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Habilidades quirúrgicas del interno vertical de Cirugía General. Retos actuales
Surgical Skills of the Vertical Intern of General Surgery. Current Challenges

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Resumen

El internado vertical representa una opción para el ingreso pre profesional de aquellos estudiantes que durante la carrera se han desempeñado como alumnos ayudantes de perfil quirúrgico y que optarán por la especialidad de Cirugía General. A pesar de los avances en esta dirección se revelan brechas en la apropiación de las habilidades, así como de los referentes teóricos que fundamentan las habilidades quirúrgicas en el interno. Lo anterior justifica el artículo descriptivo referativo con el objetivo de sistematizar los referentes teóricos en el contexto local de la problemática, partiendo del análisis documental, las entrevistas y encuestas, concluyendo que en las mismas constituye la base teórica pedagógica que propugna el proceso de formación del interno vertical.

Palabras clave: Habilidades quirúrgicas; Cirugía general; Interno vertical; Referentes teóricos.

Summary

The vertical internship represents an option for the pre-professional entry of those students who have worked as assistants with a surgical profile during their career and who will opt for the specialty of General Surgery. In spite of the advances in this direction, gaps are revealed in the appropriation of the skills, as well as of the theoretical references that support the surgical skills of the intern. The above justifies the descriptive referative article with the objective of systematizing the theoretical referents in the local context of the problem, starting from the documentary analysis, interviews and surveys, concluding that they constitute the pedagogical theoretical basis that support the training process of the vertical intern.
Key words: Surgical skills; General surgery; Vertical intern; Theoretical References

Introduction

The training process of physicians and specialists that is developed in the Cuban context is characterized by a broad profile model that has the characteristics of the profession, deep basic theoretical and practical knowledge, in current general surgery, which responds to the current needs and problems of the health system and Cuban society; which in turn, allow them to act and practice in any national and international surgical context and access to other specialization programs in postgraduate studies, expanding their competence.

From the above perspective, the vertical internship is projected as a training modality in General Surgery from the 6th year of the medical career. The vertical internship in Surgery represents an option for the pre-professional practice of those students who have worked as surgical assistants during their career and who will opt for the specialty of General Surgery.

In this order, the development of skills of the vertical intern, requires a constant inclusion and assumption of the tools of pedagogical sciences to achieve their goals, from the above it is inferred that in the training of this professional the various organizational forms of teaching and learning used in undergraduate training are taken into account, emphasizing the development of independence and creativity in different care scenarios.

The formation and development of skills are an inseparable part of the components of the cognitive processes, in close relation to the contents, which constitute elements that strengthen and condition the actions to be taken into account for the development of learning development, based on the priorities determined by the objectives.

The aforementioned also shows that skills are as much a part of the content as knowledge and values. Ability is synonymous with know-how. It enables the individual to perform a given task. Thus, in the course of the activity, the student appropriates not only a system of methods and procedures that can be applied, but also begins to master actions, learns to perform them in an increasingly perfect way, relying on the means he possesses and the experience acquired (López López, 1990:2,3).

"The skills are part of the content of a discipline, they characterize, at the didactic level, the actions that the student performs when interacting with the object of study in order to transform it, to humanize it". C. Alvarez (1996)

In this sense, the above derives a more comprehensive approach to the professional skills category itself, which is nothing more than: The type of skill that throughout the training process of the professional should be systematized until it becomes a skill with a degree of generality such that it allows him/her to apply knowledge, act and transform his/her object of work, and therefore solve the most general and frequent problems that arise in the different spheres of action, that is, the professional problems the latter including those related to surgical skills.

Professional skills in the context of general surgery is an all-encompassing category in the full extent of the word, in this order, the care sphere specifies that surgical skills are the most encompassing core in the area of surgery, on the other hand, the care, research activities and managerial or administrative complement and interact with the core of the practice of the profession.

Despite the above, there is insufficient knowledge of the theoretical references that support the development of surgical skills in the vertical internship of General Surgery in the local context.

The previous epistemic gap opened the opportunity to take advantage of all the sources of information, documentary analysis, interviews, surveys and the author's experience, whose objective was to systematize the historical background and the theoretical references that respond to the current problems in the Dr. Agostinho Neto General Teaching Hospital. The article will serve as a theoretical reference in the local teaching context, as a basis for the development of future research related to the subject.

Development

Historical background of the development of surgical skills of the vertical inmate in Guantanamo Bay

The historical background of the vertical internship in General Surgery has had a transcendence based on conditions and the historical context in which it has been developed in our country. In this same order, the contributions made by means of interviews and surveys to protagonists of the training process of the vertical internship in Surgery and the testimonies given by these doctors who are still alive (Four, 2023; Piriz, 2023; Santell, 2023;) were of inestimable value.

