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Original article

Nursing interventions in the prevention of complications during the pronation maneuver in patients with COVID-19*

Intervenções de enfermagem na prevenção de complicações na manobra prona em pacientes com COVID-19

Intervenciones de Enfermería en la prevención de complicaciones durante la maniobra de pronación en pacientes con COVID-19

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Abstract

Objective: To identify and describe the interventions implemented in Nursing care to prevent complications in pronated COVID-19 patients. **Method:** a cross-sectional study conducted in a large-sized hospital that is a reference for the care of SARS-CoV-2 infection during the pandemic. The sample consisted of 83 medical records (physical and electronic) of patients admitted to intensive care units who required the prone maneuver as a ventilatory strategy. The data were collected by means of the variables related to Nursing interventions. **Results:** predominance of the male gender was identified, as well as of older adults with hypertension and diabetes. The prevalent complication corresponded to pressure injury in the thorax and face. The interventions reported included the following: skin care, hemodynamic monitoring, care related to the medical devices, airways and hygiene measures. **Conclusion:** applying the Nursing care measures identified contributed to preventing complications related to the pronation procedure.
Descriptors: Prone Position; COVID-19; Critical Care Nursing; Standardized Nursing Terminology; Intensive Care Units

Resumo

Objetivo: identificar e descrever as intervenções implementadas na assistência de enfermagem para prevenir complicações no paciente, em posição prona, com COVID-19. **Método:** pesquisa

transversal, conduzida em um hospital de grande porte, referência para atendimentos de infecções por SARS-CoV-2 durante a pandemia. A amostra foi composta por 83 prontuários (físicos e eletrônicos) de pacientes internados em cuidados intensivos e que demandaram a realização da manobra prona enquanto estratégia ventilatória. Os dados foram coletados por meio das variáveis relativas às intervenções de enfermagem. **Resultados:** identificou-se a predominância do sexo masculino, idosos, com hipertensão e diabetes. A complicação prevalente foi a lesão por pressão em tórax e face. As intervenções relatadas incluíram: cuidados com a pele, monitorização hemodinâmica, cuidados com os dispositivos médicos, via aérea e medidas de higiene. **Conclusão:** a aplicação dos cuidados de enfermagem identificados contribui para prevenção de complicações relacionadas ao procedimento de posição prona.
Descritores: Decúbito Ventral; COVID-19; Enfermagem de Cuidados Críticos; Terminologia Padronizada em Enfermagem; Unidades de Terapia Intensiva

Resumen

Objetivo: identificar y describir las intervenciones implementadas en la atención de Enfermería para prevenir complicaciones en pacientes pronados con COVID-19. **Método:** investigación transversal realizada en un hospital de gran porte que es referencia en la atención de infecciones por SARS-CoV-2 durante la pandemia. La muestra estuvo compuesta por 83 historias clínicas (impresas y electrónicas) de pacientes internados en cuidados intensivos y que requirieron la maniobra de pronación como estrategia de ventilación. Los datos se recolectaron por medio de las variables relacionadas con las intervenciones de Enfermería. **Resultados:** se identificó predominio del sexo masculino, ancianos y personas con hipertensión y diabetes. La complicación prevalente fueron las úlceras por presión en el tórax y el rostro. Entre las intervenciones informadas se incluyen las siguientes: cuidado de la piel, control hemodinámico, precauciones relacionadas con los dispositivos médicos, vías aéreas y medidas de higiene. **Conclusión:** aplicar las medidas de atención de Enfermería que se identificaron ayuda a prevenir complicaciones relacionadas con el procedimiento de pronación.
Descriptores: Posición Prona; COVID-19; Enfermería de Cuidados Críticos; Terminología Normalizada de Enfermería; Unidades de Cuidados Intensivos

Introduction

The disease caused by the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV-2) virus has become a global public health emergency due to the speed and severity of its transmission. Consequently, it overloaded the health systems, exerting an impact on various sectors and unequally affecting the population. In March 2020, the World Health Organization (WHO) officially declares the COVID-19 pandemic. [1]

