



## Evaluation of phlebitis adverse event occurrence in patients of a Clinical Inpatient Unit\*

Avaliação da ocorrência do evento adverso flebite em pacientes de uma Unidade de Internação Clínica

Evaluación del acaecimiento del evento adverso flebitis en pacientes de una Unidad de Hospitalización Clínica

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### ABSTRACT

**Objective:** To analyze the causes and reasons associated with the occurrence of phlebitis in a Inpatient Medical Unit in a large and private general hospital. **Method:** Quantitative, exploratory-descriptive, retrospective and documentary research, carried out by consulting the electronic forms of notification of the occurrence of phlebitis in 2017. **Results:** A total of 107 phlebitis related to 96 patients were reported, most of them (91.7%) with phlebitis, being male (53.1%), aged 60-69 years old (23.0%) and with a hospital stay of less than four days (30.2%). Most (68.2%) of the notifications were made by nurses, with the occurrence of phlebitis predominating in devices with less than 24h (38.3%); with the classification of phlebitis grade 2 (45.8%); with antibiotics infusion (46.7%); with the location of the bed far from the nursing station (52.3%); and with the presence of a companion (82.2%). The damage classification indicated that 93.5% of the patients suffered mild damage, 4.7% moderate damage and 1.9% did not suffer any damage. **Conclusion:** Knowing the causes and reasons associated with the occurrence of phlebitis can support decision-making, management and care processes regarding investments in preventive or risk mitigation strategies.

### DESCRIPTORS

Inpatients; Catheterization, Peripheral; Phlebitis; Nursing Care; Hospital Units.

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## INTRODUCTION

At some point during hospitalization, intravenous therapy (IVT) is indicated for approximately 80% of patients. Of these, 20% to 70% will develop phlebitis<sup>(1)</sup> adverse event (AE), whose signs and symptoms correspond to edema, local heat, hyperemia, fibrous cord in the vessel path, pain, and there may be the presence of purulent secretion in catheter insertion site<sup>(2)</sup>.

Phlebitis can be mechanical, chemical, bacterial or post-infusional, being classified into: grade 1, presence of hyperemia at the catheter insertion site with or without local pain; grade 2, pain at the catheter insertion site with hyperemia and/or edema and induration; grade 3, pain at the catheter insertion site with hyperemia, induration and palpable venous cord formation; grade 4, pain at the catheter insertion site with hyperemia, induration and palpable venous cord formation with purulent drainage<sup>(2)</sup>.

A study carried out in an inpatient medical unit (IMU) identified the presence of phlebitis in 60% of patients and in 55.6% of peripheral venous accesses (PVA), the occurrence of which was associated with increased length of hospital stay for these patients<sup>(3)</sup>. Another study showed that patients hospitalized in surgical and orthopedic units had a lower risk of presenting phlebitis when compared to those who were in IMU, who had a prolonged hospitalization period, as well as the use of corticosteroids and antimicrobials, factors related to the development of phlebitis<sup>(4)</sup>.

The book *To err is human* showed the global impact of patient safety and the number of deaths resulting from failures in healthcare<sup>(5)</sup>. In 2004, the World Alliance for Patient Safety<sup>(6)</sup>, recognizing the magnitude of the problem, aimed to identify priorities in the area of patient safety and established measures to reduce the risks and the occurrence of AE<sup>(7)</sup>. In Brazil, Ordinance No. 529, of April 1<sup>st</sup>, 2013, from the Ministry of Health, instituted the National Patient Safety Program – PNSP (*Programa Nacional de Segurança do Paciente*) and its premise is to contribute to quality health care at all levels of health care in the country<sup>(8)</sup>. Recognizing the harm caused to patients, resulting from health care, at the 72<sup>nd</sup> World Health Assembly, in 2019, the World Health Organization (WHO) adopted resolution WHA72.6, regarding global action on patient safety and recognized this theme as a global health priority<sup>(9)</sup>.

