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PREVALENCE OF SURGERY IN ELDERLY

PREVALÊNCIA DE CIRURGIAS EM IDOSOS

PREVALENCIA DE CIRUGÍA EN ANCIANOS

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ABSTRACT

Objective: to estimate the prevalence of surgeries in the elderly. **Method:** cross-sectional, hospital-based study, made up of maps of surgical procedures. Data was collected using an instrument containing age, gender and type of surgery. **Results:** The sample consisted of 723 surgeries. The mean age was 71.51 years, of which 374 (51.7%) were male and 349 (48.3%), were female. The most prevalent surgeries were: resection of basal cell cancer (18%), revascularizations (7.5%) and colicystectomy (6.2%). **Conclusion:** most surgeries in this population result from exposure to predictable risk factors, which makes care planning and research critical, focusing on prevention and health promotion. **Descriptors:** Elderly; Surgery; Prevalence; Nursing.

RESUMO

Objetivo: estimar a prevalência de cirurgias em idosos. **Método:** estudo transversal, de base hospitalar, constituído a partir dos mapas de procedimentos cirúrgicos. Para a coleta de dados, utilizou-se instrumento contendo idade, sexo e tipo de cirurgia. **Resultados:** a amostra foi composta por 723 cirurgias. A média de idade foi de 71,51 anos, sendo que 374 (51,7%) eram idosos do sexo masculino e 349 (48,3%), do sexo feminino. As cirurgias com maior prevalência foram: ressecção de câncer basocelular (18%), revascularizações (7,5%) e colicistectomia (6,2%). **Conclusão:** grande parte das cirurgias nesta população é consequência de exposição a fatores de risco previsíveis, o que torna fundamental o planejamento do cuidado e pesquisas com foco na prevenção e promoção da saúde. **Descritores:** Idoso; Cirurgia; Prevalência; Enfermagem.

RESUMEN

Objetivo: estimar la prevalencia de cirugías en ancianos. **Método:** estudio transversal, de base hospitalaria, constituido a partir de los mapas de procedimiento quirúrgico. Para la coleta de datos, se utilizó instrumento conteniendo edad, sexo y el tipo de cirugía. **Resultados:** la muestra fue composta por 723 cirugías. La media de edad fue 71,51 años, siendo que 374 (51,7%) eran ancianos de sexo masculino y 349 (48,3%) del sexo femenino. Las cirugías con mayor prevalencia fueron: resección de cáncer baso-celular (18%), revascularizaciones (7,5%) y colicistectomia (6,2%). **Conclusión:** gran parte de las cirugías en esta población es consecuencia de exposición a factores de riesgo previsibles. Lo que torna fundamental el planeamiento del cuidado y investigaciones, con el foco en la prevención y promoción de la salud. **Descriptores:** Ancianos; Cirugía; Prevalencia; Enfermería.

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INTRODUCTION

The aging of the world population has been widely discussed in the scientific community in recent decades, since the combined effect of reducing fertility and mortality levels in Brazil has produced changes in the population age pattern. According to the census of the Brazilian Institute of Geography and Statistics (IBGE), in 2010, the contingent with 60 years or more is 20,590,599 elderly people, representing 10.8% of the general population. By 2050, the elderly population will surpass 22.7%, growth that will put the country in this millennium as the sixth largest population of older people in the world.¹⁻³

Brazil is moving rapidly towards an increasingly aging demographic profile, a phenomenon that will undoubtedly imply the need to adapt social policies, particularly those aimed at meeting the growing demands in health, welfare and social assistance.¹

With the perceptible process of demographic-epidemiological transition, the growing technological evolution in health care and economic development in the country, the disease profile of the Brazilian population has been changing. The increase in the number of elderly people has led to a greater burden of diseases, especially chronic noncommunicable diseases (CNCDs). In 2007 alone, approximately 72% of deaths in Brazil were attributed to CNCDs, among them, cardiovascular diseases, chronic respiratory diseases, diabetes, cancer, kidney diseases, among others, being considered the main causes of hospital admissions.⁴

The World Health Organization (WHO) report shows that a considerable share of worldwide disease-related disabilities will be treatable by surgical procedures.⁵ It is estimated that 31 million people undergo surgical procedures annually for malignancy.