The viral infection affects the respiratory tract and is transmitted by means of respiratory droplets and direct contact, with fever, cough, dyspnea, fatigue and myalgia as main symptoms. Nearly 81% of the cases are considered mild, mainly affecting young individuals and children and with benign progression. Approximately 14% of the cases presented the severe form of the disease and required hospitalization, whereas 5% evolved

to critical conditions and demanded intensive care. The subgroup of patients with worse clinical conditions is generally comprised by older adults and people with chronic diseases.[2]

According to a study carried out by means of a systematic review and meta-analysis, it was concluded that smoker patients, male, aged over 65 years old and with presence of comorbidities such as hypertension, diabetes and cardiovascular and respiratory diseases, are at a higher risk of worse clinical outcomes in terms of morbidity and mortality.[3]

Faced with the established epidemiological scenario, different strategies were applied as a way to mitigate transmission and contamination, such as mask use by the entire population, quarantine, social distancing avoiding crowds, and use of N95 masks and personal protective equipment (PPE) by health professionals.[4]

However, there is still no proven specific treatment with antiviral medications, although several clinical trials based on molecular mechanisms and genomic organization of SARS-CoV-2 are underway for the treatment of this viral infection. Currently, due to efforts made by the scientific community, various vaccines that showed clinical safety and efficacy of up to 95% have already been developed. Via governmental approval, these vaccines were distributed at the global level, exerting direct impacts on the pandemic scenario.[5]

Regarding the general and support treatments, they vary according to severity of the disease. Individuals with mild symptoms do not require hospitalization; their treatment consists of symptomatic medications, with antipyretics for fever and pain, adequate nutrition and rehydration, and home isolation. In turn, patients with the moderate form should be strictly monitored due to the risk of clinical degeneration.[6] For the patients who progress to severe forms of the disease, characterized by onset of the Acute Respiratory Distress Syndrome (ARDS), constant monitoring of vital signs is recommended, as well as oxygen therapy to maintain oxygen saturation (SpO_2) ≥ 94%, and advanced Intensive Care Unit (ICU) support.[7]

It is in this sense that the indication for the prone position (PP) arises, as one of the main therapeutic resources for the management of moderate to severe ARDS. The maneuver consists in positioning the patient in ventral decubitus, favoring more homogeneous ventilation, optimizing the ventilation/perfusion ratio and the pulmonary

mechanics on the chest wall,[8] allowing for a reduction of the ventilation intensity and decreasing the occurrence of ventilator-induced lung injury (VILI).[9]

However, the PP maneuver is not exempt from complications due to the complexity of the procedure, which is usually performed in critically-ill patients on ventilatory support, as a rescue therapy. Such being the case, it should be performed by a duly trained and qualified multidisciplinary team with knowledge of the indications, contraindications, technique and risks associated.[8]

This study is relevant because it emphasizes the Nursing team, as members of the multiprofessional team, as the main responsible for the direct assistance provided to the patient in prone position, with emphasis on care measures, control of risks and complications associated with the procedure. It is reiterated that improving the technical-scientific knowledge on the subject matter can contribute to grounding institutional protocols, favoring the quality of the assistance provided in health services.

Accordingly, the objective of this research was to identify and describe the interventions implemented in Nursing care to prevent complications in pronated COVID-19 patients.

Method

This is a cross-sectional study conducted in the ICUs of a reference hospital for COVID-19 care. This large-size hospital from southern Brazil used to be a reference for trauma care and, during the COVID-19 pandemic, had its structure organized for the care of critically-ill patients, requiring intensive care beds.

The sample was recruited for convenience, selecting 200 medical charts of patients diagnosed with COVID-19, 83 of which met the inclusion criteria. Data collection was in charge of a single qualified research and was conducted from April to September 2020. The inclusion criteria corresponded to medical records of patients admitted to the intensive care unit, hospitalized with a diagnosis of COVID-19 infection and subjected to the pronation maneuver. Medical charts with incomplete information were excluded, as well as those that did not include the description of the pronation maneuver.

A questionnaire was prepared using the *Google Forms* platform, and applied to collect data from physical and electronic medical records, which contained the following

variables: gender, age, comorbidities, nursing care, complications, changes in vital signs, pressure injuries, patient evaluation scale (Braden), nutrition, ventilation, ICU hospitalization time, and time in the prone position.