Phlebitis is a preventable AE and there are strategies that can be implemented, based on the knowledge of risk factors to prevent and/or minimize their occurrence, contributing to the provision of harm-free care. A cohort study with a total of 171 patients with PVA investigated the association between risk factors and the occurrence of phlebitis during use and after removal of PVA, 51.5% of the patients were men, with catheter permanence up to 72 hours and 58.2% of the medications used were sedatives/analgesics. It was identified the need for knowledge about risk factors for phlebitis, in order to contribute to the planning of care by nurses and the identification of patients who may develop phlebitis<sup>(10)</sup>.

Health professionals, notably nursing professionals, need to understand the importance of their qualified participation, according to their level of governance and in relation to the

adoption of preventive measures for phlebitis AE, aiming at obtaining favorable results for patients/users, family members and themselves, for the organization and for society. However, to guide the choice of prevention strategies, it is necessary to know the causes and consequences of this AE, and with this information it will be possible to continuously improve the care and management processes, and ensure the provision of harm-free health services and with reduction of the risks. Thus, this study aims to analyze the causes and reasons associated with the occurrence of phlebitis in the IMU of a general, large and private hospital.

## METHOD

### TYPE OF STUDY

This is a quantitative, exploratory-descriptive, retrospective and documentary research.

### SCENARIO

The General Hospital, the field of study, is private, located in the city of São Paulo and has a total of 512 hospital beds, 38 of which are for IMU. This study comprised the notifications of the occurrence of phlebitis AE in IMU patients, carried out by health professionals by completing the electronic form available on the Hospital intranet.

### SELECTION CRITERIA

All electronic forms related to the notification of the occurrence of phlebitis in the IMU patients were selected from January to December 2017.

### DATA COLLECTION

From the structuring of electronic forms for notification of phlebitis in the hospital, an instrument was created to document the following information: author (nurse, nursing technician, anonymous, other) and date of notification; patient care number; date of the performed care; physician's name; consultation number; patient's age, gender and bed; period (morning, afternoon, night); degree of phlebitis (grade 1: hyperemia, grade 2: hyperemia + local pain, grade 3: hyperemia + local pain + palpable cord, grade 4: hyperemia + local pain + palpable cord and purulent drainage); name of the drug involved; length of the intravenous device in the patient, damage classification (severe, moderate, mild, none); risk assessment for the development of phlebitis (high, moderate, low, no risk); additional information (such as examples, prescription print, photo of the place). The data contained in the instruments were entered into electronic spreadsheets.

### DATA ANALYSIS AND TREATMENT

Continuous and semi-continuous data were initially compared with the Gaussian curve using the K-S (Kolmogorov-Smirnov) distance test, determined as non-parametric and expressed using medians, percentiles and compared using the Kruskal-Wallis test, with Muller-Dunn post-test when comparing three or more groups.

Categorical data were represented by absolute (n) and relative (%) frequencies, and the contingency matrices were analyzed using Pearson's Chi-square test or Fisher's Exact Test, when necessary. Complex matrices were partitioned into simple matrices to better determine causality. It was considered, for the whole study, risk  $\alpha \leq 0.05$  of making type I or 1<sup>st</sup> species error, in addition to risk  $\beta \leq 0.20$  of making type II or 2<sup>nd</sup> species error.

### ETHICAL ASPECTS

The research was approved by the hospital's Research Ethics Committee, through the consubstantiated number: 2.500.262, on February 19<sup>th</sup>, 2018, meeting all the specifications of Resolution No. 466, from December 12<sup>th</sup>, 2012, which approves the guidelines and regulatory standards for research involving human beings.

### RESULTS

In 2017, 3028 hospitalizations occurred in the IMU, with 107 phlebitis AE associated with 96 patients, most (91.7%) affected by one phlebitis. From the notifications analyzed, it was found, as shown in Table 1, that most (53.1%) patients were male, aged 60-69 years old (23%) and with a stay of less than four days (30.2%).

**Table 1** – Distribution of patients affected by phlebitis in the Inpatient Medical Unit, according to gender, age group and length of hospital stay – São Paulo, SP, Brazil, 2019.

