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Nursing assistance to surgical patients with SARS-COV2 diagnosis: integrative literature review

Asistencia de enfermería a pacientes quirúrgicos con diagnóstico de SARS-COV2: revisión integrativa de la literatura

Assistência em enfermagem ao paciente cirúrgico com diagnóstico de SARS-COV2: revisão integrativa da literatura

ABSTRACT
Objective: to report on the main recommendations and care of the health team towards patients positive for Covid-19 during the perioperative period. methods: integrative literature review with search in 4 databases, PubMed, LILACS, MEDLINE®, SciELO, using the Health Descriptors (DeCS) Coronavirus, Operating Rooms, Nurses, Perioperative Care, Nursing Care. After applying the inclusion criteria, twenty articles were selected that comprised the study sample. Results: Due to the time of the pandemic that the world is experiencing, health services had to shape themselves according to the recommended recommendations. They must adhere to protocols aimed at conducting prevention and control of transmission of SARS-COV2, in surgical centers. Conclusion: through the studies presented, the teams in the surgical units underwent adaptations. Nursing, even with the challenges on a daily basis, stands out as a professional who always seeks comprehensive care focused on the patient's well-being, connecting knowledge, experience and empathy.
DESCRIPTORS:

RESUMEN
Informar sobre las principales recomendaciones y cuidados del equipo de salud hacia los pacientes positivos a Covid-19 durante el período perioperatorio. métodos: revisión integradora de la literatura con búsqueda en 4 bases de datos, PubMed, LILACS, MEDLINE®, SciELO, utilizando los Descriptores de Salud (DeCS) Coronavirus, Quirófanos, Enfermeras y Enfermeros, Periodo Perioperatorio, Atención de Enfermería. Después de aplicar los criterios de inclusión, se seleccionaron veinte artículos que conformaron la muestra de estudio. Resultados: Debido a la época de la pandemia que vive el mundo, los servicios de salud tuvieron que conformarse de acuerdo con las recomendaciones adoptadas. Deben adherirse a los protocolos destinados a realizar la prevención y el control de la transmisión del SARS-COV2, en los centros quirúrgicos. Conclusión: a través de los estudios presentados, los equipos de las unidades quirúrgicas fueron adaptados. La Enfermería, aún con los desafíos del día a día, se destaca como una profesión que busca siempre una atención integral enfocada al bienestar del paciente, conectando conocimientos, experiencia y empatía.
DESCRIPTORES:

RESUMO
Objetivo: relatar sobre as principais recomendações e cuidados da equipe de saúde frente aos pacientes positivos para Covid-19 durante o período perioperatório. Método:revisão integrativa da literatura com busca em 4 bases de dados sendo elas PubMed, LILACS, MEDLINE®, SciELO, utilizando os Descritores de Saúde (DeCS) Coronavírus, Operating Rooms, Nurses, Perioperative Care, Nursing Care. Após a aplicação dos critérios de inclusão, foram selecionados vinte artigos que compuseram a amostra do estudo. Resultados: Devido ao momento de pandemia que o mundo está vivendo, os serviços de saúde tiveram que se moldar de acordo com as recomendações preconizadas. Devem aderir a protocolos visando condutas para prevenção e controle de transmissão do SARS-COV2, nos centros cirúrgicos. Conclusão: mediante aos estudos apresentados as equipes nas unidades cirúrgicas passaram por adaptações. A enfermagem mesmo com os desafios no dia a dia, destaca-se como profissional que visa sempre o cuidado amplo voltado para o bem estar do paciente conectando conhecimento, experiência e empatia.
DESCRITORES:

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INTRODUCTION

SARS-COV2 (new coronavirus), belongs to a family of viruses that cause respiratory infections. The first cases of the disease were identified in December 2019 in the city of Wuhan, China. The disease spread rapidly across the country, infecting more than 80.000 people and around one million worldwide. [1]

Coronavirus causes the disease known as Covid-19, has high transmissibility and can manifest cases of mild respiratory infections and also evolve to severe cases. It is considered that 80% of the population is asymptomatic, 20% may need hospital care for presenting severe respiratory symptoms, and of these, about 5% may need ventilatory support for presenting respiratory failure. [1]

On January 30, 2020, the World Health Organization (WHO) declared the outbreak of the disease caused by coronavirus as a public health emergency of international importance. On March 11th, 2020 Covid-19 was described by the WHO as a pandemic. [2]