Subsequently, the data were organized and stored in spreadsheets generated with the *Google Forms* tool. The *Statistical Package for the Social Science* (SPSS) data analysis program, version 24, was used and the data were presented with the aid of *Microsoft Office Excel*® 2010.

Descriptive statistics was applied by means of the distribution of absolute and relative frequency, mean and standard deviation, as well as non-parametric tests (chi-square) for association of variables. The results were considered statistically significant when $p < 0.05$.

This project followed the guidelines set forth in Resolution No. 466/12 of the National Health Council, belonging to the Ministry of Health. It was approved by the Research Ethics committee of the Curitiba Health Department, Paraná (PR), with opinion No. 4,357,776 for ethical aspects; as well as by the Research Ethics Committee of the PR State Health Department, under opinion No. 4,742,070 for variability of the research.

Results

A total of 83 medical charts that met the eligibility criteria were included. Table 1 shows the predominance of men with 57% and of older adults aged between 60 and 70 years old with 27%; the ICU hospitalization time was between 5 and 15 days in 39% (n=32), and nearly 14% (n=12) of the patients were hospitalized for more than 35 days.

Table 1 - Characterization of the sample of patients admitted to the Intensive Care Unit of a hospital during the COVID-19 pandemic, Curitiba, Paraná, 2020. (n = 83)

Variables	%(n)
Age (in years old)	
20 – 30	5 (4)
30 – 40	7 (6)
40 – 50	18 (15)
50 – 60	25 (20)
60 – 70	27 (23)
70 – 80	13 (11)
>80	5 (4)
Gender	
Women	43 (36)
Men	57 (47)

ICU time* (days)	
Up to 5	13 (11)
5 – 15	39 (32)
15 – 25	17 (14)
25 – 35	17 (14)
>35	14 (12)

*ICU = Intensive Care Unit.

Regarding the comorbidities, the prevalent ones were arterial hypertension with 49% (n = 41) of the patients, diabetes mellitus with 39% (n = 32) and obesity with 29% (n = 24). These health problems emerged combined and/or alone in the patients. Table 2 presents the percentage values corresponding to the individuals' diseases and risk factors. An expressive number of aged individuals with health problems is noticed (n = 36), and it is relevant to point out that the most prevalent risk factor among the older adults was being a former smoker (n=12).

Table 2 - Characterization of the comorbidities among patients admitted to the Intensive Care Unit of a hospital during the COVID-19 pandemic, Curitiba, Paraná, 2020. (n = 83)

Profile of the patients' comorbidities	% (n)
Arterial hypertension	49 (41)
Diabetes mellitus	39 (32)
Obesity	29 (24)
Ex-smoker	14 (12)
Heart disease	13 (11)
Dyslipidemia	11 (9)
Hypothyroidism	10 (8)
Renal disease	7 (6)
Depression/Anxiety	7 (6)
COPD*	5 (4)
Asthma	5 (4)
Thrombosis	5 (4)
Alcohol consumption	4 (3)
Fibromyalgia	2 (2)
Bariatric surgery	2 (2)
Smoker	1 (1)
Former drinker	1 (1)
Epilepsy	1 (1)
Rheumatoid arthritis	1 (1)
BPH†	1 (1)

