

## NURSING CARE DURING THE POST-OPERATORY OF PATIENTS SUBMITTED TO ORTHOGNATHIC SURGERY<sup>1</sup>

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### ABSTRACT

People with dentofacial deformity may need correction through orthognathic surgery for aesthetic, functional and anatomical improvement of the face. This study aims to identify the care of the nursing team in the post-operative period of patients submitted to orthognathic surgery. The methodology used was a descriptive, exploratory qualitative study, with content analysis of Bardin, performed in a public hospital, through a semi-structured interview with 23 members of the nursing team. In the results, the interviews were transcribed, analyzed and grouped into categories: care provided in the post-operative period of orthognathic surgery; difficulties in the post-operative care; guidelines offered in the immediate post-operative period and post-discharge care. It is concluded that the nursing care offered to patients after orthognathic surgery has been performed precariously, restricted and conditioned to medical orientations, but it is noted that the team is concerned about providing correct and quality care, since they understand that they help in a good recovery of the patient.

**Keywords:** Nursing care. Orthognathic surgery. Post-operative care. Nursing. Surgery.

### INTRODUCTION

The dentofacial deformity is qualified by the discrepancy of the skeletal structures of the face due to the lack of bone symmetry, which can lead to an imbalance in the neuromuscular system and affect chewing, swallowing, phonation and respiration. The teeth may have an unsatisfactory occlusal function in which the orthodontist cannot obtain an expected treatment if he does not intervene with the help of a dental maxillofacial surgeon to establish a balance between the teeth, face and skull<sup>(1)</sup>.

In some conditions surgical intervention is necessary in cases of retraction, mandibular protrusion, temporomandibular disorders, difficulty in chewing food, speech problems, difficulty in keeping lips closed, chronic jaw and jaw pain, facial and ear pain, chronic mouth breathing, open bite, facial injuries, limitations of joint movements, noise, and imbalance of facial esthetics<sup>(2)</sup>.

To correct these deformities, orthognathic surgery is used, which "is a surgical modality that aims to improve the patient in the aesthetic, functional and

anatomical sense of the face structure"<sup>(1:15)</sup>.

Orthognathic surgery has risks and complications, being the most frequent alveolar-inferior nerve lesions, inadequate fractures, incomplete osteotomies, poor positioning of bone segments and hemorrhages<sup>(3)</sup>. Infection is a risk that can occur after any invasive procedure and postoperative pain is usually moderate<sup>(3)</sup>.

The postoperative period is very important for the success of the surgery and the nurse should include as goals: the prevention and early detection of complications, the control of pain and the restoration of the physiological balance as soon as possible, taking into account the needs and recovery of the patient<sup>(4)</sup>.

After the surgery, the nursing team should pay attention to nasal and oral bleeding due to involuntary swallowing in the surgical procedure. The head of the bed should remain elevated from 45 to 60 degrees, to facilitate breathing, to prevent face edema and bronchoaspiration. The use of the ice pack on the spot is immediate and assists in the prevention of facial edema. The team should be attentive to the vital

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parameters of the patient, signs of ischemia in the operated place and lip hydration is important to avoid dryness, in addition to the orientation of position for rest, feeding, oral hygiene and general care, noting that many patients do not succeed in surgery, due to errors made in the post-operative period<sup>(4)</sup>.

In the amount of existing nursing care, the present study is important to know the care offered by the nursing team to patients submitted to orthognathic surgery in the post-operative period, it is understood that standardized and coherent care contributes to the improvement of care provided by the nursing team and, consequently, patient quality.

Thus, this research aims to identify the care provided by the nursing team to patients in the post-operative period of orthognathic surgery, from a public hospital in a city in the interior of Minas Gerais.

## METHODOLOGY

This is a descriptive, exploratory study of qualitative nature, with content analysis according to Bardin<sup>(5)</sup>, carried out in a public hospital in the interior of Minas Gerais.

The inclusion criteria were: to act as a nurse or nursing technician for at least one year, to work in the Post-Anesthesia Recovery Room (PARR) and ward of the SUS (the choice of these sectors is justified because it is the place where the immediate and mediate care to patients in the postoperative period of orthognathic surgery are provided) and agree to participate in the research. The exclusion criteria were: to work in other areas other than the PACU and the hospitalization ward of the SUS and refusal to participate in the survey.

The PARR has five beds and it is composed of 54 employees, among them 04 nurses, 06 nursing technicians responsible for the immediate postoperative period, besides residents in anesthesia and surgery, surgeons of several specialties and two maxillofacial surgeons. The ward of surgical hospitalization has 20 beds and 05 nurses and 13 nursing technicians have worked in it, responsible for providing the assistance to the patients of immediate and mediate postoperative.