In Brazil, data from the Department of Informatics of the Unified Health System (DATAUHS) show that approximately 5,685,456 hospital admissions were performed in the first half of 2013, according to the records of issuance of Hospital Inpatient Authorization (HIA). Of these, approximately 2,146,644 (37.76%) are earmarked for surgical procedures, financed in 1,865,910 (87%) of cases by high and medium complexity services accredited by the Unified Health System (UHS).⁶ However, it is not possible to highlight, among this data, the total values of surgical procedures, by age group, that characterize the elderly population submitted to surgeries.

The significant growth of surgical procedures is related to the increase in life expectancy, as well as to the modernization of surgical medicine. It is estimated that about 234 million surgeries will be performed annually in the global context, as longevity increases. Given this scenario, surgery becomes a worldwide concern, affecting public policies, as well as the safety of the surgical patient.⁷

The surgery is a complex procedure that implies in alteration of several physiological mechanisms, contact with medicines and materials that can be harmful to the organism and, still, imposes a great organic stress. Need intensive care, to preserve good patient recovery.⁸

When assessing the possibility of a surgical procedure, it is important to consider not only the chronological age, which, often, does not correspond to the functional age, but also the physiological changes and clinical conditions that each individual presents. Although the risks of complications are increased in elderly patients, individuals with 70 years of age or older may present in their evaluation a better functional reserve than others of lesser age.⁹

Surgical care, in general, provided to adult individuals, does not differ in elderly patients, however, specific body and emotional adaptations are necessary for this population. In this sense, it is understood that aging brings changes in the main organic functions, such as pulmonary, cardiovascular, renal and central nervous system. Thus, comprehensive care for elderly patients submitted to surgery, particularly those requiring emergency surgery, requires an important analysis of the physical capacity and specific risks of this phase of life, in order to reduce risks that become high in this group.⁸

When planning care for the elderly, it is essential that the healthcare team, responsible for care, should be aware not only of the physiological changes in the elderly population, but also of the main surgical procedures to which this population is submitted. This second point is not immutable, otherwise, it varies according to the particular characteristics of each region and, especially, of the specialties that are references of each hospital institution.

In order to investigate facts that have not yet been explored, the study aims to fill the gaps in knowledge related to the topic in question, to contribute to the recognition of a local reality and to discuss health education and care for the elderly. Rethinking the health process, focusing on health promotion and disease prevention, investing in quality of life

and contributing to a healthy aging.

Thus, it is believed that it is necessary to increase the knowledge about the elderly patients submitted to surgeries, implementing measures aimed at this population that collaborate in the prevention and control of the most prevalent diseases in the geriatric population.

OBJECTIVE

- To estimate the prevalence of surgeries in the elderly.

METHOD

Cross-sectional, hospital-based study, based on surgical procedures maps. The study was carried out in a University Hospital, located in the southern region of Brazil, where care is given exclusively by UHS.

The hospital is a state reference in complex pathologies and large surgeries, with capacity for 270 beds distributed in: medical, surgical, gynecological, pediatric, intensive care unit, emergency, maternity, as well as the services of dialysis, radiology, Hemodynamics, surgical center, general and specialized outpatient clinic.

Surgeries performed at the surgical center, were used as inclusion criteria in patients aged 60 years and over, of both sexes, performed from January to December 2013.

Data collection was done manually, in files of surgical maps available in the surgical

center, between June and July 2014, and a total of 252 maps were analyzed. To record the data, an instrument with information about the date of surgery, age and gender of the patient and surgical procedure was used. The data was organized and stored in a Microsoft Office Excel® database. Subsequently, analyzed using Excel's the statistical program, with univariate statistical analysis.

The research was initiated only after the institution's acquiescence, taking into account the ethical aspects recommended in Resolution 466/12, of the National Research Council.

RESULTS

During the year 2013, a total of 3,270 surgical procedures were performed, of which 723 (22.1%) occurred in the elderly population. The mean age of these patients was 71.51 years, of which 374 (51.7%) were male and 349 (48.3%), were female.

Regarding the surgical specialty and the types of procedures performed in this population, the most prevalent interventions were identified, according to table 1.

Table 1. Procedures performed at the University Hospital. Florianópolis (SC), Brazil, 2013.