According to the available and current literature to date, the main route of transmission is from person to person. This can happen via respiratory droplets, through coughing or sneezing and it can also be through direct contact with people infected by the virus and by indirect contact on contaminated surfaces, objects or hands. Another established means of transmission is through aerosols, which are light droplets produced through procedures in which direct manipulation of the airways occurs. [1]

The incubation period can be up to 14 days, with an average of 05 to 06 days, and the SARS-COV2 virus can be detected and transmitted in the first 03 days, before the onset of symptoms. [1]

The most common symptoms presented by the patient are fever, cough, runny nose, sore throat, dyspnoea (shortness of breath), hyporexia (decreased appetite), anosmia (loss of smell), ageusia (loss of taste), asthenia (decrease in physical strength) or fatigue (tiredness) and gastrointestinal symptoms (nausea, vomiting, diarrhea) may also appear. [1]

Other extrapulmonary clinical manifestations may be associated with SARS Cov2 infection such as thromboembolism, cardiac changes (arrhythmias, myocardial ischemia), kidney changes (hematuria, proteinuria, renal failure), neurological changes (headache, dizziness, encephalopathy, cardiovascular accident), liver disorders , endocrines (hyperglycemia, diabetic ketoacidosis) and dermatological changes (urticaria, petechiae, among others). The diagnosis of Covid-19 can be made through clinical evaluations by health professionals according to the symptoms presented by the patients. [1]

If correlated with SARS-CoV2, the professional will be able to order the real-time RT-PCR test that diagnoses the coronavirus and also the influenza virus (respiratory syncytial virus), serological tests can be ordered for the diagnosis of Covid-19 and are recommended from the 8th day of symptoms onwards: Immunoenzymatic assay (Enzyme-Linked Immunosorbent Assay-ELISA, Immunochromatography (rapid test) for antibody detection, Electrochemical Chemiluminescence Immunoassay (ECLIA) and antigen search for reagent results for SARS-CoV2 by the Immunochromatofragia method for antigen detection, and the diagnosis can be made by imaging to observe pulmonary changes and confirm the laboratory diagnosis. For asymptomatic patients, RT-PCR and immunological tests are performed with results for IgM\IgA of antibodies. [1]

According to the epidemiological bulletin of the Ministry of Health of December 2020, 1.724.815 suspected cases of covid-19 flu syndrome were reported in health professionals. Of these, 406.803 (23,6%) were confirmed for covid-19, numbers that represent about 7% of the total number of confirmed cases in Brazil. [21]

In the midst of the existing pandemic, health care and procedures underwent changes. Elective surgical procedures were affected by interferences in their performance. Cancellations, prioritization and innovation of practices

through new protocols developed and modified at all times. [3]

Although Covid-19 is a new disease, it is already possible to find published studies, but recommendations for the perioperative period are scarce. [5]

In view of these considerations, studies that direct professionals to occupational and patient safety become important and the following question arises in this research: What are the necessary care measures for nursing care for patients positive for COVID-19 in the operating room?

This study aims to report on the main recommendations and care that the health team should implement in relation to patients positive for Covid-19 during the perioperative period.

METHOD

This is a bibliographic study, carried out by means of an integrative literature review, a method that aims to associate and summarize research results on a given theme or issue, in order to methodize and organize, collaborating to deepen the investigated study. This research model allows to synthesize several published studies, allowing general results of the particular aspects of the dimension of each study. [6]

The integrative review is divided into stages, which are: 1st stage: Define the review question; 2nd stage: Search for selection of primary articles; 3rd stage: Extraction of study data; 4th stage: Critical evaluation of primary studies; 5th stage: Synthesis of the results of the review; 6th stage: Presentation of the Review. [6]

For the construction and evolution of the integrative review, the following guiding question was elaborated: What are the nursing care needed to assist patients with Covid-19? For the development of the guiding question, the PICo format was used, being: P- patient/nurse, I- patients with Covid19 and nursing care. [6]

The collection of articles was carried out from April to December 2020, through the Virtual Health Library whose databases were: National Library of Medicine National Institutes of Health (PubMed), Latin American and Caribbean Literature in Health Sciences (LILACS), Medical Analysis Retrieval System Online (MEDLINE®), Scientific Eletronic Library Online (SciELO). Health Descriptors (DeSC) were used: Coronavirus, Operating Room, Nurse, Perioperative, safety. The inclusion criteria were original articles, published between the years 2019 to 2020, using articles in Portuguese and English. Search in books and documents published by the Ministry of Health and related competent bodies.

