



VENTROGLUTEAL INTRAMUSCULAR INJECTIONS: KNOWLEDGE ABOUT THE TECHNIC BY NURSING PROFESSIONALS

INJEÇÕES INTRAMUSCULARES VENTROGLÚTEA: O CONHECIMENTO DA TÉCNICA PELOS PROFISSIONAIS DE ENFERMAGEM

LAS INYECCIONES INTRAMUSCULARES VENTROGLÚTEA: EL CONOCIMIENTO DE LA TÉCNICA POR LOS PROFESIONALES DE LA ENFERMERÍA

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ABSTRACT

Objective: analyzing the knowledge of nursing professionals about the use of ventrogluteal site. **Method:** a study with a qualitative approach conducted with 68 nursing professionals of three hospitals. For the production of data, we used a semi-structured form and the assessment of the information was held in accordance with the Content Analysis. The study was approved by the Research Ethics Committee, protocol 0285.0.243.000-11. **Results:** 22 subjects know the application of ventrogluteal intramuscular injection technique; from these, four usually apply medication at this location and only one described the Hochstetter technique correctly. Since it is the ventrogluteal site the most suitable for application of intramuscular medications in the quota researched is not widely used and known. **Conclusion:** we realized the need for professional awareness on the use of this region as the first choice in clinical practice work. **Descriptors:** Intramuscular Injections; Nursing; Health Services Evaluation; Health Education; Carte.

RESUMO

Objetivo: analisar o conhecimento dos profissionais de enfermagem sobre a utilização da região ventroglútea. **Método:** estudo com abordagem qualitativa realizado com 68 profissionais de enfermagem de três hospitais. Para a produção de dados, foi utilizado um formulário semiestruturado e a apreciação das informações procedeu-se de acordo com a Análise de Conteúdo. O estudo foi aprovado pelo Comitê de Ética em Pesquisa, protocolo 0285.0.243.000-11. **Resultados:** 22 sujeitos conhecem a técnica de aplicação de injeção intramuscular ventroglútea, destes, quatro costumam aplicar medicação neste local e apenas um descreveu a técnica de *Hochstetter* corretamente. Visto ser a região ventroglútea mais indicada para aplicação de medicações intramusculares, no contingente pesquisado ainda é pouco utilizada e conhecida. **Conclusão:** percebeu-se a necessidade de sensibilização dos profissionais em relação à utilização desta região como primeira escolha na prática clínica de trabalho. **Descritores:** Injeções Intramusculares; Enfermagem; Avaliação de Serviços de Saúde; Educação em Saúde; Cuidado.

RESUMEN

Objetivo: analizar los conocimientos de los profesionales de enfermería en el uso del sitio glúteo. **Método:** un estudio con enfoque cualitativo realizado con 68 profesionales de enfermería de tres hospitales. Para la producción de los datos, se utilizó una forma semi-estructurada y la evaluación de la información en poder de acuerdo con el Análisis De Contenido. El estudio fue aprobado por el Comité de Ética en la Investigación, el protocolo 0285.0.243.000-11. **Resultados:** 22 sujetos conocen la aplicación de la técnica de inyección intramuscular ventroglutea; de estos, cuatro generalmente aplican la medicación en este lugar y sólo un describió la técnica de *Hochstetter* correctamente. Ya que el sitio ventrogluteo es el más adecuado para aplicación de medicamentos por vía intramuscular, en la cuota investigada todavía no es ampliamente utilizada y conocida. **Conclusión:** nos dimos cuenta de la necesidad de la conciencia profesional acerca del uso de esta región como primera elección en el trabajo de la práctica clínica. **Descriptores:** Inyecciones Intramusculares; Enfermería; Evaluación De Los Servicios De Salud; Educación Para La Salud; Cuidado.

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INTRODUCTION

The administration of intramuscularly drugs is considered a simple procedure; however, because it is an invasive process requires some caution, one refers to the regions elected by nursing professionals for such a procedure. Two locations of the gluteal region will be considered: dorsogluteal injection (DG) and ventrogluteal injection (VG).