This allowed us to perform an analysis from a historical perspective characterizing the development of professional skills in the vertical surgery internship by stage and identifying the following indicators

Stages:

I-First stage (1959-1970)

II- Second stage (1970-1990)

III-Third stage (1990 -2019)

Indicators:

1. Curricular conception in terms of surgical skills 2.

2. Forms used for the development and integration of skills.

I-First stage (1959-1970) In the early years, there was no talk about the training of specialists from a vertical internship program until (1962), when the need was defined for the medical curriculum to provide more practical skills, so it was agreed that the last year of the career was an internship in the rotatory modalities. On the other hand, in Guantanamo, the first steps were taken for the training of surgeons with the arrival at this stage of Dr. Paulino Enrique Four Rodriguez, who graduated as a doctor at the University of Medicine of Havana in (1962), and then began his studies as a surgeon at the nowadays Hospital Provincial Clínico Quirúrgico Docente "Saturnino de la Habana". Paulino Enrique Four Rodríguez, who graduated as a physician from the University of Medicine of Havana in 1962, and who later began his studies as a surgeon at what is today the "Saturnino Lora" Provincial Clinical and Surgical Teaching Hospital in Santiago de Cuba, graduating in 1970, and joining the hospital together with Dr. Pedro Urgellés. Pedro Urgellés. In 1975, Dr. Ángel Piriz Momblant, the first surgeon from Guantanamo to graduate after the Triumph of the Revolution, arrived at the Pedro Agustín Pérez Hospital and finished his studies as a surgeon in 1969. At this time, the system of skills that an intern who aspired to be accepted to study the specialty of surgery was not conceived.

In summary, it is revealed as the main regularity of this stage the lack in the determination and theoretical treatment of a system of skills proper of an intern, due to the fact that there was no conception for the formation as a vertical intern in the specialty of General Surgery.

II- Second stage (1970-1990)

With the foundation of the general surgery service, a teaching formation begins, taking advantage of the arrival from Santiago de Cuba of the first specialists already trained in the vertical internship modality, these are Amado Rodriguez and Jorge Clovis Leghen Cardoza. In this year, Dr. Félix Bárbaro Santell Odio was incorporated as a first degree specialist, directly from the vertical internship (1975-1976), trained at the Saturnino Lora Hospital.

The interviews revealed that at this stage the training of General Surgery was distinguished by iron discipline, there was no vertical intern training program that declared the curricular model of the vertical intern, as well as there were no skills, declared.

Consequently, students interested in this specialty were maintained by systematically attending medical guards from the first year of the medical career, but without a program, it is alleged that the entrance to the specialty of surgery was very selective; students who were not endorsed by the services did not enter.

In this stage the development of professional skills was not staggered, but the intern was acquiring surgical skills at the same time as the residents, he/she was appropriating the systematized in the on-call deliveries, in the discussions of cases in the radiological clinics, but he/she did not really have a regulated number of surgeries he/she had to attend. However, although the intern was not yet capable of acting as main surgeon, he/she was responsible, as well as the residents, for the attention to patients, on-call deliveries and minor surgeries.

III-Third stage (1990 -2019).

This stage was characterized by the technological development achieved in the surgical sciences, which requires such a teaching and scientific development that would favor the training of vertical interns, from a program during the nineties there was a period of plateau or deactivation of the vertical internship, in which the interns performed social service in the offices of the family doctor, in the mountains and once their social service was completed, they joined their specialty. In 2015, the vertical internship program was restarted in the 5th year of the medical career. The Ministry of Public Health exposes the first vertical internship program itself that declares a program for 5th year students who have served as student assistants in the specialty of general surgery, this time the program model

requires a classroom mode, the program was structured in several modules from the generalities of surgery to the diagnosis and surgical treatment of surgical emergencies and abdominal wall hernias.

The development of surgical skills was very early because the verticals had to have a skills card in which they had to complete the performance of minor ambulatory surgeries major urgent and the module of wall hernias, in addition could develop during the internship the modules of research methodology, English as part of the curricular training the state exam culminated the period of vertical internship.

In the course (2020), with the impact of the coronavirus 19 pandemic, an element that constituted a triggering variable for the modification of the vertical internship program from its revision to its implementation. The program conceived for 44 weeks the 1954 hours of initially face-to-face form within the declared skills are based on the model of the graduate of the career of medicine applied to the vertical particular in the areas of acute abdomen, trauma and patients with elective surgical pathologies.

