

# NURSING PRACTICE IN MINIMALLY INVASIVE VIDEO-ASSISTED CARDIAC SURGERY\*

*Atuação da enfermagem em cirurgia cardíaca minimamente invasiva videoassistida*  
*Enfermería de práctica en cirugía cardíaca asistida por video minimamente invasiva*

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**ABSTRACT: Objective:** To report the nursing practice in the perioperative period of minimally invasive video-assisted heart surgery. **Method:** This is an account of the experiences of the nursing staff, during the perioperative period in this surgical technique, carried out in a teaching hospital that is a reference center for cardiology in the State of São Paulo. **Results:** The observation on the importance of the role of the nursing department in the preparation of the operating room, as well as in the reception of patients, assistance to anesthesia, preparation of patients for surgery, assistance to the team in the intraoperative period and when the patient leaves the operating room, and meeting the demands of this innovative surgical procedure. **Conclusion:** The nursing practice in the surgical center must be able to monitor the evolution of the surgical techniques, both in the handling of new materials and equipment and in direct patient care, aiming at surgical safety.

**Keywords:** Perioperative nursing. Operating room nursing. Thoracicsurgery, video-assisted.

**RESUMO: Objetivo:** Relatar a atuação da enfermagem no perioperatório da cirurgia cardíaca minimamente invasiva videoassistida. **Método:** Trata-se de um relato de experiência da equipe de enfermagem no perioperatório dessa técnica cirúrgica, realizada em um hospital-escola que é referência em cardiologia no Estado de São Paulo. **Resultados:** Observa-se a importância da atuação da enfermagem no preparo do centro cirúrgico (CC), recepção do paciente, assistência ao ato anestésico, preparo do paciente para a cirurgia, atendimento à equipe no período intraoperatório e na saída do paciente de sala operatória (SO), atendendo às demandas desta modalidade cirúrgica inovadora. **Conclusão:** A enfermagem de centro cirúrgico (CC) deve ser capacitada a acompanhar a evolução das técnicas cirúrgicas, tanto no manuseio dos novos materiais e equipamentos como na assistência direta ao paciente, visando à segurança cirúrgica.

**Palavras-chave:** Enfermagem perioperatória. Enfermagem de centro cirúrgico. Cirurgia torácica videoassistida.

**RESUMEN: Objetivo:** Presentar la práctica de enfermería en cirugía cardíaca mínimamente invasiva trans operativa videoassistida. **Método:** Se trata de un relato de la experiencia personal de enfermería durante la cirugía de esta técnica quirúrgica que se realiza en unos centros de referencia hospital universitario de São Paulo. **Resultados:** Toma nota de la importancia del papel de enfermería en la preparación de la sala de operaciones, así como en la recepción del paciente, la asistencia a la anestesia, la preparación del paciente para la cirugía, llame al equipo en el período intraoperatorio y la salida del paciente del sistema operativo, la satisfacción de las demandas de este procedimiento quirúrgico innovador. **Conclusión:** Un centro de Enfermería Cirúrgico debe ser capaz de controlar la evolución de las técnicas quirúrgicas, tanto en el manejo de nuevos materiales y equipos como en la atención directa al paciente, el objetivo de la seguridad quirúrgica.

**Palabras clave:** Enfermería perioperatoria. Enfermería de quirófano. Cirugía torácica asistida por vídeo.

\*Paper based on the "Nursing performance on minimally invasive video-assisted cardiac surgery", Faculdade Israelita de Ciências em Saúde Albert Einstein (FICSAE), in 2015.

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Received: 17 Mar. 2016 – Approved: 16 Aug. 2016

DOI: 10.5327/Z1414-4425201600030008

## INTRODUCTION

Historically, cardiac surgery has been performed for a little more than six decades; since then, its progress has been remarkable. The first successful heart surgery took place in 1938, in the United States of America (USA), by Dr. Robert Edward Gross, for the correction of patent ductus arteriosus, and the first correction of intracardiac defect was in 1952, performed by Dr. Floyd John Lewis, in a patient with interatrial communication. In 1951, it was the first time an extracorporeal circulation (ECC) was conducted in humans<sup>1</sup>.

