedative n = 89</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td></td>
</tr>
<tr>
<td>18-28 years old</td>
<td>2 (4,3%)</td>
</tr>
<tr>
<td>29-38</td>
<td>1 (2,3%)</td>
</tr>
<tr>
<td>39-48</td>
<td>6 (13,1%)</td>
</tr>
<tr>
<td>39-49</td>
<td>11 (23,9%)</td>
</tr>
<tr>
<td>59-68</td>
<td>10 (21,7%)</td>
</tr>
<tr>
<td>69-78</td>
<td>6 (13,1%)</td>
</tr>
<tr>
<td>79 or older</td>
<td>10 (21,7%)</td>
</tr>
<tr>
<td>Clinical criteria to establish the diagnosis</td>
<td>46 (51,7%)</td>
</tr>
<tr>
<td>Female</td>
<td>43 (48,3%)</td>
</tr>
<tr>
<td>18-28</td>
<td>1 (2,3%)</td>
</tr>
<tr>
<td>29-38</td>
<td>1 (2,3%)</td>
</tr>
<tr>
<td>39-48</td>
<td>2 (4,7%)</td>
</tr>
<tr>
<td>49-58</td>
<td>9 (20,9%)</td>
</tr>
<tr>
<td>59-68</td>
<td>9 (20,9%)</td>
</tr>
<tr>
<td>69-78</td>
<td>14 (32,6%)</td>
</tr>
<tr>
<td>79 or older</td>
<td>7 (16,3%)</td>
</tr>
<tr>
<td>Clinical criteria to establish the diagnosis</td>
<td>43 (48,3%)</td>
</tr>
</tbody>
</table>
Delirium in intensive care - a retrospective...

Sedatives used in the sample were represented by Midazolam and Propofol, acting as hypnotic sedatives, with average use time of 6.5 days in an average hospital stay of 11.7 days.

Study of surgical trauma in ICU patients showed that midazolam increases the possibility of transition to delirium. Sedatives was observed in all the patients with clinical criteria for the diagnosis of delirium, although, not delirium had been diagnosed at any of them.

We had in this study the frequency of occurrence of 2.24%, based on the total number of cases in relation to the total number of individuals at risk at any given time. While this result is close to those found in the literature, much concerns us in relation to the quantity of patients who had clinical criteria for establishing the diagnosis of delirium (Table 3), contributing to a delirium of the occurrence of risk in 69.53% of the sample analyzed.

Clinical criteria for the diagnosis were age less than 65, the multiple underlying diseases, the use of sedatives, the oscillation level of consciousness and/or mental state. Looking at the female results, these are similar to those of the male and even overlap them. As we look for interesting that perhaps the most under-diagnosis is with female patients, since the literature does not put as a predisposing factor for delirium.

There were quantified exactly the clinical criteria found among male patients who used sedatives and who did not have the diagnosis of delirium, represented by 46 patients (51.7%). We envision that multiple underlying diseases were representative increasingly in the age groups 49-58 years old, 39-48 and above 79 years, with percentages of 30.4% and 26.1% respectively in the last two. Although it is usual the intensive care patient was receiving multiple medications due to its complexity and seriousness that has established itself as a pathological process, we identified in older age groups a percentage of higher multidrug therapy, permeating the same age group to the above comorbidities.

With regard to the status of psychomotor pay attention to an important issue. In greater regularity is referred to in the records of doctors and nurses analyzed a level of calm awareness with little change this state. However, we realize that in the age groups 49-58 and above 79 years old two cases (4.3%) for each age group, remained agitated in some period of hospitalization; thus, as the oscillation in the age ranges 39-48 years old (2.2%) 59 to 68 years old (4.3%) and over 79 years old (2.2%).

The level of awareness there is heightened reports regarding the lack of interaction with the examiner and the country, mainly noted in patients over the age of 49 to 78 years old. Unlike this, in relation to the fluctuation of this state predominated in patients aged above 79 years old represented by five elderly obtaining a representation of 10.8% of cases.

Very concerns us when we evaluate more accurately the percentage of the state of consciousness of patients who showed no interaction with the environment and/or examiner. We assume that patients could be extremely sedated or even in the development of hypoactive delirium, especially, if we imagine that these same patients who had no interaction, are the same or a significant portion of that appeared calm in the evaluation of psychomotor state.

In females can view the results of clinical criteria found among women who used sedatives and who did not have the diagnosis of delirium established. Where highlights the emergence of underlying diseases and use of multidrug therapy in older age groups identified above 49 years.

Regarding psychomotor approached the findings in males, with a higher percentage in the higher age groups when found in the records of doctors and nurses a calm state of these patients. So how can we sustain the same assumption regarding the absence of interaction with the environment and/or examiner as discussed earlier in males, referring us to excessive sedation or hypoactive state of delirium.

Regarding the oscillation level of consciousness was more dispersed between age groups, but with very close to the absolute values found in men. Referring patients who used sedatives and had clinical criteria for diagnosing cognitive grievance, that study comprises a risk to the underdiagnosis of delirium for males referring to 35.9%, while for females a score of 33.6%.

Among all patients in the sample analyzed 23.4% were discharged from the unit and 76.6% died, including two patients who were diagnosed with delirium. And of these total deaths, 37.8% were males and 38.8% were female patients who used sedatives during hospitalization.

**CONCLUSION**

It was possible to realize how vulnerable are the patients on continuous sedation in intensive care in relation to delirium and how
underdiagnosis can contribute to the worsening of this problem so many implications behind to practice nursing. Being identified the risk of delirium in 69.53% of the sample analyzed.

It is essential that assessment scales that detect delirium to the bedside is handled and applied in the evaluation of the patients’ life that create a supporting diagnosis in their disease process, as it seemed to be, from that study, those who use sedative.

REFERENCES


Delirium in intensive care - a retrospective...