Therefore, the University of Medical Sciences of Guantanamo and the General Teaching Hospital Agostinho Neto are not exempt from the transformations in the formation of the skills of the vertical interns, who have the option of being admitted in a semi-presential way, joining one week daily to the surgery service with their tutor to develop the skills stated in the program, at the same time that they perform their rotating internship.

Theoretical references that support the development of surgical skills in the vertical internship of Surgery

From the didactic point of view, as a component of the content, it characterizes the actions that the student performs when interacting with his object of study and, allows to achieve a developmental teaching, which does not depend on the performance of additional activities, in class or out of it, but, demands an adequate preparation of the teacher and structuring of the teaching-learning process, which does not deny the support of complementary activities, but prioritizes the quality of the teaching-learning process.

The formation of skills implies the mastery of actions, and occurs as a result of the systematization of such actions subordinated to conscious objectives. In this process it is necessary to structure the steps to follow from the pedagogical point of view, in correspondence with the characteristics of the action so that it can become a skill, so the stage that comprises the conscious acquisition of the ways of acting is called skill formation, when under the direction of the teacher or professor, the student receives the

appropriate guidance on how to proceed. This stage is fundamental to guarantee the correct formation of the skill.

In the development of the skill, it refers to the fact that once the modes of action have been acquired, the process of exercising or using the newly formed skill begins, to the necessary extent and with adequate frequency, continuously perfecting itself, so that it becomes increasingly feasible to reproduce or apply and errors are eliminated.

By ensuring sufficient practice, it is said that the skill is developed and, in a sufficient and varied period of practice, indicators such as: the speed and correctness with which the action is performed appear. It is a requirement of the skill development stage to know how many times, how often, how often, and very importantly, in what form.

The exercise needs to be sufficient and diversified, that is to say, varied exercises to avoid the routine of the exercise that is presented. Besides taking into account that mistakes nullify learning, "eliminate" thinking, reflection, intelligent behavior" (Lopez, 1990, pp.2,3).

The analysis of the previous definitions allowed him to reach the conclusion that the surgical skills to be developed by the student who goes through the vertical internship training in General Surgery are defined as the set of actions that students develop in the medical-surgical field for the systematic and practical appropriation of procedures.

The scientific and technical training of the physician is based on ethical principles and on a philosophy that permeates the particular way of humanistic exercise that is manifested in his personal and professional performance.

In this sense, skill responds to the different criteria assumed by different authors: skill is the ability to do well, easily and quickly something that is difficult for others, and skillful is the person who has the ability to do things easily and well done. The above definition is the one provided by the dictionary of the Spanish language, which outlines the etymological sense only, but does not define the concept as an action or as a philosophical activity. RAE (2014)

Taking into account the above, Alvarez considers that "The skills, part of the content of a discipline, characterize, at the didactic level, the actions that the student performs when interacting with the object of study in order to transform it, to humanize it". In this case the author makes known only a disciplinary concept, but without assuming the same in a humanistic order of activity, for the purposes of the above it is undeniable that the relationship between skill and action is the subject of theoretical disquisition among psychologists and pedagogues (1996, p. 43).

Skills in a more comprehensive order are applied to all branches of the sciences and arts in this sense it is necessary to expose the conceptual typologies of skills: Specific skills (linked to a branch of culture or profession). They constitute the type of skill that the subject develops in his interaction with an object of study or concrete work and that, in the process of teaching and learning, once they are sufficiently systematized and generalized, they are concretized in methods proper to the different objects of culture that are configured as content:

Logical skills: These are the ones that allow man to assimilate, understand and construct knowledge. They are closely related to the fundamental processes of thought, such as analysis, synthesis, abstraction, concretion and generalization.

They are developed through skills such as diagnosing and urgent surgical conditions, comprehensive assessment of comorbidities associated with preoperative patients undergoing emergency and elective surgery, surgical treatment of abdominal wall hernias, which in the context are at the basis of the development of the rest of the skills and in general of all cognitive activity of man. Information processing and communication skills: These are the skills that allow man to process information, and include those that allow obtaining information and reworking information. Here we include those skills inherent to the teaching process, such as taking notes, making abstracts, as well as presenting knowledge both in writing and orally.

The formation of knowledge and skills in students is a privileged part of the purposes and conceptions of the different educational models for any level of education; however, the selection of these, their organization, sequencing and the strategies followed by teachers to achieve such learning vary depending on their experiences and the characteristics of the students, the type of subject and the objectives they pursue.

The dimension of the content that shows the behavior of man in a branch of knowledge proper to the culture of humanity, is from the psychological point of view the system of actions and operations dominated by the subject that responds to an objective: Mode of interaction of the subject with the objective, is the content of the actions that the subject performs, integrated by a set of operations that have an objective and that are assimilated in the process itself" (Alvarez, 1999,. 6).