Transsternal median sternotomy is the most common access used in heart surgery. It was first introduced in 1957, to replace bilateral anterior thoracotomy, benefitting many patients by reducing the time of the surgery, and providing excellent exposure of the heart and reducing respiratory trauma, thus becoming the most used access nowadays. However, in the past few years, there has been great interest in reducing surgical trauma and providing more comfort for the patients. The new phase of heart surgery began in 2005 – minimally invasive surgeries, including video-assisted surgery and intra-cavitary procedures through peripheral ECC, vacuum assistance, and minithoracotomies. The surgical method employed was gradually progressive, giving space to possibilities of surgical approaches for different valve heart disease, coronary obstructions, and congenital anomalies<sup>2,3,4</sup>.

Conceptually, the word “minimally invasive” refers to surgery conducted through small incisions, without a direct access to the heart or another organ to be operated; however, it obtains the same therapeutic results achieved from conventional surgery<sup>4</sup>. Add to that the use of videoscope in the minimally invasive surgery, which provides a better view of intra-cavitary cavities in adequate moments of the procedure, ensuring success to the technique<sup>5,6</sup>.

Therefore, minimally invasive video-assisted cardiac surgery (MIVACS) is a safe technique that reduces pain and postoperative complications, leading to reduced time of hospital stay and a consequent reduction of hospitalization costs; besides, it leads to the aesthetic satisfaction of the client resulting from reduced surgical trauma<sup>5,6</sup>.

Comparatively, in conventional surgery by transsternal median sternotomy, the entire intracardiac cavity is exposed to the environment. If this situation is prolonged, it leads to an exponential increase in the risk of infections and

hydroelectrolytic balance, which contributes to the weakening of the immunological response, thus resulting in a longer hospital stay for the patient<sup>7</sup>.

With so many technological advances, new challenges and responsibilities came up for the nursing team in the surgical ward. So, the whole team needs to be specifically trained to work with accuracy in minimally invasive surgeries, both in the direct care for the patient and to accompany the fast evolution of equipment and devices used<sup>7</sup>. Therefore, it is important to share the experiences of the nursing team in the surgical center (SC) in this type of procedure, aiming at contributing with the growth of other professionals and at improving perioperative nursing care.

## OBJECTIVE

To report the work of the nursing team in the perioperative period of MIVACS in a teaching hospital considered to be reference in cardiology in the State of São Paulo.

## METHOD

This is a descriptive study, an experience report, aiming at studying an unknown or little known phenomenon in society, by exploring data to build a scenario. The study was based on the premise that problems can be solved and practices can be improved by the description and analysis of objective and direct observations<sup>8</sup>.

The study aimed at describing the experience of the researcher and her team at the perioperative of patients submitted to MIVACS in a reference teaching school in cardiology, located in São Paulo. This major institution has 3 buildings and capacity for 373 beds, and is considered to be one of the largest cardiology hospitals in Latin America.

The surgical division is organized to meet the high institutional demand: ten conventional heart surgeries and five peripheral vascular surgeries per day are performed in eight surgical rooms and one room for hybrid procedures, besides four beds for anesthetic recovery. The latter are basically used for the recovery of patients submitted to hybrid minor procedures, such as carotid dissection for the access of cardiac catheterization and percutaneous procedures without indication of recovery in the intensive care unit (ICU). The ICU counts on 50 beds for post-surgery recoveries and post-heart transplant.

The nursing staff who work directly in SC care is constituted of 2 nurses in the morning shift and 2 nurses in the afternoon shift, 13 nursing technicians in the morning and 11 in the afternoon. Night shifts have six technicians and one nurse each. The elective surgical procedures are conducted only by day. The night shift only does emergency surgeries. There are also 12 surgical instrumentation technicians (6 in the morning and 6 in the afternoon).