Specialty	n	Percentage	Intervention
Curative / restorative plastic surgery	184	25.5%	1 - Resection - cancer of the basal cell / head and neck region / upper limbs - (130) = 70.6% 2 - Blephroplasty - (14) = 7.6% 3-Squamous cell carcinoma - (11) = 6% 4- Other (29) = 15.8%
General surgery	182	25.2%	1-Laparoscopic Video Colicystectomy - (45) = 25.6% 2 - Hernioplasty - (39) = 22.1% 3 - ERCP (35) = 19.9% 4 - Gastrectomy- (24) = 13.2% 5. Other (39) = 22.2%
Vascular surgery	130	18%	1 - Revascularizations (aortic endoprosteses and bypass femoro-popliteo) - (54) = 43.2% 2 - Lower limb angioplasty- (24) = 19.3% 3 - Lower limb amputation (20) = 15.4% 4-Endarterectomy (18) = 14.4% 5 - Other - (10) = 7.7%
Urological Surgery	53	7.3 %	1- Transrectal urethral bladder resection - (21) = 39.6% 2- Nephrectomy - (10) = 18.8% 3 - Transrectal urethral resection of prostate - (4) = 7.5% 3 - Other - (18) = 34.1%
Other procedures	174	24 %	
Total	723		

N= Number of patients

In the variable "other procedures", described in table 1, we quote: 38 proctology specialty procedures, of which 27 are operations of Retanosigmoidectomy; 37 of the gynecology specialty of these, with 26 hysterectomy surgeries; 33 mastectomy procedures, being 20 mastectomy surgeries; 33 of the specialty head and neck, being 11 surgeries of thyroidectomy; 15 pulmonology procedures; 11, oncology; six of gastrology and one of ophthalmology.

Regarding the most prevalent surgical specialties, we highlight the curative and restorative plastic surgery, with 25.5%. With lower prevalence, the interventions related to head and neck surgery, proctology, gynecology, oncology, pneumology, gastric, bucomaxil and neurological.

DISCUSSION

Concomitant to the aging population, also increase the index of surgical procedures in this age group, constituting an alert for the need for a reorganization of the health system. This population requires challenging care, due to the chronic diseases they present and age-related dysfunction.¹⁰

In this study, despite a small difference between the sexes, a greater number of elderly men were submitted to surgical interventions. This data is in line with population demographic indices in Brazil, which show that the elderly men are at higher risk of becoming ill and dying in relation to the female sex, with women presenting a life expectancy of ten years longer than men.¹¹ In a study carried out in a hospital in the state of São Paulo, 445 (61%) of the 728 medical records were male and 283 (39%) female,¹² corroborating with The data of this study.

The number of surgical procedures in the elderly is growing, especially, in heart, orthopedic and vascular diseases. However, there is reluctance to recommend aggressive interventions for malignant conditions. According to the authors, oncological operations are postponed in elderly patients, due to higher morbidity and mortality,¹³ confronting this research that identifies, among the four most performed surgical interventions in the period, the highest percentage is in curative and restorative plastic surgeries.

It is important to note that the 25.5% of the surgeries performed in this period are mostly plastic surgery procedures, and that the surgical interventions performed by this specialty aim at healing the disease. On the other hand, aesthetic reconstruction is necessary for Reestablish functionality, as

well as to improve patient self-esteem. Regarding this data, the Ministry of Health, demonstrating concern for the health of the Brazilian population and supporting laws for a better quality of life, on April 24, 2013, sanctioned Law No. 12,802, regarding the breast repairing plastic that gives women the right to reconstructive plastic surgery, at the same time as the surgical intervention oncology. "In the event of immediate reconstruction, the patient will be referred for follow-up and will be guaranteed to perform the surgery immediately after reaching the required clinical conditions."¹⁴

Another highlight of the quantitative specialty of plastic surgery presented in this study refers to surgeries for the removal of cutaneous cancer involving the face, head and neck region. According to the National Cancer Institute (NCI), skin cancer is the most frequent in Brazil and accounts for about 25% of malignant tumors registered in the country. Melanoma is regarded as the most aggressive, because it has high metastatic power. The estimate of NCI in 2012 was 6,230 new cases. On the other hand, the death estimate is of 1,507 cases, being the man most affected by this prognosis. These numbers frighten because the data point to Santa Catarina as the State with the highest incidence of skin cancer, which, in absolute numbers, represents 250 new cases per year in a population of 100 thousand.¹⁵