A total of 14 nursing technicians and 9 nurses participated in the study, with 5 professionals (nursing technicians) refusing to say they did not like or did not know about the subject.

The data were collected using a semistructured

research instrument, in January 2017 and the interviews recorded and transcribed later. The questionnaire addressed sociodemographic data: sex, age, training, working time and which sector it operates, and guiding questions, which were: "In your experience, what care should be provided to the patient in the postoperative period of orthognathic surgery?"; "Do you have any difficulties with post-operative care?"; "What guidelines are offered in the immediate postoperative period?" And "After discharge from hospital what care should the patient have?".

In order to analyze the data, we used the content analysis in the thematic analysis modality of Bardin<sup>(5)</sup>, and followed three stages: the first one was a pro-analysis of the material, in which several readings were made of all the material collected (floating reading), initially with no objective commitment to systematization, but rather seeking to comprehend in a global way the main ideas and their general meanings.

In the second stage, the material for thematic analysis was explored<sup>(6)</sup>, which consists of the operation of coding, identification of the sense nuclei, through the research objectives and indications raised from the contact with the material studied, and in the third step, the results obtained and interpretation using the speeches of participants.

The research was initiated after approval by the Research Ethics Committee of the Higher Education Foundation of Passos - FESP/MG, Opinion 1,838,143 on 11/21/2016, following the ethical standards contained in resolution number 466 of 2012 of the National Council of Health, which regulates research involving human beings<sup>(7)</sup>.

## RESULTS AND DISCUSSION

From the 23 participants, 18 are female and five are male. The participants' ages ranged from 18 to 65 years-old, with seven being between 18 and 29 years-old, ten between 30 and 41 years-old, four between 42 and 53 years-old, and two aged between 54 and 65 years-old. With respect to marital status, 12 are single, six are married, three are divorced and two are in a stable relationship.

As for training, 14 are nurses and nine are nursing technicians, and from these ones, two nurses and a nursing technician, totaling 13% of the sample have a postgraduate course.

Regarding the sector of actuation, nine

professionals are directly involved in the immediate nursing care and care in the Post Anesthesia Recovery Room, four nurses and five nursing technicians and 14 professionals are working in the ward of the SUS, five nurses and nine technicians nursing professionals, who are the professionals responsible for the nursing care of patients who have already left the PARR.

The analysis of the material resulted in the following categories: care provided in the postoperative period of orthognathic surgery; difficulties in the postoperative care; guidelines offered in the immediate postoperative period and post-discharge care.

In the first category the Care provided to patients in the immediate postoperative of orthognathic surgery were addressed. The interviewees' statements highlight the importance of specific care related to the postoperative period of orthognathic surgery, starting after the end of the procedure, where the patient is referred to the PARR until the wards of hospitalization, considering that it is paramount to evaluate the upper airways, which may be obstructed due to bleeding that occurs during the surgical procedure and nasal intubation; monitor oxygen saturation, blood pressure; temperature; remove the bladder catheter from delay, keep the patient in Fowler position, apply cold or cold compresses to the face, lubricate the lips and administer the medications prescribed by the doctors. According to the speeches below:

[...] Since it is a surgery on the face, you should be very careful with your face, for not having any complications. Put the ice because the buccomaxillofacial surgeon always talks to put it on the day of surgery and in the next day to avoid edema. (Nurse T)

[...] After surgery the correct thing is to elevate the bedside of the patient and to put the ice on the face and pay attention to the saturation of the patient, because he has a great difficulty of breathing after the surgery. (Tec. X)

According to the literature<sup>(8)</sup> it is necessary to use an ice pack on the face in the first 24 hours, inserting it every 20 minutes. The use of ice at the site causes vasoconstriction, which leads to decreased bleeding and minimizes edema.

It is important to emphasize that there are recommendations for ice to not be applied directly to the skin, and it is recommended to use a protective barrier between the ice and the skin to avoid the risk of causing major damages such as burns and ulcerations<sup>(9)</sup>.

The immediate postoperative care related to the

patient's diet and in the reports the professionals say that the guidelines should be to offer diets liquid, pasty or even crushed, avoiding damages to the surgery, discomfort or pain in chewing. The literature also states that in addition to being whipped or sieved, it is important to use nutritional supplements to supplement the diet<sup>(1)</sup>.