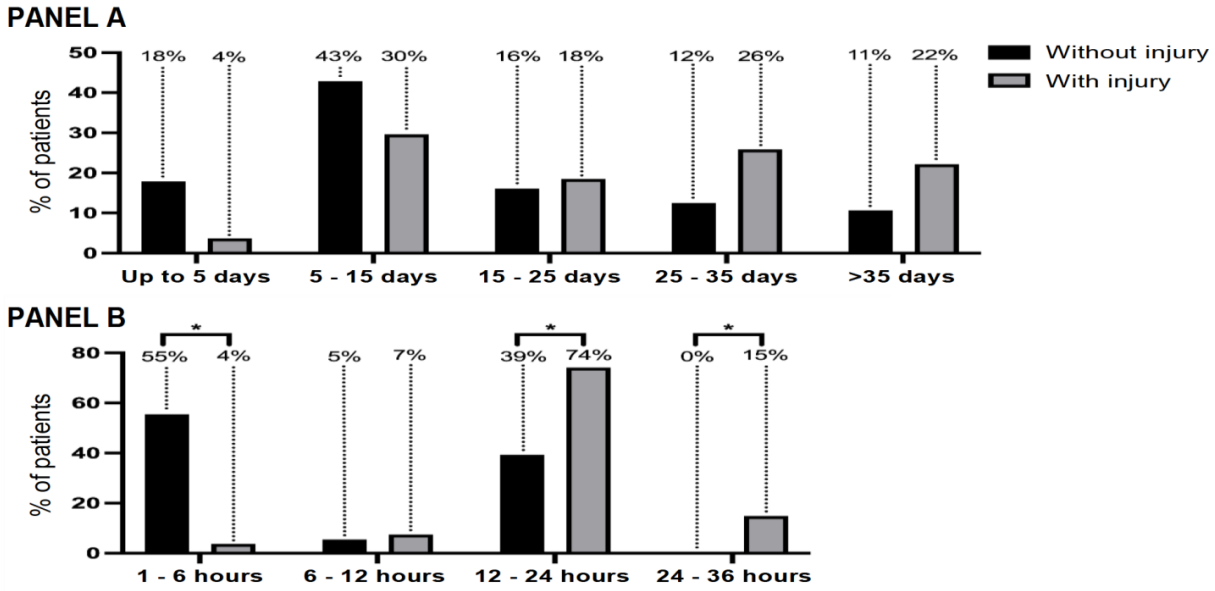
*COPD = Chronic Obstructive Pulmonary Disease. †BPH = Benign Prostate Hyperplasia.

Regarding the time the patients remained in PP, 51% (n = 42) did so for 12 to 24 hours, 38% (n = 32) from 1 to 6 hours, 6% (n = 5) from 6 to 12 hours, and 5% (n = 4)

from 24 to 36 hours. The patients who stayed between 1 to 6 hours were in spontaneous prone position; most of them were on non-invasive oxygen support, or without any need for ventilatory support. It is emphasized that the time between 24 and 36 hours was not in continuous prone position, but for patients who were placed in the supine position and, in less than 24 hours, needed to return to PP, thus accounting for the total time.

Figure 1 presents the percentage between hospitalization time and occurrence of pressure injuries (PIs). The results indicate that there was no significant difference between ICU hospitalization time (Figure 1, Panel A; $X^2 = 7.26$; DoF = 4; $p = 0.12$); in other words, longer hospitalization times are not directly related to the emergence of PIs due to the prone position. However, the chi-square test identified a difference in time between PP ($X^2 = 25.39$; DoF = 3; $p < 0.01$) and PI emergence. This finding was due to a higher percentage of patients without injuries having stayed only 1 to 6 hours in the prone position, when compared to a large percentage of patients with PIs having stayed more than 12 hours in this position; it is interesting to highlight the incidence of injuries among the patients who stayed up to 36 hours in such position, even though they returned to supine at some moment; 100% of the sample developed PIs (Figure 1, Panel B).

Figure 1 - Comparison of the hospitalization time in the Intensive Care Unit and time spent in the prone position between patients with and without pressure injuries in a hospital from Curitiba, Paraná, 2020. (n = 83)



PANEL A – ICU hospitalization time. PANEL B – Time in prone position.
*Significant difference between the groups (standardized residual measure > 2).

Of all 27 PI cases, 13 (n = 4) were classified as grade I, whereas 87% (n = 23) were categorized as grade II injuries. The injured areas were as follows: face 59% (n = 16); chest 56% (n = 15); abdomen 15% (n = 4); sacrum 19% (n = 5) and lower limbs 11% (n = 3). Thus, the data evidenced that the face and thorax are the regions most affected by PIs resulting from PP.

Table 3 shows the main changes in the vital signs at the maneuver time described in the medical charts. Nearly 72% (n = 59) of the patients did not present any change during the pronation maneuver. A high tachypnea rate was observed, adding up the patients that had this change in both of its forms (normal and mild): 18% (n = 15) of the patients. Hypotension was found in 4% (n = 3), followed by desaturation in 2% (n = 2), tachycardia in 2% (n = 2) and dyspnea in 2% (n = 2). None of the patients presented more than one change in vital signs at the maneuver moment.