In another building of the institution, there are more than four surgical rooms addressed to procedures such as implantation of pacemakers, peripheral vascular surgeries, and kidney transplants. In this same building, there is a fifth surgical room, with the objective of implementing the fetal medicine center, which will count on 15 neonatal ICU beds and 10 pediatric ICU beds.

On an average, 350 surgical procedures are conducted per month. MIVACS, specifically, has had only one procedure per month since November 2014, which is currently conducted by the same surgical team.

## RESULTS

The main MIVACSs conducted in the analyzed institution are mitral prosthesis implant with biological or mechanical prosthesis and mitral valve repair; in some cases, epicardial electrode implantations are conducted.

In this experience report, the work of perioperative nursing in the implantation of mitral pericardial bioprosthesis in its isolated activities, as well as those shared with the other professionals in the operating room (OR), such as anesthesiologists, the main surgeon, the assistant surgeon, the perfusion technician, the surgical instrument technician, the clinical engineering technician and the echocardiography technician.

Because it is a specific and innovative surgical procedure, it was necessary to prepare the nursing team for a systematic work, aiming at preventing risks for the patient that are related to the surgical procedure itself, following the steps to come whose actions were guided by education, management and care.

In terms of education, the idea was to ensure the proper use of the new devices and equipments used in MIVACS. Practical classes were offered by the company in charge, and were addressed to the nursing team of the SC and the material and sterilization center (MSC), and surgical instrument technicians.

Concerning management, materials, and equipment necessary for the performance of MIVACS were properly predicted and provided, besides the standardization of items to execute the surgical procedure, with the creation of checklists used in the OR and requirements for specific materials. Regarding patient safety, institutional protocols were created referring to patient care in the intraoperative period.

As to care, Chart 1 shows the sequence of actions and procedures conducted by the multiprofessional team, including the nursing of SC for the video-assisted minimally invasive mitral pericardial bioprosthesis implantation (Figure 1).

## DISCUSSION

The introduction of new surgical procedures considered innovative, like MIVACS, came as a response to the need for minor incisions, but with the increased visualization of the operation field, providing the same results obtained throughout the years with conventional surgery. This aggregates perceptible advantages to the clinical picture of the patient in the intra- and post-operative periods<sup>9</sup>.

The technique demands adaptation of the surgeon when approaching heart cavities in a restricted manner due to the limited length of the incision, which is compensated by the use of videothoracoscopy. The handling of long instruments and the indirect visibility of the operative field are difficulties, which can be gradually overcome by the succession of surgical interventions, through which the skills and abilities in manipulations are improved<sup>10</sup>.

Likewise, the procedure represents a challenge for the multiprofessional team, including the nursing staff in the SC, since it requires the assistant and the circulating nurse to adjust to the needs of the team and the patient in the trans-operative period.

In this sense, it is essential that the nursing team involved in MIVACS receive adequate training to perform their actions with knowledge and safety, both in care activities and in the handling of devices and specific equipment for this procedure, aiming at patient safety during the entire anesthetic-surgical procedure.

In order to facilitate the proper care of the surgical team and the patient in MIVACS, it is necessary to predict and provide these materials and equipment, besides standardizing them by creating a checklist with the minimum

**Chart 1.** Sequence of procedures to perform minimally invasive video-assisted surgery in a teaching cardiological hospital in the State of São Paulo.