By admitting the acquisition of the skill and its application in an activity that demands from the learner the use of his psychic and practical actions, as well as his knowledge and habits to reach the level of independence that qualitatively elevates him in his professional mode of action in his future profession. According to López 's criteria, "Skills are formed, developed and, in short, are those that enable

students to assimilate and use knowledge better and, what is even more important, prepare them to face new information, search for the necessary information and acquire new knowledge on their own" (López, 1990, p.4).

In these definitions of skills given by different authors, from psychological or pedagogical points of view, points of contact can be appreciated that indicate that when approaching the term skill, these elements must be present:

- Ability implies mastery of the forms of cognitive activity.
- The relationship of this with the actions and operations.
- On the basis of acquired knowledge and habits.
- Its manifestation both in theory and in practice.
- Aimed to an objective.
- Skill is knowledge in action.
- Action arises through operations, which are procedures subordinated to tasks.
- Skill is developed in activity.

The systematization of operations allows the development of skills; their mastery allows a conscious regulation of the activity.

The formation and development of skills are an indissoluble part of the components of the cognitive processes, in close relation to the contents, which constitute elements that strengthen and condition the actions to be taken into account for the development of developmental learning, based on the priorities determined by the objectives.

Current status of surgical skills development of the vertical intern in General Surgery

The current state of teaching in surgery in the local context is presented after having carried out a characterization of the professors working in the discipline of general surgery.

The characterization of the professors working in the discipline of general surgery, different empirical instruments were applied, such as: interviews and surveys to professors, documentary analysis of the methodological work plans, subject collectives, as well as the criteria of the researcher as assistant professor of the discipline of General Surgery.

Doctors specializing in General Surgery, who work in the discipline of General Surgery with greater experience and teaching category. Of the total, 6 have the teaching category of Assistant Professor, of the latter 4 and 5 of them specialists in 2nd degree of General Surgery with special category of

consultants, 5 of Assistant and 7 Instructors; 2 without teaching category but who have in common that they work with the vertical interns who all have more than 5 years of experience working in the discipline.

Table 1 shows the teaching categories of the professors. Of the total number of professors surveyed with a teaching category, 35% are instructors, 25% are assistants, 30% are assistants and 10% are not categorized.

Table1. Teaching categories of the professors of the Department of General Surgery

Categorías docentes	Cantidad	%
Instructor	**7**	**35**
Asistente	**5**	**25**
Auxiliar	**6**	**30**
Titular	**-**	**-**
No categorizados	**2**	**10**
Total	**20**	**100**

Fuente: Elaboración propia

Cuestionario a profesores de la disciplina Cirugía General n=20

Cuadro 2.

Años de experiencia	Cantidad	%
Menos de 1	**2**	**10**
De 1 – 3	**4**	**20**
De 4 – 5.	**1**	**5**
6 o más	**14**	**70**
Total	**20**	**100**

Teachers surveyed according to years of teaching experience

Source: Own elaboration

Questionnaire to professors of the discipline General Surgery n=20

In the current context the surgical skills that are stimulated by the teachers since the student knows that he/she is going to be programmed in the operating room, he/she must perform the theoretical review of the surgical techniques, as well as the review of the surgical instruments to be used.

Another element to be taken into account are the handicrafts to be developed by the vertical intern, from the grasping of the forceps, the mastery and systematic practice of the types of surgical knots, organization of the instruments, an element that should be inculcated in the practice with the teachers, not only in the operating room, but should become a daily practice in any scenario.

On the other hand, other skills should be appropriated during this period, such as: dissection of tissues and anatomical structures, as well as mastery of surgical anatomy, incision and drainage of abscesses, appendectomy technique, minimal thoracic drainage, dissection of veins, among others.

In spite of the above, the development of skills still finds limitations in the current and local context, the decrease of programmed surgery in the local context; which limits the number of practical teaching scenarios; in the teaching order, the planning of the teaching-learning process and the distribution of time according to the productivity of the teaching activity, the verification of previous knowledge, students' experiences.

Establishing links between the known and the unknown, ensuring the preconditions, motivation and willingness to learn on the part of the students so that the content acquires meaning and personal significance for the student.

Conclusions

The above reveals that even with the systematized there is still much to be done in order to solve the limitations found in the process of surgical skills development in the vertical internship of General Surgery in Guantanamo. The pedagogical theoretical basis that advocate the training process of the vertical intern of the current state concludes encouraging results reveal that there are still gaps that give way to the continuity of the research and give solution to the limitations found in the process of development of surgical skills in the vertical intern of General Surgery in Guantanamo.

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