[...] Another care is always offering the proper diet, according to the surgery performed. Usually when it is maxillofacial surgery, the diet should be liquid and cold to avoid friction of the jaw with the maxilla and also avoid unnecessary pain, and even for being postoperative to avoid moving the jaw and maxilla. (Nurse O)

It is indicated to offer liquid, homogeneous, sparse diets, restricted to milk in the first days, in order to avoid the deposit of residuals at the surgical points, bacterial proliferation and favor the rest of the operated place, to prevent possible complications in the postoperative period. However, these dietary restrictions, pain and difficulty in chewing and swallowing, may expose the patient to the risk of nutritional deficiencies, and may favor weight loss of three to 10 kg, in 45 days after undergoing orthognathic surgery<sup>(10)</sup>.

In the course of the recovery process, the food will adapt until the calcification and bone healing, which normally lasts from 45 to 60 days, is completed and after that the patient can feed normally. Adequate postoperative nutrition decreases the time of incapacitation after surgery, the incidence of complications and improves healing<sup>(11)</sup>.

Still in relation to the care provided in the immediate postoperative period, the speeches related to vital signs (SSVV) should be highlighted and the headboard should be kept elevated to facilitate breathing:

[...] Receiving the patient, checking vital signs, raising the head 30°, applying ice pack, the diet, if it is released, should be liquid and cool. We should guide them about pain and medicine. (Nurse R)

[...] Medical advice is made ... keeping the headboard high, putting ice in the surgical site and keeping vital signs steady and steady. (Nurse J)

It is also emphasized by the professionals the importance of the observation regarding the bleeding in the operated place, being considered also an essential and timely care.

[...] Beware of bleeding, beware of the position is ... the position, I say, the position of his face, be careful not to hit his face in somewhere [...] (Nurse K)

[...] You have to be careful with the bleeding and you should also observe the level of awareness. (Tec. S)

The nursing team offers adequate care regarding face care, ice application, high head, vital signs, level of consciousness and control of bleeding, for a good recovery of patients submitted to orthognathic surgery, but only the report of a professional related to the technique of oral hygiene:

[...] Oral hygiene is essential, most of these patients come with poor oral hygiene, most of them smoke and we advise that they cannot! But there are some cases that are not good for us to talk about, but the first thing we do is also guidance on their oral hygiene, which is important in the postsurgical period. (Nurse Q)

The literature describes that even after the professionals' orientations regarding the importance of oral hygiene, patients cannot do it adequately, a fact that, in the case of a postoperative of orthognathic surgery, can predispose the patient to risk of local infection<sup>(1)</sup>.

Orientation on the normal brushing of the teeth and tongue, being in the regions operated carefully and less vigorously, but never absent, with soft bristle brushes, aims to prevent the occurrence of infection. These guidelines should be made, since some patients have difficulty in opening the mouth postoperatively and are afraid to perform oral hygiene<sup>(8)</sup>.

During the mid-term postoperative period, nursing care prioritizes the restoration of physiological balance, the relief of pain through the administration of medications at prescribed times and when it is necessary, in addition to providing a calm and welcoming environment; the prevention of complications and the education of the patient for self-care after surgery. Careful evaluation and immediate intervention help the patient to return quickly to his or her function, safely and comfortably. The continuation of care in the community through home care, follow-up in the doctor's office or through telephone contact to know the patient's conditions and resolve doubts, promote a recovery without major complications<sup>(12)</sup>.

In the second category, the difficulties in the postoperative care were discussed, in which professionals report the difficulties they feel, especially in relation to the application of ice packs at short intervals and to meet the patients' needs:

[...] Keeping the ice in the correct place with no help for it. (Nurse C)

[...] We have some limitations due to the patient's

willingness that sometimes want to feed, wants to get up immediately... The difficulties in the care, we know that the care is very specific to avoid swelling [...]

It is not only putting the ice, but also the elevation of the headboard is important so that no edema and bleeding occur, but the professional cites the removal of a "tampon" that causes a great bleeding.

[...] So you have to observe all the time in relation to bleeding, just as I'm telling you, depending on the bleeding we have to communicate the doctor, because there are bleeds that are normal post-surgery and some which are abnormal, because sometimes the patient gets up and accidentally takes off the tampon and sometimes without the doctor requesting ... because the patients get very agitated and then they take the tampon out, and then it bleeds a lot, then we communicate the doctor about these abnormalities and he only puts ice in the place and leaves the patient at rest with the head raised. (Tec. I)

In this speech the professional demonstrates ignorance regarding orthognathic surgery, because in this type of surgery it is not necessary to use a tampon.