Variables	N	%
<b>Gender</b>		
Female	45	46.9
Male	51	53.1
<b>Age group</b>		
10-19	1	1.0
20-29	3	3.1
30-39	15	15.6
40-49	15	15.6
50-59	13	13.5
60-69	22	23.0
70-79	13	13.5
80-89	10	10.4
90-99	4	4.1
<b>Length of hospital stay (days)</b>		
< 4 days	29	30.2
5-7 days	25	26.0
8-11 days	25	26.0
> 12 days	17	17.8
<b>TOTAL</b>	<b>96</b>	<b>100.0</b>
N = 96		

The medical diagnostic hypotheses of the 96 patients were grouped into categories, most of them, 70.8%, were hospitalized for infectious diseases; followed by 16.6% for

disorders of the central and peripheral nervous system; 9.4% due to digestive system disorders. Among pre-existing diseases, systemic arterial hypertension – SAH (22.9%), diabetes mellitus – DM (15.6%) and dyslipidemia (12.5%) stood out; 19.8% of patients had more than one pre-existing disease.

January (13.1%), June (12.1%), July (10.3%) and October (10.3%) were the months with the highest number of notifications. The afternoon and morning shifts had the highest number of notifications (40.2% and 38.3%), carried out by nurses (68.2%); 29.9% notifications were anonymous; 1.9% were performed by nursing technicians. There was no statistically significant difference in relation to the distribution of the degree of 107 phlebitis and to the variables gender, age group and length of hospital stay of patients.

According to Table 2, most (52.3%) phlebitis AE occurred in patients who used the Jelco® intravenous device, with the device remaining in place for 24 hours (38.3%), with a prevalence of grade 2 phlebitis (45.8%), receiving antibiotics (46.7%), with the beds located far from the nursing station (52.3%) and with the presence of a companion (82.2%).

**Table 2** – Characterization of notified phlebitis as to the type of device, length of device in the same place, degree of phlebitis, category of drug infused – São Paulo, SP, Brazil, 2019.

Variables	N	%
<b>Type of device</b>		
Jelco®	56	52.3
Intima®	51	47.7
<b>Length of device in the same place</b>		
24 h	41	38.3
48 h	28	26.1
72 h	18	16.8
96 h	6	5.6
120 h	6	5.6
144 h	5	4.8
168 h	2	1.9
Post-removal	1	0.9
<b>Phlebitis degree*</b>		
Grade 1	32	29.9
Grade 2	49	45.8
Grade 3	24	22.4
Grade 4	2	1.9
<b>Drug category</b>		
Analgesic	9	8.4
Antihistamine	1	0.9
Anti-inflammatory	2	1.9
Antianemic	1	0.9
Antiemetic	3	2.8
Antifungal	3	2.8
Antibiotic	50	46.7
Antiviral	7	6.5
Crystalloid	1	0.9
Diuretic	1	0.9

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Variables	N	%
Immunoglobulin	10	9.3
Electrolytic solution	15	14
Lack of registration	4	3.7
<b>Bed location</b>		
Near the nursing station	51	47.7
Far from the nursing station	56	52.3
<b>Companion</b>		
Yes	88	82.2
No	19	17.8

N = 107

Analyzing, in Table 3, the relationship between pre-existing diseases and the degree of phlebitis, there was a statistically significant difference in the occurrence of grade 2 phlebitis associated with pre-existing diseases SAH ( $p = 0.020$ ), mental and behavioral disorders ( $p = 0.020$ ) and neuropathy ( $p = 0.005$ ). Most (40.0%) of patients with SAH had grade 2 (15 – 68.2%) and grade 3 (6 – 27.3%) phlebitis, in addition, three (75.0%) patients with chronic renal failure and nine (75.0%) with dyslipidemia also had phlebitis grade 2. DM was associated with a greater number of patients with phlebitis grade 2 (53.3%) and grade 3 (26.7%), in addition three patients (60.0%) with a diagnostic hypothesis of sepsis presented grade 3 phlebitis.

**Table 3** – Distribution of the degree of phlebitis reported according to the variables pre-existing diseases and diagnostic hypotheses – São Paulo, SP, Brazil, 2019.