Surgical indication
<p>The criteria indicating the possibility to perform MIVACS in the institution include elective patients, without previous heart or thoracic surgery, weighing more than 50 kg and ejection fraction above 50%.</p> <p>Exclusion criteria: Obese patients, dilation of the ascending aorta, and thoracic deformities (<i>pectus excavatum e pectus carinatum</i>). The decision for the procedure is made by the cardiologist with the heart surgeon, with the proper clarifications to the patient and the family. Afterwards, the surgery notice is filled out and sent to the SC by the cardiologist to schedule the surgery.</p>
Surgery schedule
<p>It is made directly in the SC by the main and assistant surgeons, after analysis of the patient history and complementary preoperative examinations (electrocardiography, thoracic x-ray, transesophageal echocardiography, carotid artery ultrasound, abdominal, iliac and femoral aorta), by filling out a specific form describing data about the patient, surgery, and team, besides the necessary materials and equipment for the surgical procedure. The note is then given to the nurse of the SC, in charge of the surgical map, who predicts and provides them to the drugstore, MSC, and warehouse for the day of the surgery.</p>
Preparation of the operating room
<p>On the date scheduled for the surgery, the assistant nurse checks items such as reservations of blood derivatives, bed available in the ICU, besides checking, with the circulating, the institutional checklist of the assembly of the OR. This checklist verifies the presence and functioning of general items, such as preparatory cleansing, presence of equipment, cart for consumption material, cart of anesthetic drugs, materials necessary for orotracheal intubation and furniture, besides permanent materials and equipment, specific for MIVACS, requested at scheduling. The clinical engineering technician performs the test of all the equipment in the OR before the patient's entrance.</p>
Receiving the patient in the SC
<p>The patient is referred to the SC in a stretcher, accompanied by family members and the nursing staff in the hospitalization unit. At the entrance of the SC, the nurse receives the patient with the assistant surgeon, they check and confirm the following data: full name, identification bracelet, medical chart, and the anesthetic and surgical consent form. They both clarify possible doubts that may come both from the patient and the family members, then the nurse refers the patient to the OR.</p>
Receiving the patient in the OR
<p>In the OR, the patient is welcomed by the circulating nurse, who is assisted by the nurse and transfer him/her to the operating table under a thermal blanket at 38°C, in the horizontal dorsal position. In this period, the air-conditioner of the operating room remains off. The circulating nurse checks the identification bracelet once again, as well as the medical chart and the consent form (signed). The nurse fills out the SAEP, including the admission in the room and prescribing, through a checklist, the nursing interventions to be carried out during surgery, as well as the items of surgical safety, which is carried out in a different form. All items prescribed are checked by the circulating nurse during the surgery.</p>
Preparing the operating table
<p>In parallel, the surgical instrument technician reviews the presence of single-use sterile materials, permanent and consigned materials (prosthesis, arterial and venous canal, PTFE neocorda – surgical suture made of polytetrafluoroethylene, Goretex and Carpentier rigid rings). After verification, the instrument technician gets ready and starts to assemble the operating room, with the assistance of the circulating nurse, who disposes the materials, previously separated, and checks the integrators, stored in a form in the patient's records.</p>
Preparing the patient for anesthesia
<p>With the patient in an operating room, the nurse performs a non-invasive verification (electrodes, invasive blood pressure and wrist pulse oximeter) followed by venous puncture by the anesthetist in the right forearm. The patient is placed sitting to perform the rachianesthesia, followed by the placement of disposable blades for external cardiac defibrillation, placed in the right scapular region and the left anterolateral hemithoracic region, as well as the insertion of a disposable electric scalpel in the right lumbar region. The patient is then placed in the horizontal dorsal decubitus position, the continuous electroencephalogram electrode is positioned in a frontal region to monitor the brain dynamics during anesthesia. Then, anesthetic induction begins (inhaling and venous), leading to orotracheal intubation, tube fixation, ocular protection, passage of the esophageal temperature sensor, and echocardiography probe.</p>

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**Chart 1.** Continuation.**Preparing the patient**

After anesthesia, the patient's clothes are removed, respecting his privacy and comfort, enabling the verification of skin integrity, body hygiene, and trichotomy (anterior and posterior thorax, axillary, right and left inguinal region), which is performed in the room immediately after the patient is referred to the SC.