The VG region, scientifically, is considered as the safest for intramuscular (IM) due to some features, such as increased thickness of the muscle belly of the gluteus (medium and gluteus minimus) that they are covered by the gluteus maximus muscle, is free of blood vessels and important nerves in adults and in children and contain less thickness of subcutaneous tissue compared to other areas of application. Furthermore, it is bounded by palpable bony structures that highlight important indicative points.¹

To define this region should taper the non-dominant hand over the greater trochanter of the femur of the patient, place the index finger on the anterior superior iliac spine and the middle finger in the iliac crest, as far as possible, thus forming a "V"; the centroid of the triangle should be applied to medication. For applications in the left hip of the client, the procedure should be the same, but the applicator will use the right hand to set the puncture site.²

It should be added that this site muscle fibers present direction that prevents the "slip" of the material injected into the sciatic nerve area (sciatic), ridding it of irritations. Another advantage to be considered is the lowest concentration of anaerobic pathogens in the epidermis compared to DG region being less likely to be contaminated with feces and urine in bedridden.¹

Among various techniques that are performed under the nurse's responsibility, the administration of parenteral drugs, especially IM requires the professional to a scientific view and analyze the potential anatomical regions and more appropriate to the client, in view of the pharmacological characteristics of drugs the absorption capacity of muscle and the path followed by the drug in the body to the elimination.³

A study that sought to raise awareness among health care professionals with several arguments for the use of VG region in the administration of intramuscular injections described the main reasons for the use of this site, and to analyzing the advantages and disadvantages of using this region as compared to DG region, said that this is

inappropriate and potentially dangerous; however, it is often chosen by nursing professionals for the administration of drugs through IM. Yet, it is reaffirmed that the VG region has a smaller amount of innervation of blood vessels and decreasing a number of complications associated with nerve damage and major vessels. Ensures that the VG region is still minimally accepted due to limited knowledge of professionals and therefore not able to perform the technique.⁴

Due to the existing gaps in teaching hospitals of the region covered by the Federal University of Santa Maria (UFSM), Campus of Palmeira das Missões, disquieted researchers with little use of VG region for drug application, verified during practical activities in health units of Northern Rio Grande do Sul State (RS), which teaching activities are carried out under the supervision and monitoring of students in practical field, structured a research proposal, in order to identify reflective percentage, recognize reasons, causes and profile of nursing professionals in relation to this subject. Given the above, this study aims to:

- Analyzing the knowledge of nursing professionals about the use of ventrogluteal site.

METHOD

A qualitative approach study, descriptive and exploratory,^{5,6} conducted with 68 professional nurses, technicians and nursing assistants, working in three hospitals, two small and one of medium size, located in municipalities in the northern region of the RS state. Inclusion criteria for the study were respected: be professional nursing active, not being on vacation, take part in the study and sign the Instrument of Consent. Exclusion criteria considered voluntary intention not to participate.

Initially, the goals and methods of the proposal were presented to professionals in order to know your intention to participate or not the research. In order to maintain the anonymity of participants, they were identified with the letter P refers to the word professional and the numbers 1 to 68 are listed according to the order of completion of the questionnaires. The three hospitals were represented by the letters A, B and C, and 41 subjects from Hospital A, 15 from of the Hospital B and 12 from the Hospital C.

There was used as an instrument of data collection a semi-structured questionnaire with open and closed questions where the respondent answered individually and manually. Furthermore, the information was

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raised between March and June 2012, in hospitals, workplace of these subjects.

The theoretical and methodological support used to analyzing and interpreting the data of this research was the Content Analysis that consists of:

A set of communications analysis techniques in order to obtain, by procedures, systematic and objective description of the content of the messages, indicators (quantitative or not) that allow the inference of knowledge relating to conditions of production/reception (variables inferred) of these messages.^{6:44}

Possible areas of applying content analysis are the analysis of the meanings (thematic analysis) of interviews, discussions or talks. This method represents a kind of content analysis techniques, whose operation consists of three steps: 1) pre-analysis; 2) exploration of the material; 3) processing of results, inference and interpretation.

To make each step of the above methodology, took place in the first time, a return to the purpose of this study, in order to systematize the initial concepts of research. Later there was the careful reading of the material to be analyzed, each of the questions answered in full, seeking to interconnect all its contents, so as to draw in full the steps of the methodology.

In its exploration of material there was performed an attempt by words or meaningful expressions that have emerged in the readings, and therefore, were categorized and the corpus.