Phlebitis Degree*		Grade 1		Grade 2		Grade 3		Grade 4		Pearson's $\chi^{2**}$
Variables		N	%	N	%	N	%	N	%	Sig.
<b>Pre-existing diseases</b>										
<b>Systemic Arterial Hypertension</b>	No	31	36.5%	34	40.0%	18	21.2%	2	2.4%	0.02
	Yes	1	4.5%	15	68.2%	6	27.3%	0	0.0%	
<b>Mental and behavioral disorders</b>	No	31	30.7%	45	44.6%	24	23.8%	1	1.0%	0.02
	Yes	1	16.7%	4	66.7%	0	0.0%	1	16.7%	
<b>Neuropathy</b>	No	31	30.1%	47	45.6%	24	23.3%	1	1.0%	0.005
	Yes	1	25.0%	2	50.0%	0	0.0%	1	25.0%	
<b>Chronic Kidney Failure</b>	No	31	30.1%	46	44.7%	24	23.3%	2	1.9%	0.611
	Yes	1	25.0%	3	75.0%	0	0.0%	0	0.0%	
<b>Dyslipidemia</b>	No	31	32.6%	40	42.1%	22	23.2%	2	2.1%	0.166
	Yes	1	8.3%	9	75.0%	2	16.70%	0	0.0%	
<b>Sepsis</b>	No	31	30.4%	48	47.1%	21	20.6%	2	2.0%	0.228
	Yes	1	20.0%	1	20.0%	3	60.0%	0	0.0%	

N = 107

When the variable reporter's function was compared to the degree of phlebitis, there was a statistically significant relationship ( $p = 0.007$ ) between phlebitis grade 2 and the notification made by the nurse in relation to a notification made anonymously. Nursing technicians reported only two phlebitis referring to grade 1. Out of the 50 (100.0%) patients who received antibiotics, 42.0% had phlebitis grade 2 and 28% phlebitis grade 3. Among the 10 (100.0%) patients who used immunoglobulin, 50.0% had phlebitis grade 3. As for patients located far from the nursing station, 28 (50.0%) had phlebitis grade 2, followed by grade 3 (17.9%) and grade 4 (3.6%).

In the hospital where the study was carried out, nurses are supposed to classify the risk for the development of phlebitis every 24 hours, as an integral part of the Nursing Care Systematization. Regarding this classification, 47.7% of patients corresponded as low risk, 23.4% as moderate risk, 22.4% as high risk and 6.5% as no risk. There was no statistically significant difference between the risk of developing phlebitis and the variables gender, age group, length

of stay for patients, pre-existing diseases and grouping of medical diagnostic hypotheses, month of occurrence, shift (morning, afternoon or night) and professional category of the reporter.

Regarding the damage caused, 93.5% of the patients with phlebitis suffered mild damage, 4.7%, moderate and 1.9% did not suffer any damage. There was no record of the occurrence of severe damage or death. However, there was a statistically significant difference in the mild damage associated with pre-existing diseases mental and behavioral disorders ( $p = 0.014$ ) and hypothyroidism ( $p = 0.042$ ), regarding the medical diagnostic hypothesis of sepsis ( $p = 0.023$ ).

As for the damage caused by phlebitis, there was no statistically significant difference when comparing the variables gender, age group, length of stay of patients, month of occurrence, shift and professional category of the reporter, type of intravenous device, length of stay of the device, class of drug, location of the bed in relation to the nursing station and presence of a companion. Considering the association between damage classification

and infused drugs, only Oxacillin ( $p = 0.007$ ) – belonging to the antibiotic class – showed a statistically significant difference with mild damage.

In Table 4, there was no statistically significant difference correlating the variables length of catheter stay with the degree of phlebitis, damage classification and risk

assessment. The median time of permanence of the device in grade 1 phlebitis was 2.5 days; in grade 2 phlebitis, three days; in grade 3 phlebitis, three days; in grade 4 phlebitis, six days. The median time of stay of the device in patients who presented moderate damage was three days, with a variation between three and four days.

**Table 4** – Distribution of catheter stay time, according to the degree of phlebitis, damage classification and risk assessment variables – São Paulo, SP, Brazil, 2019.