The assistant surgeon is equipped to perform the central and arterial venous puncture, according to the institution's protocol to place the accesses – right side for the peripheral access (forearm) and central double lumen catheter (subclavian) to administrate the vasoactive drugs, anesthetics, and to measure CVP; and left side for the control of MAP and arterial gasometry. After these procedures, the indwelling bladder catheter for the control of urinary output.

The horizontal dorsal position is maintained, however, with the placement of a cushion under the right lumbar region, to guarantee an inclination angle of 30°. The arms are maintained and fixated at the extension of the body. The main surgeon makes the incision markings of minithoracotomy and the assistant proceeds to degermation (solution of chlorhexidine degermante) and skin antisepsis (solution of alcoholic chlorhexidine).

The team, which is already prepared, places the surgical fields and leaves the thorax exposed, as well as the right inguinal, to install the ECC canulla.

**The intraoperative period: MIVACS**

The instrumental and auxiliary table with all of the materials is close, and the number of big, small compresses and gauze is checked by the instrument technician, with a proper note from the circulating nurse in a specific form.

Then, the clinical engineering technician, the circulating and the nurse place the two video shelves, electric scalpel, defibrillator, hampers, besides opening the consigned materials and other specifics (box with optic fiber and boxes for minimally-invasive surgery), after the nurse checks it.

An adherent and transparent film, made of chlorhexidine, is placed on the skin of the patient to fixate the surgical fields and to protect the operative field. The main surgeon begins the 4 cm incisions, to the level of 4<sup>th</sup> EICD, between ALL and RMCL (Figure 1). The ECC machine and the echocardiogram device are close together, and the first sample of arterial blood is analyzed to control blood parameters. After the full heparinization of the patient, ECC is established by femoral cannulation to the right, and temperature is established at 30°C. Then comes the surgical act itself, with aortic cross-clamping, left atrioectomy, valvular excision, passage of stitches through the valvular ring, biological prosthesis and knots with surgical threads, by using the exclusive visibility through the video monitor. During the procedure, the position of the surgical table is rotated in Trendelenburg, reverse Trendelenburg, right and left lateral by the anesthesiologist. In the ECC period, the values of arterial gasometry, hematocrits, hemoglobin, electrolytes, and TTPA are verified every 30 minutes by the perfusion technician and the anesthetist, allowing the performance of the necessary corrections. The tests are sent and the results are received by the nursing staff, besides checking the blood derivatives, when necessary.

After concluding the surgery, an inspection is conducted in the cavities with the assistance of transesophageal echocardiography, and the circulating nurse helps to re-heat the patient with a thermal blanket at 38°C, warm venous infusions and by turning off the air-conditioner. To return the heart to the sinus rhythm, the surgeon requests the circulating nurse to prepare an external defibrillation load of 10 joules. The active and joint conference of blood loss is made by compresses and gauze and hydric balance (registered in a proper form), besides the correct storage of materials removed from the patient for posterior pathological anatomy, properly protocolled by the nursing team.

The bandages and drains are installed by the introduction of a 0.9% physiological solution in the bottles for air drainage and blood in the cavity. The circulating nurse in the room labels the bottle informing the volume in mL and the time for control.

The nursing staff turn off the equipment, putting them away to remove the surgical fields, checking for the presence of lost instruments, as well as checking the patient's skin for integrity, especially in the dorsal, sacral-gluteal and calcaneal regions, concluding the filling out of SAEP – nursing diagnoses and necessary intervention in the immediate postoperative period.