Regarding the type of ventilation (Table 3), 60% (n = 50) of the patients were on ventilatory support, 22% (n = 18) were using masks with reservoir, 16% (n = 13) were on nasal catheters, and 2% (n = 2) on room air. The type of nutrition is presented with 60% (n = 50) using enteral nutrition and 40% (n = 33) receiving oral nutrition. Noteworthy is the equivalence of patients on invasive ventilatory support receiving enteral nutrition and those on non-invasive ventilatory support receiving oral diets.

Table 3 - Comparison of the changes in the vital signs while in prone position, regarding the type of ventilation and nutrition among patients admitted to the Intensive Care Unit of a hospital from Curitiba, Paraná, 2020. (n = 83)

Changes while in prone position	% (n)	X^2	p*
None	72 (59)	14.82	0.02
Mild tachypnea	8 (7)		
Tachypnea	10 (8)		
Hypotension	4 (3)		
Desaturation	2 (2)		
Tachycardia	2 (2)		
Dyspnea	2 (2)		
Type of ventilation		22.46	<0.01
Room air	2 (2)		
Nasal catheter	16 (13)		
Mask with reservoir	22 (18)		
Mechanical ventilation	60 (50)		
Type of nutrition		22.35	<0.01
Oral route	40 (33)		
Enteral route	60 (50)		

* Significant difference between the groups (standardized residual measure > 2).

The participants were evaluated with the Braden scale, which assess the risk for PI development. The mean score was 12.6 ± 3.6 (standard deviation), indicating that the individuals were at a high risk of developing pressure injuries. Analyzing the groups separately, those who had PIs presented lower values (denoting higher risk) on the scale, when compared to those without injuries ($t = 4.38$; $p < 0.01$; with injuries: 10.8 ± 1.5 vs. without injuries: 13.5 ± 4).

During the pronation maneuver, 7% of cases with complications was reported. The adverse events documented were the following: 1) nausea; 2) orotracheal tube (OTT) displacement and desaturation; 3) hypotension and cardiopulmonary arrest (CPA) in asystole; 4) large air leak; 5) ventilatory prosthesis displacement, and 6) need to increase FiO_2.

Regarding the Nursing procedures described during the pronation maneuver, 38% (n = 32) of the medical records did not describe the Nursing assistance performed. Regarding the remaining patients, 62% (n = 51), Table 4 lists the type of care provided and, subsequently, the intervention performed, also containing the moment when this

intervention was applied, before the pronation maneuver and during the time the patient stays in the prone position, or afterwards, when the patient returns to supine.

Table 4 - Care measures implemented before, during and after the pronation maneuver in patients admitted to the Intensive Care Unit of a hospital from Curitiba, Paraná, 2020. (n = 83)

Care time	Intervention	% (n)	Period
None	--	38 (32)	Before, during or after the prone position
Monitoring	Installation of multiparametric monitoring	62 (51)	Continuous (before, during, after)
Devices	Measuring vital signs	62 (51)	Before, during (every 2 hours), after
	Testing of venous accesses	45 (38)	Before
	Exchange of fasteners	54 (45)	Before, during (every 24 hours or AN*)
	Dressing exchanges	8 (7)	Before, during (every 24 hours or AN*)
Skin care	Preparation and positioning of cushions	60 (50)	Before
	Swimming position exchange	62 (51)	Continuous (every 2 hours)
Hygiene and comfort	Eye and body hygiene	39 (33)	Before, during (every 24 hours or AN*)
Nutritional	Fasting	22 (19)	Before
	Installation of open NGT†	54 (45)	Before
Airway	AW‡ and OTT§ aspiration	59 (49)	Before, during (AN*)

*AN = As Necessary. †NGT = Nasogastric Tube. ‡AW = Airway. §OTT = Orotracheal Tube

As shown in Table 4, the Nursing assistance provided was grouped according to the characteristics of the interventions: monitoring, devices, skin, body hygiene, ocular, nutritional and airway.