RESULTS

After the end of the research, the authors performed a critical reflexive reading. The readings were rotated so that the articles and documents were read by all authors. To systematize the methodological path, a Prisma flow chart (Chart 1) was used and studies that included the following inclusion criteria were included: articles aimed at answering the research objective, literature review, with relevant information that addressed the influence of nursing care in the operating room and reports of experiences according to the context. Each article was carefully read, highlighting 21 articles and documents that responded to the objective proposed by this study and that were selected and referenced in this text.

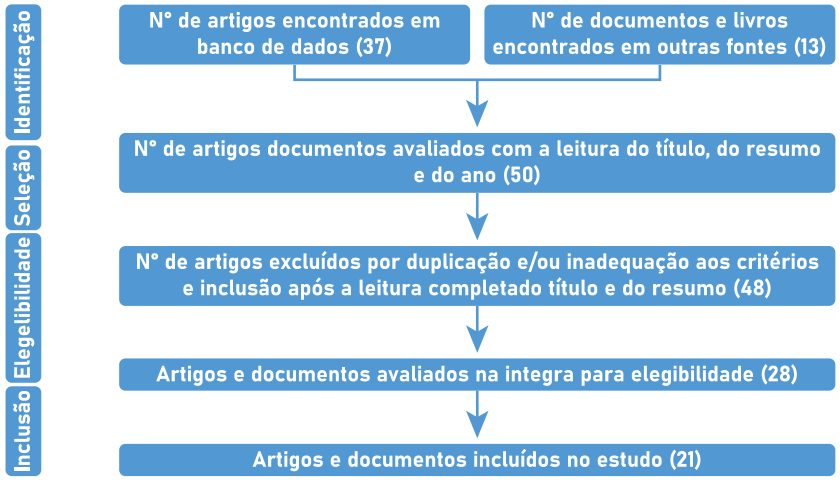
According to the criteria, it is emphasized that 2 articles and documents that were duplicated and that after reading in full were not adequate with the theme were excluded.

DISCUSSION

Operating Room Preparation and Disinfection

Due to the moment of pandemic that the world is experiencing, health services had to adapt themselves according to the recommended recommendations. The operating room has undergone some adaptations, giving priority to urgent/emergency procedures and reassessing the need for elective surgeries. In order to receive these patients, there must be good communication between the teams, professionals must follow the safe surgery protocols, use the proper checklists for the procedure, such as those for vesting and deparmenting,

Figure 1: Flowchart of the methodological path.



Source: Prepared by the authors.

Chart 1. Characteristics of the 21 studies found in the integrative review.