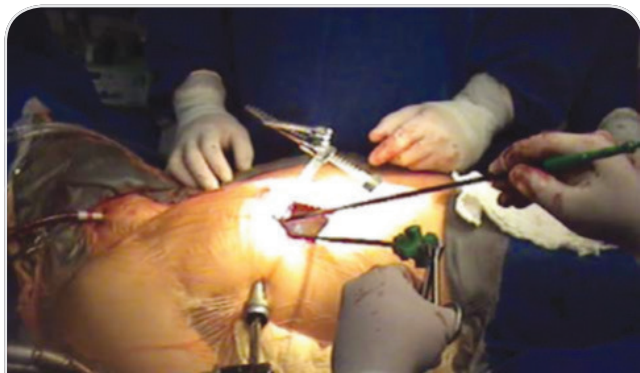
**Discharging patients from the OR**

The nurse passes the shift to the ICU nurse by telephone, with the following data: name and age of the patient, anesthesia and surgery conducted, positions and conditions of the peripheral, central and arterial venous catheter, drains, bandages, and drug infusions, as well as interferences. The nurse also checks the proper filling out of notes regarding the preoperative period, besides postoperative care, as well as other forms in the anesthetist, perfusionist, and surgeon's responsibility chart. This professional gathers the used and not-used consigned material in surgery, and sends it to the drugstore.

The patient is transferred from the operating table to the bed with the help of a transfer, and the multiparameter portable transmitter and supplementary oxygen are placed. Drug infusions are identified, drains and other devices are reorganized and the patient is covered.

The transportation of the patient to the ICU is accompanied by the anesthesiologist, the assistant surgeon and the circulating nurse to the room. The main surgeon sees the family members in a separate room close to the SC for providing information about the intra- and post-operative periods of the patient.

ECC: extracorporeal circulation; SC: surgical center; OR: operating room; CVP: central venous pressure; MAP: mean arterial pressure; RICS: right intercostal space; AAL: anterior axillary line; LHD: right midclavicular line (RMCL); APTT: activated partial thromboplastin time; ICU: intensive care unit; SAEP: Perioperative Nursing Care System.



Source: Fortunato<sup>9</sup>.

**Figure 1.** Panoramic view of right lateral minithoracotomy to access the mitral valve.

necessary items to conduct the procedure. The objective is to facilitate the assembly of the OR by the circulating nurse and the verification by the nurse before the patient enters the SC<sup>11</sup>.

Standardization is an important administration tool and, as such, it provides uniformity to the actions, besides reducing dispersion and enabling each professional to perform their services in a guided and safe manner<sup>12</sup>.

With a well-trained team and the materials and equipment available in the OR, perioperative-nursing care will be more effective. Add to that important measures, such as the application of a surgical safety verification list (checklist), with the following steps: Sign in – before anesthetic induction; Timeout – before the skin incision; and Sign out – at the end of the surgery, before the patient leaves the OR. These actions are performed by the coordinator of the verification list, usually a nurse, aiming at patient safety<sup>11,13</sup>.

For the success of the anesthetic-surgical act, it is essential that the nurses have an active participation in the entire trans-operative period, from the reception of the patient in the SC until his/her discharge in the OR, providing individualized and humanized care<sup>14</sup>.

It is recommended that the nurse receive the patient in the SC, preferably by the same professional who made the preoperative nursing visit, so that this person can continue to apply the Perioperative Nursing Care System (SAEP). Besides, the fact that the patient knows this professional can provide more safety. Likewise, preferably, the patient should be received in the OR by the same professional who received him/her in the SC, and then the patient should be introduced to the environment and the team<sup>14</sup>.

The assistance to the anesthetic act should be first conducted by the nurse, who must be prepared for emergencies,

simultaneously to the preparation of the surgical table, conducted by the surgical instrument technician with the help of the circulating nurse, as well as the preparation of the surgical team.

The anesthetist introduces an echocardiography transducer, because, in MIVACS, the use of an esophageal echocardiography in the pre and intraoperative periods is essential, in order to identify mechanisms of valve insufficiency, as well as to make sure that the entire intracavitary cavity has no residual air in the exit of ECC. Since the technique is being used in the institution, trans-esophageal echocardiography is standard in every video procedure, aiming at providing safety and efficiency to the surgical procedure.