For ethical conduct of the research project, it was registered in the Projects Office - Information System for Education (SIE), UFSM, under the number 030333. The data were collected after approval by the Research Ethics Committee of UFSM with CAAE (Presentation Certificate for Ethics Assessment) number 0285.0.243.000-11 on 03/01/2012 and by signing the Informed Consent and Informed (IC) by the participant. It is also supported, in the guidelines and provisions of Resolution No. 196/96,⁷ by the Ministry of Health, describing the guidelines and regulations governing research processes involving humans, being met the recommendations at all stages of the research.

RESULTS AND DISCUSSION

The study included 68 professionals in the nursing field, there are: six nurses, 41 nursing technicians and 21 nursing assistants. From these 68 subjects, 60 were female and eight were male. Being 41 subjects from Hospital A, 15 from the Hospital B and 12 the Hospital C.

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From the analysis and discussion of the open questions of the questionnaire applied in the light of thematic content framework⁶, there were identified a main theme of great relevance to the research, which was called: "The lack of knowledge and poor adherence of ventrogluteal region as site of intramuscular injection".

♦ Few knowledge and low adherence of ventrogluteal region as a local of intramuscular application

This category was identified, because the majority of respondents do not know the VG region and hence do not use it and report having little knowledge about the geometric definition of the place for the application of injections/intramuscular medications in this region.

When asked about the knowledge of intramuscular injection application in VG region (by Hochtetter technique), 22 professionals said they know the technique, 45 do not know it and did not answer this question. As the application of intramuscular injection in this region four professional usually apply, 39 do not use this technique and 25 did not respond. And regarding use of the drugs in this way, four professionals indicated that sometimes use and 64 reported never use this route for drug administration. As such, the qualitative analysis, it emerged that the professionals surveyed generally do not use the VG region for the application of injections/ medications and reported ignorance on the geometric definition. Researchers⁸ data corroborate the results of this research, they show that the administration intramuscularly according to Hochtetter technique or VG is virtually unknown by the professionals surveyed in their work, and therefore unaware of the real importance of this site for intramuscular administration drugs.

In order to identify the knowledge of those involved in the research about the geometric definition of the Hochtetter technique, we opted for the question: Do you ever apply medications in the VG region? How often? In response, there were identified poor knowledge and adherence to technique, since 64 professionals never use this route for drug application during their work practice, with only four injection usually apply in this region also added that this is "the times ". Thus, we can see that there is dichotomy in relation to the above questions in which most professionals have doubts about the definition of that site or do not know it; there are other regions of greater acceptance by the nursing

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staff when choosing to administer intramuscular medications.

During data analysis, there was a bias on the part of respondents, as 22 knew about the application technique, however, only four of these professionals actually use that location in their professional practice. The results of this Article and that focused on three hospital institutions of the North RS region, with coverage of UFSM, Palm Campus Mission confirm the results obtained by researchers^{1; 9; 10-3} conducted in other regions of the country. This shows the lack of basic knowledge, especially those relating to safer places, and the lack of VG injections technique, which although indicated as first choice, is not used in clinical practice work, which can be found in the speeches of the subjects, when asked about their knowledge regarding the application technique:

I can't explain it, because I never learned to do. (P24)

I don't usually use this technique for not mastering the same. (P45)

The modification of this fact depends on the academic development and an active nursing staff, which, when properly trained, continue to be implemented in practice. In undergraduate degree, you can work theoretical and practical concepts for this anatomical region of interdisciplinary way, encouraging future professionals to prioritize the use and applicability in this way in their fields.¹⁴

The failure of some intravenous application of procedures referred to in the national nursing literature and cited studies⁹, recommends orientation processes and supervision of nursing staff so that errors in the application are prevented or reduced, thus providing greater safety for the patient.

In most studies found for this article is explicit the expectation that nurses play its role as an educator in the community to which it belongs, in addition to inpatients, outpatients and staff of the nursing team.

The 22 respondents who reported knowing the technique, when asked where they had this learning, reported to be in college or technical nursing course, with teachers UFSM Campus of Palm Mission and Integrated Regional University (URI), or with the nurses of institutions where they work as we can see in the following lines:

When did the Nursing Technical Course. (P5)

With the Scholars and Professors of nursing of UFSM. (P6)

With the professors of the Course of Nursing of URI, in the discipline of Nursing Fundamentals. (P8)

In College, when I did the graduation. (P22)

With the hospital nurse. (P41)

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From these 22 professionals, there was mentioned Hochestter technique, only four responded that apply injections at this location, referring be "sometimes", which agrees with the study authors⁸, who studied nursing professionals at a university hospital in the countryside and found that the VG region is not widely used and that the professionals had difficulty in describing the method confirming the low adherence to this technique and, thus suggesting the need to update these professionals, especially in relation to anatomy, and proper terminology used to describing regions and knowledge of complications and contraindications.