AUTORES	ARTIGOS	OBJETIVO	RECOMENDAÇÕES	CONCLUSÃO
COIMBRA, R; EDWARDS, S; KURIHARA, H; BASS, G A; BALOGH, ZSOLT J; TILSED, J; FACCINCANI, R; CARLUCCI, M; MARTÍNEZ CASAS, I; GAARDER, C; TABUENCA, A; COIMBRA, BO C; MARZI, I.	European Society of Trauma and Emergency Surgery (ESTES) recommendations for trauma and emergency surgery preparation during times of COVID-19 infection	Informar os cuidados necessários para pacientes de trauma e cirúrgicos em tempos de pandemia	Recomendam oito domínios: Recomendação geral para Serviços cirúrgicos; Cirurgia de Emergência para pacientes com suspeita positiva ou suspeita de COVID-19 em estado crítico - Planejamento pré-operatório e seleção de casos; Configuração da sala de cirurgia; Transporte do paciente para a sala de cirurgia; Preparação da equipe cirúrgica; Considerações anestésicas; Abordagem cirúrgica; e Conclusão do caso.	As recomendações realçam a importância de o profissional estar preparado para o atendimento independente da situação realizando um atendimento com segurança.
MENDES KDS, SILVEIRA RCCP, GALVÃO CM.	Uso de gerenciador de referências bibliográficas na seleção dos estudos primários em revisão integrativa.	Apresentar o uso do gerenciador de referências para auxiliar na construção de banco de dados e seleção de estudos primários.	Demonstra a busca através do gerenciador com recursos para auxiliar na construção de uma revisão integrativa.	O uso da tecnologia auxilia no resultado deste tipo de estudo, assegurando uma melhoria na qualidade.
WONG J, GOH QY, TAN Z, LIE SA, TAY YC, YI NG S, SOH CR	Preparing for a COVID-19 pandemic: a review of operating room outbreak response measures in a large tertiary hospital in Singapore	Demonstrar sobre que a preparação para uma pandemia exige que o hospital desenvolva estratégias para gerenciar sua infraestrutura, processos, equipe e pacientes.	Relata as medidas que foram tomadas através da equipe de engenharia, administrativa e multiprofissional de um Hospital especialista em cuidados agudos, para os cuidados aos pacientes e profissionais.	Relata como foi importante avaliar a viabilidade de modificações completamente novas na sala de cirurgia ou de um novo fluxo de trabalho para continuidade dos atendimentos.
KANG Y, DENG L, ZHANG D, WANG Y,WANG G, MEI L, ZHOU G, SHU H	A practice of anesthesia scenario design for emergency cesarean section in patients with COVID-19 infection based on the role of standard patient	Prestar uma assistência segura no cenário das cesarianas, prevenindo de infecção cruzada e melhorar o fluxo de trabalho.	Apresenta a prática e experiência para planejar um programa de treinamento em um centro cirúrgico. Com as definições: Estabelecimento de equipe, Estabelecimento regra cirúrgica e fluxo de trabalho, Cenário da anestesia.	O estudo demonstrou que é necessário ter uma comunicação uniforme na equipe e realizar treinamentos e práticas repetidas para uma melhor prática em cirurgias com pacientes com COVID19
LOCKHART, S L; DUGGAN, L V; GROCOTT, H P;	Personal protective equipment (PPE) for both anesthesiologists and other airway managers: principles and practice during the COVID 19 pandemic	Demonstrar a prioridade no uso do EPI na prevenção dos profissionais na luta contra a COVID19. Enfatizando a importância do treinamento da equipe.	Recomendam três níveis para o EPI: Precauções contra gotículas e contatos; Precauções aerossóis, gotículas e contato; Precauções aerossóis, gotículas e contatos para procedimentos médicos geradores de Aerossóis	O artigo conclui a necessidade de oferecer serviços de saúde seguros, conservando EPI adequados.
SEAN COFF EY, ANOUSKA MOYNAGH, BELINDA GREEN, JOHN EDMOND, GERARD T WILKINS, BRENDAN ARNOLD, JAMES PEMBERTON, BEN WILKINS, MICHAEL JA WILLIAMS	Changes to management of a non-pandemic illness during the COVID-19 pandemic: case study of invasive management of acute coronary syndrome	Demonstrar os riscos e benefícios apresentados pela COVID19, em pacientes com tratamento da síndrome coronariana aguda.	Aponta riscos de COVID19 em pacientes com síndromes, risco para os profissionais e manejo com os pacientes.	Demonstram o provável aumento de complicações cardiovasculares contra o risco da COVID19 e que as estimativas de riscos e benefícios poderá ser útil nas tomadas de decisões.