Tangent to the causality of these findings, two important factors stand out: the habit of tanning often, without adequate sun protection, added to the physical characteristics more encountered, such as blue eyes, skin and light hair, may have contributed to the results Cited above. Despite the reported risks of excessive exposure to solar radiation and practices aimed at protecting the skin, the custom of intentionally exposing oneself to the sun prevails.¹⁶

The incidence of skin cancer is proportionally related to the decrease in latitude, with ultraviolet (UV) radiation being a factor predisposing mainly to: squamous cell carcinomas, basal cell carcinoma, and cutaneous melanoma. The skin region most affected by squamous cell carcinoma is 19 times more prevalent in the head than in the trunk. Already for basal cell carcinoma is seven times, and cutaneous melanoma is 0.9 to 1.3, times.¹⁷

In this sense, it is important to emphasize that the institution under study is a reference for plastic surgeries and this needs

to be taken into account in the analysis of the data found.

The prevalence of cholelithiasis increased with age mainly in people between 60-69 years.¹⁸ In this sense, this finding is in accordance with this research, where, despite differing in age limits, videolaparoscopy surgery in the treatment of cholelithiasis presented a Significant index in general surgery in the elderly.

Cholelithiasis in diabetic patients is often related to overweight, hypertriglyceridemia and dietary habits. In addition, elderly people are particularly susceptible to the adverse effects of excess body weight, as a result of decreased muscle mass and strength, which occur with aging.¹⁹ In addition, in patients with a degree of obesity, hypersaturated bile, excessive increase of synthesis and biliary secretion of cholesterol. It highlights the high prevalence of biliary lithiasis in outpatients, particularly those with defined risk factors.¹⁸ The results indicate an urgent need for public health policies, in order to invest in the prevention of injuries, based on the assumption that can be avoidable and curable, with improvements in eating habits and regular physical activity practices.

Most of the research on elderly surgeries found in the literature, deals with myocardial revascularization. In this study, it was realized that 43.2% of the vascular surgeries were from peripheral revascularizations. Peripheral Obstructive Artery Disease (POAD) is characterized by a decrease in blood flow to the lower limbs related to the occlusive process in the arterial beds and its incidence is related to risk factors such as advanced age, gender, systemic arterial hypertension (SAH), diabetes Mellitus (DM), dyslipidemia, elevated triglycerides, smoking, obesity, sedentary lifestyle, family history of vascular diseases and genetic factors. Of these, the authors highlight hypertension, sedentary lifestyle and dyslipidemia in both sexes as modifiable risk factors, highlighting the imperative need for multiprofessional actions both in prevention and in the promotion of the health of these patients.²⁰ Thus, The knowledge regarding the risk factors of the disease is essential for its early diagnosis and appropriate treatment.

The most prevalent surgical procedure in this study was trans-urethral resection of the bladder and prostate, totaling 47.1%. This procedure is related to invasive treatments of cancers, especially prostate cancer. In Brazil, there are few studies regarding urological surgeries and bladder cancers.

However, in a study carried out in Germany, coffee consumption, smoking and hair dyeing were considered as risk factors for bladder cancer,²¹ emphasizing importance Prevention of this disease, including high fluid intake and consumption of fruits and vegetables.

CONCLUSION

Aging is an aspiration of today and potentiates the need to rethink about the sociocultural conditions in which they are inserted, as well as the health practices and public policies of Brazil. The multiple factors of the aging process, linked to social, systemic, behavioral, cognitive and structural issues, interact with the functioning of the aging subject. Added to this, the surgical population increases significantly and, with it, the appearance of comorbidities.

Based on the results of the main surgical procedures of this research, these are related to predictable risk factors, such as excessive exposure to the sun, inadequate diet, physical inactivity and stress. It is pointed out the need of the multidisciplinary team to include, in the care of the elderly population, the focus on disease prevention and health promotion. With the early planning, there is a greater chance of achieving longevity, with quality and pretension, to achieve a true active aging.

The importance of the multiplication of new researches involving the elderly population and the surgical procedures in different realities, is emphasized. In order to constitute a solid body of knowledge on this subject, which will allow a greater reflection.

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