In the third category, the guidelines offered in the immediate postoperative period were discussed. Immediate postoperative care begins at PARR, where measurements of cardiac monitoring, peripheral oxygen saturation, vital signs, pain, nausea and vomiting are recommended, and attention should be paid to the length of stay in PARR, which should be at least 60 minutes, so that the evolution of potential complications can be evaluated, being the competence of the nurse the implementation of Nursing Care Systematization (SAE) and effective measures in the control of the patient's complications during this period of anesthetic recovery<sup>(13)</sup>.

At the time the patient reestablishes consciousness and is guided, guidance on post-operative care should be given. Most study participants reported that have guided them about proper nutrition, use of ice packs and unwanted bleeding, as set out below:

[...] I would advise him about the surgery he did that is a surgery on the face so that would have to put ice, as the doctor said, and avoid the effort ... observe the issue of bleeding and more liquid and cold diets. (Nurse A)

Regarding the guidelines, some authors cite the time of recovery, information on food and food consistency; oral hygiene; periods of pain and discomfort and presence of edema in the postoperative period; possible use of blockade with maxilomandibular elastics, patient's awareness of eliminating oral habits such as: nail biting, smoking,

alcoholism; approaches on the esthetic change achieved by surgery, and also the presence of family members, who from this phase is fundamental for a desired postoperative period<sup>(4)</sup>.

Rest in bed, observation of bleeding, maintenance of dressing, prescribed medications and observation of the patient, general condition. (Nurse C)

[...] We look at the prescription and see if the patient may be eating or not ... if he has to stay unfed, if the patient is fasting, we advise him not to drink anything... To ingest the medications prescribed by the doctor, leave the headboard raised to 30° when he arrives in the room [...] (Nurse N)

In addition to the aforementioned guidelines, there are several guidelines that must be made, such as feeding at the proper consistency and temperature, which prevent bleeding due to the vasoconstriction they cause. And in the same way physical efforts should be avoided, since they can lead to a more rapid circulation and, consequently, increase of blood pressure. It is necessary to rest and sleep with the head higher, avoiding lowering and sleeping sideways; to make light and passive mouthwashes 3 times a day with oral antiseptic, beginning only 24 hours after surgery; avoid smoking; apply liquid petroleum jelly or protective creams to the lips to keep them lubricated, avoiding dryings; guidelines on facial paresthesia, edema, nausea, weakness, the importance of not blowing nose and strictly follow medication schedules<sup>(1)</sup>.

In relation to what was exposed by the statements of the professionals of the nursing team, it is noted that the guidelines are limited and there is a lack about theoretical and scientific knowledge. The professionals provide some guidelines, but they do not know their justification.

In the fourth and last category, care after hospital discharge was discussed, in which professionals talk about patient orientation related to hospital discharge and medical prescription, as presented below.

[...] It is still responsibility of the doctor who guides him. (Nurse G)

[...] We follow the medical guidelines ... food ... the other things are followed by medical guidance. I think it's just ... no more ... because post-operative is good. (Tec. J)

Many patients at discharge receive insufficient or incomprehensible guidance by the nursing staff, not emphasizing their real needs. Generally, the discharge guidelines are only performed by physicians, which

are limited to the drug therapy to be used by the patient<sup>(14)</sup>.

Other participants cite oral opening movements as guidance and care after hospital discharge:

[...] Observar os movimentos... de abrir e fechar o movimento da boca, e observar se há alguma intercorrência, sangramento ou alguma coisa e procurar o médico dele. pra passar mais orientações e na medida do possível fazer acompanhamento com o médico pra ele não perder o movimento da boca principalmente. (Enf. E)

It is noted that there is a Systematization of Nursing Care in the institution, but the plan of care for hospital discharge is still deficient, as it should be started as soon as possible, preferably from the moment the patient is admitted in the institution and developed during the entire period of hospitalization with the patient and their relatives. It would also be important for the patient and family members to receive verbal and written instructions to give continuity to care at home, the errors in care have serious consequences and even compromise surgery<sup>(15)</sup>.

The nurse plays a key role in the discharge process because it is the professional who normally delivers high papers and must be prepared to provide clear and accurate information at this delicate and important moment. In the present study, this dynamics of hospital discharge was not observed, and the difficulty of communication among health professionals and the lack of care planning are also contributing factors to the gaps in the discharge plan implementation. Often, the nursing team performs the guidelines for hospital discharge in a mechanical and hurried way, not considering the conditions and needs of each patient<sup>(15)</sup>.