GALLASCH, CH; CUNHA, ML; LASP,LAS; JUNIOR, JSS;	Prevenção relacionada à exposição ocupacional do profissional de saúde no cenário de COVID-19	Descrever ações de proteção ao profissional exposto a COVID19	Realiza uma revisão sobre os impactos da COVID 19 nas unidades de saúde, as falhas de proteção dos trabalhadores nos atendimentos e expõe a necessidade de dispor de EPI e monitorar profissionais expostos.	Conclui que os cuidados na promoção da saúde deverão ser prioridade. Os EPI's devem ser suficiente para todos os trabalhadores e somados com treinamentos para seu uso correto.
MARQUES LC, LUCCA DC, ALVES EO, FERNANDES GCM, NASCIMENTO KC.	COVID-19: Cuidados de enfermagem para segurança no atendimento de serviço pré-hospitalar móvel	Descrever as ações realizadas por enfermeiros do serviço pré-hospitalar móvel antes, durante e após atendimentos e transferências de pacientes suspeitos e/ou confirmados para Covid-19.	Demonstra as limitações encontradas por profissionais de enfermagem para diminuir a exposição à doença.	Identificou a preocupação com a segurança dos profissionais e pacientes, uma vez que adotaram condutas para a prevenção e controle da pandemia mediante a utilização de equipamentos, e o preparo da ambulância.
OLIVEIRA, PCC	Pandemia do novo coronavírus (SARS--CoV-2): panorama do enfrentamento dos profissionais de enfermagem no controle de infecção pela doença COVID-19 no Brasil	Orientar sobre os cuidados que os profissionais de enfermagem estão tendo para controle de infecção pelo vírus.	Aponta os equipamentos de proteção individual que devem ser utilizados e os cuidados mínimos a serem adotados.	Evidencia o cuidado que os profissionais de enfermagem devem ter, e a importância da formação de novos profissionais.
BRASIL, MINISTÉRIO DA SAÚDE	Protocolo de Manejo Clínico para o Novo Coronavírus (2019-nCoV)	Orientar na atuação na identificação, notificação e manejo oportuno de casos suspeitos pelo Novo Coronavírus de modo a mitigar os riscos de transmissão sustentada no território nacional.	Instrui a evitar a transmissão do vírus para profissionais de saúde e contatos próximos, as condutas frente aos casos.	Corrobora com definições, atendimento e tratamento e medidas de controle para os profissionais da saúde.
ANVISA	NOTA TÉCNICA GVIMS/GGTES/ANVISA Nº 06/2020	Orientações para a prevenção e o controle das infecções pelo novo coronavírus (SARS--COV-2) em procedimentos cirúrgicos -	Discrimina a composição da sala e equipe, uso de EPI, uso de aparelhos laparingoscópicos e a retomada das cirurgias eletivas.	Expõe informações para auxiliar os profissionais nos procedimentos cirúrgicos.
ANVISA	NOTA TÉCNICA GVIMS/GGTES/ANVISA Nº 04/2020	Orientar quanto as medidas de prevenção e controle durante a assistência aos casos suspeitos e confirmados de infecção ao coronavírus	Orienta cuidados no atendimento pré hospitalar, triagem e durante a assistência hospitalar. Medidas de precaução e isolamento, cuidados com resíduos e higienização hospitalar.	Apresenta medidas para o atendimento visando o cuidado com os profissionais que assistem o paciente suspeito ou confirmado.
ANVISA	NOTA TÉCNICA GVIMS/GGTES/ANVISA Nº 07/2020	Orientações para prevenção e vigilância epidemiológica das infecções por sars-cov-2 (covid-19) dentro dos serviços de saúde.	Conduz uma temática a respeito do contexto da doença, monitoramento dos casos suspeitos, ações a serem realizada com profissionais da saúde e o uso de EPI.	Expõe o cuidado e atenção aos profissionais e ações a serem seguidas frente a exposição do trabalhador a Covid19.

BRASIL, MINISTÉRIO DA SAÚDE	GUIA PRÁTICO DE GESTÃO EM SAÚDE NO TRABALHO PARA COVID-19	Orientações para Médicos do Trabalho e gestores na adoção de medidas protetivas de prevenção dos trabalhadores quanto a prevenção, investigação, condutas após contágio.	Explana as medidas preventivas e educativas, cuidados com o trabalhador exposto ao vírus, afastamento e retorno ao trabalho.	Norteia informações para auxliar na segurança à saúde do trabalhador e do ambiente de trabalho.
ORGANIZAÇÃO PAN-AMERICANA DA SAÚDE	OPAS	Materiais de comunicação baseados em evidências	-	Informa sobre os riscos a saúde apresentado pela covid.
SOBECC	Recomendações relacionadas ao fluxo de atendimento para pacientes com suspeita ou infecção confirmada pelo covid-19 em procedimentos cirúrgicos ou endoscópicos / 2ª Edição	Demonstrar o manejo dos casos suspeitos e confirmados dentro do setor centro cirúrgico.	Disponibiliza orientações a respeito do atendimento de casos, visando a proteção da equipe, organização do fluxo de atendimento, preparo da sala e cuidados com materiais.	Recomenda ações com objetivo de garantir a segurança e instrumentalizar os profissionais.
A.C.CAMARGO CANCER CENTER	Orientações em casos suspeitos ou confirmados de infecção por Covid-19.	Materiais de orientação a casos suspeitos e confirmados	-	Cita orientações para atendimento para casos confirmas ou suspeitos.
CBC	Orientações para o retorno de cirurgias eletivas durante a pandemia de COVID-19	Orientar gestores e médicos na retomada de cirurgias eletivas, apontando pontos a serem discutidos para maior segurança do profissional e paciente.	Aponta critérios para discussão e avaliação das novas necessidades, estratégias de prevenção de contagio.	Explana orientações para médicos e serviços de saúde na retomada das cirurgias.
UNIVERSIDADE FEDERAL DE CAMPINA GRANDE HOSPITAL UNIVERSITÁRIO JÚLIO BANDEIRA DE MELLO	PARAMENTAÇÃO E DESPARAMENTACÃO NO ATENDIMENTO À PACIENTES COM SUSPEITA/CONFIRMAÇÃO DE COVID-19	Padronizar o processo de paramentação e desparamentação dos Equipamentos de Proteção Individual (EPIs) utilizados no atendimento aos pacientes suspeitos/confirmados de COVID 19 no âmbito do Hospital Universitário Júlio Bandeira.	Através de fluxogramas demonstra os processos de atendimento aos pacientes suspeitos e confirmados de COVID.	Destaca sobre a importância da higienização correta das mãos e a utilização dos equipamentos de proteção individuais para prevenção de contagio pelo vírus.
POSSARI, JF	Centro Cirúrgico: Planejamento, Organização e Gestão. 5ª edição.	Capítulos voltados a infra estrutura, gestão pessoal e cuidados no serviço de saúde.	Aborda temas da infra estrutura, dimensionamento de enfermagem, gerenciamento de cirurgias.	Apresenta conteúdos amplos de centro cirúrgico visando desde a montagem de uma sala até os cuidados e tarefas a serem realizados.
BRASIL, MINISTÉRIO DA SAÚDE	BOLETIM EPIDEMIOLÓGICO ESPECIAL. Doença pelo Coronavírus COVID-19	Infomar a análise dos dados epidemiológicos da covid no Brasil	-	Demonstra dados, estatísticas de casos, óbitos e vigilância laboratorial no Brasil.