Excellence in execution of intramuscular medication application techniques is directly related to the continuous improvement of knowledge of nursing professionals is central to security in the time of application.⁵

Medicines wrongly administered can cause damage/injury to the patient due to factors, such as: pharmacological incompatibility, unwanted reactions, drug interactions and more. It is necessary that the professional administering drugs is aware and sure of their actions and have knowledge or access to required information. The doubts and difficulties unclear, correctly, lead to uncertainty and insecurity, and this situation is a risk factor for the occurrence of errors in the medication administration process. These aspects highlight the need for supervision of nursing activities by nurses during the preparation and administration of medicines, since this is the only professional nursing team that should count, in their training, with sufficient knowledge to conducting this model practice of safety.¹³

The regions preferably in the choice for IM injection application should be, with some exceptions, the following sequence: ventrogluteal region, dorsogluteal region, the lateral side anterior thigh region and deltoid.¹

When we ask to describe the ventrogluteal application technique, only 6 from the 68 subjects described the technique and of these, a professional described correctly. How is this in the following quote?

First you need to outline with your index finger the iliac crest and with the hand supporting the trochanter of the femur. With the index and middle finger you form a V, and apply the medication in the middle region. (P21)

The VG region, despite being the least used by nursing professionals, is the most presents studies that articulate reflection in light of the human anatomy. The location of the boundaries of art intramuscular was placed from the traditional model, with the help of

the hands, and from the geometric definition proposed model. Many studies have shown that the geometric model allows greater precision at the puncture site, avoiding accidents in nervous structures (superior and inferior gluteal nerve) and vascular (superior gluteal artery).¹⁶

The knowledge among nursing professionals in a teaching hospital in the state of São Paulo, regarding the region used more frequently to giving injections IM, demonstrated considerable investment in priority sequence: DG region (65,62%), D (31,25%), FALC (15,62%) and VG (12,5%).⁸

Thus, nursing must remain alert to what concerns the educational role of the nurse is because nurses must fulfill its role as an educator to promote health, or because the drug administration is within its competence and responsibility. The union of these two prerogatives reinforces the idea that the nurse within the active entity, from a clinical and reflective thinking, should suit the development of Hochstetter technique to the reality presented by the patient.

The search for more and more qualified leads to greater investment in training of health workers. Authors¹⁶ emphasize the importance of defining a training policy model, training and health education for human resources. Thus, training in health care should be considered strategic, and could be used in a specific area of construction expertise, policy and ethics for the strengthening of human resources.¹⁶

It becomes essential quoting the National Policy for Continuing Health Education (EPS), established by the Ministry of Health in 2004.¹⁷ The EPS proposes that the transformation of professional practices must be based on critical reflection, in collective spaces, discussion groups, the from questioning the reality of work, identifying the training needs.¹⁷ Therefore, health education is facing multiple challenges, being necessary to stimulate educational activities in the teaching-learning process from the academic phase.¹⁸ Furthermore, it is necessary discussing in graduate nursing aspects that encourage the formation of critical and reflective nurses, who not only reproduce the historically dominant models.¹⁸

Based on the analyzes and discussions exposed, there is the presence of low-skilled professionals for the use of VG region, which may be a modified reality from the insertion of more frequent health education spaces and meeting the national scientific evidence and international with respect to application of medication intramuscularly.

CONCLUSION

The results demonstrated a lack of knowledge among nursing professionals, regarding the application of injections/medications in the VG region. There is need to dismembering this work in extension character actions aimed to work theoretical and practical concepts of the VG region, encouraging them to increase the use and applicability of theoretical concepts in their fields of work, sensitizing them based in theoretical concepts explained by the current literature, because lifelong learning is of great importance for professionals who are directly involved in the execution of the procedure, favoring a better quality of care provided, because there is need for nurses to work towards the full, to having frequent interaction with the population and patients, offering alternatives to collaborate with their recovery effectively.

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