Variables		Catheter stay time (in days)*			Sig.**
		Median	25%	75%	
Phlebitis degree	Grade 1	2.5	2.0	4.0	0.173
	Grade 2	3.0	2.0	5.0	
	Grade 3	3.0	2.0	3.5	
	Grade 4	6.0	3.0	9.0	
	None	2.0	1.0	3.0	
Damage classification	Mild	3.0	2.0	4.0	0.810
	Moderate	3.0	3.0	4.0	
	Severe	-	-	-	
	No risk	2.0	1.0	3.0	
Risk assessment	Low	3.0	2.0	4.0	0.324
	Moderate	3.0	3.0	4.0	
	High	3.0	2.0	4.0	

\*Data expressed as median and percentiles, \*\*Kruskal-Wallis test

## DISCUSSION

Frequently, IMU patients remain hospitalized for a long period, they are generally older adults with high dependence on nursing care, and even need the support of the de-hospitalization team to assist in the recovery and hospital discharge process. There are also patients hospitalized for the treatment of infectious and neurological disorders that remain hospitalized for long periods and the IMU is a reference for psychiatric patients who require days of hospitalization for adequate control of their pathology.

A study carried out in a hospital in the northwest of Sao Paulo showed that patients who had phlebitis remained hospitalized on average 22.3 days, 53.4% of these patients for less than 15 days<sup>(11)</sup>. In the Federal District, the average hospitalization period for patients with phlebitis was 17.86 days ( $SD \pm 14.37$ ), ranging from two to 93 days<sup>(3)</sup>.

In this study, most (53.1%) of the patients with phlebitis were men, a result similar to those found in the literature<sup>(10-14)</sup>. In a survey conducted at the IMU from a university hospital, 51.5% of the patients with phlebitis were men<sup>(10)</sup>. The number of men hospitalized with chronic non-communicable diseases and complications resulting from lack of treatment is higher, they report not valuing signs and symptoms presented and only seek hospital treatment after weeks and months without any improvement. In addition, they tend to be more resistant to the guidelines of the health team in relation to self-care.

In Zimbabwe, a study assessed risk factors related to the patient and the PVA for the development of phlebitis, and indicated that the age of the patients ranged from 23-80 years old, with 28.2% of the patients being between 30-39 years old, 26.0% were between 40-49, and 23.9% were over 60 years old<sup>(14)</sup>. Another study showed that 53.0% of the patients with phlebitis were older than 60 years old<sup>(2)</sup>, a result close to that found in another study, in which 43.7% of the phlebitis reports were associated with patients aged 60 or over<sup>(11)</sup>.

Older adult patients have a greater number of pre-existing diseases that are risk factors for the development of phlebitis<sup>(15)</sup>. This study showed that patients with phlebitis had SAH, DM and dyslipidemia as pre-existing diseases, corroborating findings available in the literature<sup>(16-17)</sup>. The same occurred with the diagnostic hypothesis, with infectious disease being the main cause of hospitalization for these patients<sup>(16)</sup>. In the western Brazilian Amazon, the presence of chronic disease and the diagnostic hypothesis of infection showed a statistically significant relationship for phlebitis in hospitalized patients<sup>(18)</sup>. Multiple pre-existing diseases were also present in 89.3% of individuals who had phlebitis in Zimbabwe<sup>(14)</sup>.

With regard to the months of greatest phlebitis report in the IMU, it is noteworthy that during the winter the number of hospitalized patients with respiratory disorders was higher, demanding the use of antibiotics that required the installation and maintenance of PVA, factors that could contribute for the development of phlebitis.

A study carried out in a University Hospital evaluated the incidents related to patient safety, of which 344 were AEs, and phlebitis was the fourth cause of report with 13.8%, whereas nurses were responsible for 70.6% of the notifications<sup>(19)</sup>. The notification of AE contributes to the improvement of care, making it possible to identify the causes and propose improvements to mitigate its occurrence.

As for the period of report of the occurrence of phlebitis, a study showed the prevalence in the morning shift (43.7%), due to the greater number of procedures and health professionals to make them feasible, followed by the afternoon shift (40.7%)<sup>(19)</sup>. A report released by *Agência Nacional de Vigilância Sanitária* (Anvisa) states that, between January 2014 and December 2018, 59.6% of AE reports were made between 7am and 7pm; in Sao Paulo, this value corresponded to 62.7% of the notifications. In the aforementioned period, 14,428 phlebitis were reported in Brazil<sup>(20)</sup>.