it is recommended that all professionals who are going to participate surgical procedure are properly attired, using the recommended PPE and it is proposed that only one operating room be used to receive these patients. [3]

Therefore, the Brazilian Association of Surgical Center Nurses, Anesthetic Recovery and Material and Steriliza-

tion Center (SOBECC) recommends that the professional who is going to set up the operating room (OR) should clean their hands before starting and check with the clinical engineering team. or hospital maintenance the pressure the room is in and its configuration. The operating room door must be signposted on the types of precautions for contacts and aerosols. Therefore, it is recommended to leave in the OR only what to use and if possible use disposable materials, to facilitate cleaning and disinfection of both instruments and the room. [7]

During the intubation and extubation procedure, it is recommended that only the anesthesiology team remain inside the OR and that the rest of the team wait outside to minimize the risk of contamination with viruses during the procedure. The room should be under negative pressure, and during the surgical procedure it is recommended to restrict a number of professionals. Therefore, if possible, have a support professional outside the OR, to support and assist in the prevention and use of the necessary techniques. The teams must redouble the care with personal objects, regarding the use of the cell phone, must be instructed on the use of these objects and follow the guidelines recommended by the health services. [3]

After the surgical procedure of patients suspected or confirmed for covid-19, the OR must be disassembled and sanitized. Filters and circuits must be changed, disinfection of anesthesia materials must be carried out, terminal cleaning of all SO equipment and furniture must be carried out, the professional must be dressed and using PPE for contact precautions and aerosols. [7]

The products aimed at cleaning are those based on quaternary ammonia and/or sodium hypochlorite. During the cleaning of the room, the pressure of the room must remain negative. It suggests that you have a time of at least 1 hour from one surgical procedure to another so that you have time to clean and decontaminate the room. The responsible professional must take care when removing the PPE to avoid possible contamination by the virus, all infectious waste must be discarded in a milky white bag, and do not use any medicine and materials that are left, it is recommended to be discarded. [7]

Recommendation of Paramentação and Desparamentamento

Not all the transmission mechanisms of Covid-19 are yet known, which makes social prevention measures among health professionals difficult to implement. Health professionals are at the forefront in the treatment and guidance of the exposed or infected population. It is recognized that the virus spreads through aerosols of respiratory secretions, mainly from symptomatic patients, in which the viral load tends to be higher. [8]

Professionals who work in sectors with critical patients or in the manipulation of the airways of carriers of the virus, are certainly the most exposed within the hospital, and must use the personal protective equipment correctly in their attire and especially when they are out of office. It is also essential that the nursing team communicate to all professionals who will participate in the patient's surgical act so that they are dressed, the patient must be warned of any surgical procedure, be received by the nurse and already transported to the OR, be aware of the patient's vital signs, strict temperature control, oxygenation. [8,9]

As the whole routine of the operating room will be altered, if there are suspected or infected patients, adequate training must be carried out for all staff that provides assistance, a checklist model and systematic checking must be carried out, this must be accessible and in dedicated areas for dressing and dressing. It is recommended that the entire team undergo training for attire and detachment. [10]

When preparing an OR to receive an infected or suspected patient, only what is essential to stay inside the room should be separated, thus, few materials will need to be disinfected, reprocessed or discarded at the end of the procedure. Prioritize disposable materials and all equipment that is touched by many people should be covered with plastic, such as monitors, anesthesia devices, mechanical ventilation devices, ultrasound devices, x-ray devices, video procedures devices, computers, among others. others, performing terminal disinfection after finishing the surgical procedure. [10]