The nurse should participate in the surgical positioning both for the performance of the anesthetic act and for the surgical act. This action is shared by the team focusing on patient safety and on identifying risks to prevent the formation of pressure ulcers in major surgeries, with prevalence of the horizontal dorsal decubitus position because of the long duration and mobilization. General anesthesia provides absence of sensitivity, and since it is used for longer periods, such as in heart surgeries, it is damaging for the exchange of oxygen and carbon dioxide, because the body loses its compensation mechanisms, being prone to the development of lesions<sup>15</sup>.

The use of electrosurgery requires special care from the staff. It is recommended that the dispersive plate be placed after surgical positioning, close to the surgical incision, over the clean, dry, hairless skin, on the muscle mass and in a vascularized region; there is no specific location for that. At the end of the procedure, the plate must be removed carefully, with the observation of possible lesions, paying attention to the nursing records related to the use of the equipment<sup>16</sup>.

The preparation of the surgical patient includes the conduction of techniques such as trichotomy, degermation of the skin and indwelling bladder catheter (IBC), which can be executed by the nurse in the OR. Specifically in the analyzed institution, trichotomy is conducted in the room immediately before the patient is referred to the SC, and the demergation of the skin and IBC are performed by the assistant surgeon after the procedures of central accesses already described.

When the team and the patient are ready, the surgery begins, and the role of the circulating nurse is more addressed to meeting the intraoperative needs.

In MIVACS, the use of ECC plays an important role for a safe perfusion, with rigorous control of blood flows, oxygen levels and temperature, conducted by the perfusion technician and the anesthesiologist by controlling blood parameters, gas exchange and blood volume for the necessary corrections<sup>17</sup>, according to results of the tests brought in by the circulating nurse.

In this surgery, the duration of ECC and aorta impingement is longer when compared to the traditional technique via transsternal median thoracotomy. However, this is a safe procedure, associated to lower morbidity, postoperative pain, bleeding and need for blood transfusion, time of extubation, permanence in the ICU and hospitalization, returning to daily activities faster<sup>18</sup>.

To conclude the surgery, the circulating and the nurse make procedures such as checking the compresses, identifying the items for pathological anatomy, filling out forms and organizing the medical chart, transferring the patient to the bed, transporting, and passing the shift for the ICU. Another important factor is that a member of the surgical team can arrange the communication with the patient's family members to provide information about the procedure, the situation and the location of the patient.

For major surgeries, like heart surgeries, it is important that the operation room has the adequate physical dimensions, due to the number of equipment and professionals involved in the procedure. The OR should have at least 36 m<sup>2</sup>, with minimum dimension of 5m<sup>19</sup> – size of the operation rooms in this analyzed institution.

It is worth to mention that a surgical site infection (SSI) is still one of the complicating factors in heart surgery. However, statistic data prove a 90% reduction in the risk of SSI in MIVACS when compared to conventional methods of transsternal median thoracotomy, whose risk of presenting an infection is over 30%, with mortality rate of 10 to 47%<sup>20</sup>.

In the face of the exposure, it is essential that all members of the nursing team be aware of their role, working together to guarantee the quality of care provided to the surgical patient. It is important to provide constant evaluation of quality, prevention and correction of possible mistakes in the process and reformulation of care, in order to ensure the rights, the safety and the well-being of the patient.

## FINAL CONSIDERATIONS

With the constant evolution of surgeries — among them, heart surgery — new technologies have been developed with the objective of making surgical procedures safer and less invasive, leading to better functional and aesthetic results.

MIVACSSs, like other surgical procedures, require an active participation of perioperative nursing. It starts with the preparation of the environment, the reception of the patient, the assistance to anesthesia, to the preparation of the patient for surgery, the service to the team in the intraoperative period until the discharge of the patient from the OR and transportation to the ICU, meeting the demands of this innovative surgical modality.

With so many advances, new challenges and responsibilities, the nursing team in the SC needs constant update and training in search of technical and scientific base to develop their activities, aiming at the success of the anesthetic-surgical procedure.

In this sense, this experience report aimed at assisting other hospitals and perioperative teams in the preparation and conduction of minimally invasive heart surgeries involving safe and humanized care.

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