Discussion

This study reports general, clinical, and Nursing care characteristics of 83 patients admitted due to COVID-19 in an ICU and subjected to spontaneous or conventional prone position. Predictors such as male gender, advanced age and presence of comorbidities were identified as risk factors for complications and poor prognosis in patients with COVID-19, as published in multicenter studies conducted in China, Italy and the United Kingdom.[10-12]

According to the general characteristics, a study showed a high incidence of male patients, emphasizing the gender difference as a considerable factor in aggravating the COVID-19 infection, where particularly older men showed a higher chance of developing the

severe form of the disease, leading to increased mortality due to specific genetic conditions and women, in turn, presented better strong immune responses to viruses and vaccines.[13]

Advanced age, with predominance of patients between 60 and 70 years old, stands out as one of the main risk factors for complications and increased mortality due to the decline of multiple physiological functions, including the immune system. Aged and frail individuals are at significant risk for adverse results when manifesting an acute disease.[14]

The comorbidities identified were hypertension, diabetes and obesity, respectively. These conditions were shown to be prevalent, indicating factors of poor prognosis and mortality. Patients with one or more underlying diseases are at an increased risk of developing and worsening diseases, require more time and complexity in terms of health assistance, and generally have worse outcomes than healthy patients.[15]

As for the ICU hospitalization time, most of the patients were admitted for 5 to 15 days. The long hospitalization period can be justified by the severity of these individuals' conditions. Similar data are reported in a multicenter study conducted in Brazil.[16]

From this perspective, it is interesting to address ventilatory management, in which nearly 60% (n = 50) of the patients were on invasive mechanical ventilation, which indicates the viral potentiality mainly affecting the respiratory system. These data match a survey conducted in Germany with 223 patients, of which 167 (75%) received invasive ventilatory support during their ICU hospitalization.[17]

In this context, use of the prone position is based on severity of the patients, who present moderate or severe ARDS, evidenced by a PaO_2/FiO_2 ratio < 150.[18]

The available scientific evidence suggests that early combined use of a protective ventilatory strategy with maintenance of drive pressure below 16 cm/H_2O and prone position for periods of 16 to 20 hours results in benefits in terms of mortality reduction.[19]

Regarding the time the patient stays in prone position, a minimum of 12 hours is recommended, and the ideal for ARDS patients on mechanical ventilation is 16 hours, with the possibility of staying up to 20 hours. The findings of the current review are corroborated by data from the World Federation of Societies of Anaesthesiologists.[20]

A relevant point was the application of spontaneous pronation for the patients who were awake and without mechanical ventilation, the time they stayed in the position ranged from 1 to 2 hours. Diverse scientific evidence suggests that the prone

position in spontaneously breathing non-intubated patients can improve oxygenation, depending on those who tolerate the position, in addition to avoiding endotracheal intubation and its possible complications.[21]

Given the above, it is pertinent to highlight some of the risks that arise from performing this maneuver. The main complications identified that are matched in another study were endotracheal tube displacement, desaturation, hemodynamic instability and CPA.[8]

Endotracheal tube displacement, found in 4% (n = 3) of the patients, can cause accidental extubation. Due to this risk, it becomes necessary to include a professional at the bedside to coordinate the rotation;[22] in addition to checking the position of the ventilatory prosthesis through pulmonary auscultation, lip commissure, and confirmation of cuff pressure before and after the maneuver.[23]

Hypotension, as observed in 4% (n = 3) of the patients, may occur as a consequence of reduced venous return (preload) due to increased intra-abdominal pressure in ventral decubitus, decreasing cardiac output.[24]

Identified in 1% (n = 1) of the reports, cardiopulmonary arrest is a prevalent complication in critically-ill patients with COVID-19. CPA may result from hypoxic etiologies, in a context of multiple organ dysfunction secondary to sepsis, systemic inflammation, disseminated intravascular coagulation, or as a deterioration of chronic underlying diseases.[25]

As for Nursing care during the maneuver and when the patient is in the prone position, most of the interventions performed are consistent with a study that developed a safe prone checklist, in which interventions are divided into general, nutritional, material, and airway care.[22]