It is recommended that PPE be made available to professionals, the adoption of measures to prevent contact with aerosols, N95 masks for the surgical procedure, due to possible dispersion of aerosols, private uniform of the operating room, long sleeve waterproof disposable cloaks, gloves, burrows, goggles, face shield and waterproof boots. All professionals who were in contact with the patient must perform body hygiene and private clothes must be changed. Only urgent and emergency surgeries should be performed during the critical period of the pandemic. [1,9]

To avoid unnecessary movement of suspected or infected patients and professionals involved in anesthetic-surgical care, the patient must be evaluated and recovered within the operating room that has been designated for this purpose. [9]

During anesthesia, all measures to maintain patient safety and prevent the infection from spreading should be taken. Knowing that the airway manipulations of infected patients with suspected infection can generate aerosols, any unnecessary manipulation, positive pressure ventilation under a face mask, open circuit aspiration and patient coughing during tracheal intubation or extubation should be avoided. [3,7]

If regional anesthesia is possible, the patient should be kept in a surgical mask during the procedure. If supplemental oxygenation is indicated in patients who are not intubated, a simple nasal catheter should be used under the

surgical mask, with high flow catheters or non-invasive ventilation contraindicated. [11]

Flow of Care in the Perioperative Period

In order to provide safe surgical assistance in times of a pandemic, health units must adhere to protocols aimed at conducting prevention and control of SARS-COV2 transmission, within surgical centers. [12, 3]

Considering the need to have an exclusive room for patient procedures with Covid-19 and with recommendations restricted to this type of care, it is necessary that the entire team is able to provide such assistance. For this, it is necessary that the nursing team establish protocols for care, for the classification of suspected or confirmed cases and guidelines for the flows to be performed during perioperative care. [13]

Professionals should be prepared for such assistance, through training, training and simulations of assistance. With this, they will be able to predict possible conflicts and structure strategies for better service, feeling safe and confident in adverse events. [3]

All members inside the operating room become more susceptible to the virus, through contact, droplets and aerosols generated in the preparation and procedures performed. Therefore, they can become transmission vehicles. So it is recommended that the period of exposure of the professional to the patient be limited. Therefore, it is necessary to consider that only essential professionals remain in the surgical procedure, to avoid the exchange of these during the process and that preferably they are the most experienced professionals in the service. [3,7,13,14]

In the period of intubation and extubation, only the necessary professionals should remain in the room and the surgical team should stay out of the room until a safe airway is established. In fact, have a professional circulating outside the operating room to provide necessary materials at the time of the surgical procedure. [3,12]

It is also important to determine, before the procedure, a patient transfer flow through the hospital unit and the precautions taken for protection with the transport team. The patient must receive the patient with the PPE and the patient must proceed directly to the operating room. Therefore, the nursing interventions performed in planning the flow of care are important in order to prevent the contagion and proliferation of Covid-19. [7,13]

Occupational Health Monitoring

Surgical center professionals are also at high risk of exposure to the virus, due to being in close contact with the patient and through procedures performed that can generate contaminated particles, since some patients can potentially be transmitters during these procedures. [13,15]

Thus, it is important to implement actions aimed at the safety of professionals in the prevention, monitoring, removal, treatment of professionals exposed during their activities and also in order to ensure that they do not become a source of spread in their environment. [16,17]

Health services must promote monitoring individually or jointly for this purpose, in agreement with a hospital infection control committee, safety unit, surgical center nursing, managers and teams working in the sector. [16,17]

These strategies can be passive: through self-assessment as to the presence of signs and symptoms, being guided in the presence to communicate to the head, immediately receive the medical evaluation and keep away from their work activities, according to the guidelines of the Ministry of Health. Or active: through daily assessment before each work shift; and active remote strategy: all professionals remotely report the presence or absence of symptoms daily. [17]

According to these assessments, the professional who presents with Flu Syndrome or Severe Acute Respiratory Syndrome (SARS) or has some close home contact in these conditions must inform

Chart 2. Removal of suspected or confirmed health service professionals and return to their activities.