In Turkey, a cross-sectional study determined the effect of the time of peripheral venous catheter exchange on the development of phlebitis. Devices inserted for less than 48 hours were 5.8 times more likely to present phlebitis than those which were inserted between 49<sup>th</sup> and 96<sup>th</sup> hour, the risk was 2.8 times higher, both compared to those with the 97 to 120 hours of catheter time. The incidence of phlebitis was higher in PVA with 48h or less, followed by those with 49 to 96 hours and 97 to 120 hours<sup>(21)</sup>. In Vale do Paraiba, the average stay of venous catheters in patients who developed phlebitis was 49 hours<sup>(12)</sup>. A study that analyzed the incidence of phlebitis in a IMU found that 36.2% of PVA remained on patients up to 72 hours, and 63.8% of PVA had a remaining time greater than 72 hours<sup>(3)</sup>.

In Australia, a study with 3283 patients evaluated a total of 5,907 PVA divided into two groups: replacement of PVA, when clinically indicated; and replacement of routine PVA, in both groups, in these cases 7.0% of patients had phlebitis. The study showed that the devices could be replaced, when clinically indicated, avoiding the puncture of up to six million devices, reducing the costs related to labor and use of materials for the procedure<sup>(22)</sup>.

In Paraná, phlebitis grade 2 corresponded to most of the notified phlebitis, followed by grade 3<sup>(13)</sup>. The *Rede Sentinela* hospital in the city of Recife showed that 63.2% were classified as grade 1, followed by 27.0% as grade 2 and 5.3% as grade 3<sup>(23)</sup>. In Vale da Paraiba, 41.6% of reports were related to phlebitis grade 1; 37.5% to grade 2; 16.7% at grade 3; and only 4.2% at grade 4<sup>(12)</sup>. A study carried out in Portugal indicated that phlebitis grades 1 (37.0%) and 2 (53.6%) were also the most present<sup>(24)</sup>. Identifying phlebitis in the first degrees prevents the occurrence of permanent and temporary damage to the patient.

Medicines can contribute to the development of phlebitis due to chemical properties, pH and osmolarity<sup>(23)</sup>. Antibiotics are related to the risks for the development of phlebitis<sup>(25)</sup> and a higher risk of presenting this AE to a more advanced degree<sup>(14)</sup>. Antibiotics and analgesics are drugs that cause phlebitis due to aspects related to dilution and drug interactions, when salinization is not performed at the end of the infusion<sup>(23)</sup>.

The Infusion Nursing Standards of Practice recommends the use of a catheter with an integrated stabilization system, whenever possible, as it reduces the risk of phlebitis<sup>(2)</sup>. The choice of the device is essential, before the puncture of the PVA evaluating patients is necessary, also knowing the properties of the drug that will be infused, as in the case of irritating and vesicant medications.

It is noteworthy that the occurrence of phlebitis increases the care costs associated with the establishment of a new PVA, in addition to the care that this AE requires, increasing the consumption of materials and the time spent by human resources. As an example, a study carried out in the United States of America indicated that the occurrence of 566 phlebitis, in one month, resulted in the need for 396 new punctures, and the estimated cost of the new PVA corresponded to US\$ 13,860 dollars<sup>(26)</sup>.

The analyzed reports indicated that most patients were distant from the nursing station. Therefore, the period that the team demands between answering the call and traveling to the patients' room may worsen the vessel injury, due to the time to pause/interrupt the medication and evaluate the device.

A limiting aspect of this study was that 20.45% of the notifications did not have records on the procedures adopted during phlebitis. It is noteworthy that the correct notification is extremely important for the quantification of the occurrence of phlebitis and the analysis of the causes and contributing factors, aiming at risk assessment and the adoption of measures to improve patient safety<sup>(10)</sup>. In this logic, medical and nursing professionals should record information related to the care provided in a clear, legible, objective and complete way, with date, time, signature and number of their professional record<sup>(27-28)</sup>.

In order to identify phlebitis signs/symptoms early, evaluation and documentation of the degree of phlebitis in nursing practice using an appropriate scale becomes essential and may assist the nurse in making decisions and establishing the care plan<sup>(29)</sup>.

The systematic orientation of patients and family members, as a strategy adopted in the study field hospital, is an important source of information and prevention of AE. In addition, the hospital has a specific protocol for PVA that has reduced patient discomfort due to multiple punctures and reduces the cost related to the use of materials and human resources in unsuccessful puncture attempts.