Installation of an open nasogastric tube was evidenced among the actions inherent to nutrition, in order to drain the gastric content. The interventions related to monitoring included transferring the electrodes to the patient's dorsal region and checking vital signs before, during and after the maneuver, in anticipation of hemodynamic changes. In skin care, they were related to preparation and positioning of the cushions and to the swimming position every 2 hours, aiming at the prevention of pressure injuries, as well as to dressing the injuries. Eye and body hygiene measures and management of devices such as access testing and exchange of fasteners are

important and can prevent further complications related to device traction and malfunctions. Regarding airway management, aspiration of the airways and the endotracheal tube were mentioned, in addition to changing the tube fixation, preventing complications due to tube traction and obstruction.[8,22-26]

PIs emerge as the main complication derived from PP. The results indicated that the face and the thorax were the most affected regions for stage 2 lesions. The risk for PIs in patients on PP due to COVID-19 is multifactorial, some factors such as long periods on PP; face edema; use of invasive devices such as catheters, probes and drains, in addition to the endotracheal tube; the need for ventilatory support; catecholamines; sedation and neuromuscular blockade; and the type of nutrition, constitute the central components of this adverse event.[27]

The interventions for the prevention of injuries that were recognized in this study correspond to adequate skin hygiene and hydration, constant inspection of the skin, changing the position of drains, tubes and catheters, rotation of the swimming position and rotation of the head, and placement of hydrocolloid sheets in regions where there were already injuries in early stages, and not as a preventive measure.[28] As potential factors related to the occurrence of PIs, the time the patient spends in the ICU and the time in the prone position after performing the maneuver are suggested.

Thus, the Braden scale is one of the main tools applied by nurses to prevent pressure injuries. According to a study, this scale identifies aspects of nutritional status, mobility level, sensory perception, skin friction and shear, skin moisture and the patient's degree of physical activity, assessing the risk of developing pressure injuries during hospitalization.[29]

According to the results analyzed, the patients who had lower scores indicated higher risk and were directly related to the emergence of lesions at later moments; the overall mean of the scales was 12 points, which concludes high risk. Application of this tool is a measure that assists nurses in the daily inspection and evaluation of the patient's skin, identifying possible risks, allied to other factors, and preventing the appearance of PIs.

Nearly 60% of the sample received enteral nutritional support concomitantly with ventilatory support in ventral decubitus. Thus, it is relevant to emphasize some nutritional care related to the prone position, such as pausing the diet and opening the

nasoenteric tube and maintaining fasting for at least 2 hours before the procedure; these care measures were cited as performed by the Nursing team.

Other interventions, such as radiological confirmation of the Dubbhoff tube in post-pyloric position, keeping the headboard elevated from 25° to 30°, starting the diet after the first hour with 30 mL/hour and pausing it in case of gastric residual volume equal to or greater than 500 mL in 6 hours, avoid complications such as vomiting and risk of bronchoaspiration, in addition to improving dietary tolerance and minimizing the chances of nutritional support discontinuation.[22,30]

The limits of the results of this research refer to the type of design, as cross-sectional studies do not allow establishing a cause and effect relationship or generalizing the results. In addition to that, the research was conducted in a restricted context. Another weakness lies in the fact that some medical charts had incomplete records, given the variation in systems used by the institution.

Even so, the results obtained contribute to health services and professionals, providing a reflection on the need and importance of continuous training related to the theme, as well as the development of instruments that assist in the implementation and conduction of the interventions identified, in addition to completeness of the records.

Conclusion

The prone position played an important role during the clinical management of patients with severe acute hypoxemic respiratory failure secondary to SARS-Co-V-2 infection, impacting on the outcomes of critically-ill patients under intensive care.

Although it is an intervention conducted by the multiprofessional team, Nursing professionals are considered determinant for safe performance of the procedure and for keeping the patient in ventral decubitus, ensuring a reduction of adverse events and effectiveness of the ventilation strategy.

The clinical management of a patient in prone position is complex, requiring a range of care measures related to hemodynamic and hemogasometric monitoring, preservation of invasive devices and advanced airway, prevention of skin injuries, maintenance of enteral nutritional support, hygiene and comfort measures. All these procedures go through Nursing assistance.

The success of prone position use in ARDS patients depends directly on the quality of the assistance provided and on the operational capacity of the multiprofessional team. Therefore, it becomes necessary to establish protocols that contemplate the incorporation of evidence-based clinical practice for performing interventions in critically-ill patients.

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