TESTE	AÇÕES DO AFASTAMENTO
Assintomáticos não gravemente imunossuprimidos	10 dias após a data do primeiro teste RT-PCR em tempo real Positivo e com avaliação médica atestando a segurança no seu retorno.
Pacientes assintomáticos e gravemente imunossuprimidos	Pelo menos 20 dias desde o primeiro teste RT-PCR em tempo real positivo e com avaliação médica atestando a segurança no seu retorno.
Pacientes com quadro leve a moderado, não gravemente imunossuprimidos	Pelo menos 10 dias desde o início dos sintomas E pelo menos 24 horas sem febre (sem uso de antitérmicos) E melhora dos sintomas
Pacientes com quadro grave/crítico OU gravemente imunossuprimidos	Pelo menos 20 dias desde o início dos sintomas E pelo menos 24 horas sem febre (sem uso de antitérmicos) E melhora dos sintomas
TESTE INDISPONÍVEL	- Mínimo de 72 horas assintomático E - Mínimo de 7 dias após o início dos sintomas.

* Source: MINISTRY OF HEALTH / ANAMT - PRACTICAL GUIDE FOR HEALTH MANAGEMENT AT WORK FOR COVID-19 | JULY 2020. (18)
TECHNICAL NOTE GVIMS / GGTES / ANVISA No. 04/2020 | OCTOBER 2020.

the head, be evaluated and immediately removed from work. [17,18]

Undoubtedly, all care with professionals is necessary to ensure that procedures are not interrupted, do not become a chain of transmission and work in a quiet and safe manner in order to reduce the negative impacts of Covid-19. [16,17]

Nursing Care During Care for Symptomatic/Suspected Patients

Nursing professionals who are at the forefront in combating and controlling the spread of the new coronavirus represent the largest active category in the health field, whether in public or private institutions, and are the only professionals present in direct assistance 24 hours a day together to patients. Being much more susceptible to infection due to their performance in reception, humanized care, detection and evaluation of suspected situations of contagion of the coronavirus and the technical capacity of this professional. [19]

The recommendation of the National Health Surveillance Agency (ANVISA) of measures considered mandatory to be implemented to prevent and control the spread of the virus in health services by health professionals are: hand hygiene with water and liquid soap or 70% alcoholic preparation; and personal protective equipment (PPE), goggles or face shield (face shield), surgical mask, apron, procedure gloves, surgical mask, N95/PFF2 mask and cap. [19]

A strongly adopted measure has been hand hygiene, preferably with soap and water, through friction movements that contemplate the palms and fingers, including rubbing thumbs, fingers and wrists separately. Hands must be washed between appointments to different patients, after the end of each appointment and before removing N95 masks and glasses. In view of the impossibility of washing them, 70% alcoholic preparations can be used. It is suggested to put a moderate amount on your hands and rub them with the same movements of washing with water and soap, as it is the friction that guarantees cleaning. Applying a large amount of the product without rubbing does not produce the expected effect. [20]

The nursing team should replace the surgical mask with an N95 / PFF2 mask, when performing aerosol-generating procedures, such as: assist in tracheal intubation or aspiration, non-invasive mechanical ventilation, cardiopulmonary resuscitation, manual ventilation before intubation, collections of nasotracheal samples, bronchoscopies, among others. Regulatory Norm NR32 advises that nursing professionals are exposed to biological risks, and considers the probability of occupational exposure to biological agents as biological risk and determines in its Art. 32.2.4.7 that the PPE must be available in sufficient numbers, at ensuring immediate supply or replacement for all professionals. [19]

In addition, health services must provide training for all health professionals (own or outsourced), practicing the proper use of all PPE before caring for a suspected or confirmed case of infection with the new coronavirus, including care the correct use of PPE, sealing tests of the N95/PFF2 mask or equivalent (when its use is necessary) and the prevention of contamination of clothing, skin and environment during the process of removing all equipment. [19]

CONCLUSION

In this paper, we discuss nursing care in the operating room in caring for a suspected/confirmed patient with SARS-COV2. We contextualize actions to be elaborated and worked on in all assistance, aiming to provide a safe service for workers and assisted patients.

Thus, we seek to encourage nursing professionals to strengthen the link between all those involved in the operating room unit through protocols and training, with the purpose of carrying out a safe procedure and team work based on trust, commitment and technique. We understand the importance of the engagement of all teams and in carrying out each process of care for suspected/confirmed patients, in order to avoid risk and contamination of professionals and patients.

Anyway, in the face of the pandemic, all the teams in the surgical units underwent adaptations and increased their care with the tasks performed even more, but nursing, even with so many challenges on a daily basis, highlights as being those professionals who always aim for broader care , caring for the well-being of others, linking knowledge, experience and empathy. ■

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