Finally, it is understood that analyzing the causes and reasons associated with the occurrence of phlebitis AE contributes to the improvement of knowledge on the subject, in addition to providing subsidies for the construction of care protocols and educational interventions along with health professionals, privileging the adoption of preventive measures.

## CONCLUSION

A total of 107 phlebitis related to 96 patients were reported, most with a record of the occurrence of one phlebitis (91.7%), mostly in male patients (53.1%), aged 60-69

years old (23.0%) and with the device remaining on the patient for less than four days (30.2%).

The nurse was the professional who made most of the notifications (68.2%). Moreover, there was a predominance: of the occurrence of phlebitis in devices with less than 24 hours (38.3%), classification in grade 2 (45.8%), infusion of

antibiotics (46.7%), location of the bed far from the nursing station (52.3%) and the presence of a companion (82.2%). The classification of damage caused by phlebitis indicated that 93.5% of the patients suffered mild damage; 4.7% moderate damage; 1.9% suffered no damage. There was no record of patients classified with severe damage or with death outcome.

## RESUMO

**Objetivo:** Analisar as causas e os motivos associados à ocorrência de flebite na Unidade de Internação Clínica de um hospital geral, que é de grande porte e privado. **Método:** Pesquisa quantitativa, exploratório-descritiva, retrospectiva e documental, realizada a partir da consulta aos formulários eletrônicos de notificação da ocorrência de flebite referentes ao ano de 2017. **Resultados:** Foram notificadas 107 flebitis relativas a 96 pacientes, a maioria (91,7%) com uma flebite, do sexo masculino (53,1%), na faixa etária de 60-69 anos (23,0%) e com tempo de permanência inferior a quatro dias (30,2%). A maioria (68,2%) das notificações foi realizada por enfermeiros, tendo predominado a ocorrência de flebite nos dispositivos com tempo inferior a 24 h (38,3%), a classificação flebite grau 2 (45,8%), a infusão de antibióticos (46,7%), a localização do leito distante do posto de enfermagem (52,3%) e a presença de acompanhante (82,2%). A classificação de danos indicou que 93,5% dos pacientes sofreram danos leves, 4,7%, danos moderados e 1,9% não sofreram danos. **Conclusão:** Conhecer as causas e os motivos associados à ocorrência de flebite poderá subsidiar os processos decisórios, gerencial e assistencial, quanto aos investimentos em estratégias preventivas ou de mitigação de riscos.

## DESCRITORES

Pacientes Internados; Cateterismo Periférico; Flebite; Cuidados de Enfermagem; Unidades Hospitalares.

## RESUMEN

**Objetivo:** Analizar las causas y los motivos asociados a la aparición de flebitis en la Unidad de Hospitalización Clínica de un hospital general privado y de gran envergadura. **Método:** Se trata de una investigación cuantitativa, exploratoria descriptiva, retrospectiva y documental, realizada mediante la consulta de formularios electrónicos de notificación del acaecimiento de flebitis en 2017. **Resultados:** Se reportaron 107 flebitis relativas a 96 pacientes, la mayoría de ellos (91,7%) con una flebitis, del sexo masculino (53,1%), en el grupo de edad de 60-69 años (23,0%) y con estancia inferior a cuatro días (30,2%). El personal de enfermería realizó la mayoría de las notificaciones (68,2%), con predominio de aparición de flebitis en los dispositivos con tiempo inferior a 24h (38,3%), la clasificación de la flebitis en grado 2 (45,8%), la infusión de antibióticos (46,7%), la ubicación de la cama lejos del puesto de enfermería (52,3%) y la presencia de un acompañante (82,2%). La clasificación de los daños indicó que el 93,5% de los pacientes sufría daños leves, el 4,7%, daños moderados y el 1,9% no había sufrido daños. **Conclusión:** Conocer las causas y los motivos asociados a la aparición de flebitis puede subsidiar los procesos decisivos, gerenciales y asistenciales, en relación con las inversiones en estrategias preventivas o de mitigación de riesgos.

## DESCRIPTORES

Pacientes Internos; Cateterismo Periférico; Flebitis; Atención de Enfermería; Unidades Hospitalarias.

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