Finally, the process of caring for nurses in the postoperative period should cover the pathophysiological and emotional aspects of the patient and his/her relative, aiming at teaching self-care, focusing on the importance of making the patient and his/her relatives active agents in promoting their health, through re-education of habits and custom<sup>(15)</sup>.

## FINAL CONSIDERATIONS

This study aimed to identify the care provided by the nursing team to patients in the orthognathic surgery postoperative of a public hospital in a city in the interior of Minas Gerais, since an incorrect postoperative period may lead to serious consequences and even loss of the surgical procedure.

The results showed that the care offered to the users has been carried out in a restricted, deficient and often conditioned way to the medical prescriptions, but it is also noted the concern of the nursing team to provide correct and quality care, since they understand that the same assist in a satisfactory recovery and successful surgery.

Faced with the search for scientific references, it is noted that there is a lack of literature that addresses the theme and justifies the care practices and, thus, the nursing team continues without theoretical subsidies and assistance systematization, offering random care, and promoting the care of according to previous professional experiences and medical prescriptions.

It is important to emphasize the importance of providing adequate and timely guidance to the patient

and family member, during hospitalization and at the moment of hospital discharge, it is essential that the patient is prepared and discharged with correct, clear and concise information regarding care until complete restoration.

Thus, we conclude that for better patient care and recovery it would be important to offer health education and training with these professionals so that they can offer adequate care and also the preparation of a booklet that addresses the postoperative care both for care of nursing in the hospital environment, as well as for hospital discharge, where the patients and their families would have educational and informative material in hand, addressing the care and main doubts, thus contributing to a rapid recovery and success of the surgery.

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## **CUIDADOS DE ENFERMAGEM NO PÓS-OPERATÓRIO DE PACIENTES SUBMETIDOS À CIRURGIA ORTOGNÁTICA**

### **RESUMO**

Pessoas com deformidade dentofacial podem necessitar de correção através de cirurgia ortognática para melhora estética, funcional e anatômica da face. O objetivo foi identificar os cuidados da equipe de enfermagem no pós-operatório de pacientes submetidos à cirurgia ortognática. A metodologia usada foi de estudo descritivo, exploratório de natureza qualitativa, com análise de conteúdo de Bardin, realizada em um hospital público, através de entrevista semiestruturada com 23 membros da equipe de enfermagem. Nos resultados, as entrevistas foram transcritas, analisadas e agrupadas em categorias: cuidados prestados no pós-operatório de cirurgia ortognática; dificuldades nos cuidados do pós-operatório; orientações oferecidas no pós-operatório imediato e cuidados após alta hospitalar. Conclui-se que os cuidados de enfermagem ofertados aos pacientes de pós-operatório de cirurgia ortognática vêm sendo realizados de forma precária, restrita e condicionados às orientações médicas, mas nota-se preocupação da equipe em oferecer cuidados corretos e com qualidade, pois entendem que os mesmos auxiliam em uma boa recuperação do paciente.

**Palavras-chave:** Cuidados de enfermagem. Cirurgia ortognática. Cuidados pós-operatórios. Enfermagem. Cirurgia.

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## **CUIDADOS DE ENFERMERÍA EN EL POSTOPERATORIO DE PACIENTES SOMETIDOS A LA CIRUGÍA ORTOGNÁTICA**

### **RESUMEN**

Personas con deformidad dentofacial pueden necesitar de corrección a través de cirugía ortognática para la mejora estética, funcional y anatómica del rostro. El objetivo fue identificar los cuidados del equipo de enfermería en el postoperatorio de pacientes sometidos a la cirugía ortognática. La metodología usada fue de estudio descriptivo, exploratorio de naturaleza cualitativa, con análisis de contenido de Bardin. La investigación fue realizada en un hospital público, a través de entrevista semiestruturada con 23 miembros del equipo de enfermería. En los resultados, las entrevistas fueron transcritas, analizadas y agrupadas en categorías: cuidados prestados en postoperatorio de cirugía ortognática; dificultades en los cuidados del postoperatorio; orientaciones ofrecidas en el postoperatorio inmediato y cuidados tras alta hospitalaria. Se concluye que los cuidados de enfermería ofrecidos a los pacientes de postoperatorio de cirugía ortognática son hechas de forma precaria, restricta y condicionada a las orientaciones médicas, aunque se note la preocupación del equipo en ofrecer cuidados correctos y con calidad, pues entienden que estos ayudan en una buena recuperación del paciente.

**Palabras clave:** Atención de enfermería. Cirugía ortognática. Cuidados postoperatorios. Enfermería. Cirugía.

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