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Outpatient Care and Short Hospitalization for the Elderly Patient with Inguinal Hernia

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Abstract

Introduction: The surgery of hernial disease of abdominal wall and especially of the inguinofemoral hernia has increase but in fact its prevalence is unknown. The objective of present study was to assess the result of surgical treatment of the inguinofemoral region hernia in third-age patients seen in the "Dr. Enrique Cabrera" Teaching General Hospital.

Materials and Methods: A study was conducted in 2,186 third-age patients operated on of inguinofemoral hernia from January, 2000 to December, 2020 in the above mentioned hospital. In all cases patients had the alternative to be operated on in ambulatory way or with a short hospital stay. Also, were included the patients operated on as an urgency. From the patients operated on in an elective way were excluded those suffering of associated, cardiopulmonary or thromboembolic ASA-III type diseases (classification of the American Society of Anesthesiology).

Results: The great incidence of the inguinal hernia was found in ages from 60 to 69 years (59.3%). The indirect right inguinal hernia was the more frequent. The Desarda's anatomical surgical technique was the more applied one in the inguinal hernia and the Lichtenstein's prosthetic technique with the 32% was the following in frequency. There were 20 relapses (0.9%). Local anesthesia was applied in the 75.4% of patients, in ambulatory way in the 76.4%. The total of complications was of 78 (7.1%).

Conclusion: The surgical treatment of inguinofemoral hernias, ambulatory or with a short hospital stay is a suitable procedure in third-age patients since to increase the comfort of patients, to decrease the hospital infection risk, to reduce the waiting lists and the hospital costs.

Keywords: Inguinal hernia; Ambulatory treatment; Elderly patients

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Introduction

Old age is a natural process that begins at birth. For many is a disease and conceive it as the conclusion of the useful life, forced retirement and the loss of physical functions and mental. This concept is only valid for those who is treated their health with excesses of drinks, food or cigarettes and have been sedentary. In Cuba, the increase in the health levels of the population has achieved life expectancy of 78 years for the women and for men [1]. Every time our population achieves a greater possibility of life and with it appears the risk of suffer from numerous diseases, whose only form of Curative treatment is surgery and these should not be deprived sick of the benefit of this. Age as such cannot and should not be a surgical contraindication. Surgery for the disease hernia of the abdominal wall and especially the hernia inguinofemoral has undergone an increase, but in reality its prevalence is unknown. However, taking into consideration different parameters, it is concluded that said prevalence fluctuates between 10 and 15% of the population, with an age variation: It is 8% in the group of patients between 25 and 40 years and 45% in patients older than 75 years [1-3]. This study presents the accumulated experience in the Hospital General Teaching «Enrique Cabrera», regarding the treatment of elderly patients, cared for since January 2000 until December 2020.

Materials and Methods

An observational, descriptive and retrospective study was carried out in 2,186 elderly patients, operated on for inguinofemoral hernia, in the period from January 2000 to December 2020, at the «Enrique Cabrera» General Teaching Hospital. All the patients who underwent elective surgery were studied and selected preoperatively in the programming consultation, where the patients sent by the consultations of the basic working groups and in other cases directly from the consultations of the

polyclinics of the area. In all cases, the patient the alternative of being intervened on an outpatient basis or with short stay. Also included were patients operated on for urgency. Some of the selection criteria that were taken into account in electively operated patients were: No coexistence of associated systemic diseases, cardiopulmonary and thromboembolic events that exceed class ASA-III (American Society of Anesthesiologists); complicated surgical interventions, non-existence of psychological and adaptation obstacles on the part of the patient, domicile located in Havana, among others [4,5]. All the patients were examined in the anesthesia consultation, where performed a surgical risk assessment and, upon completion of the assessment preoperative, received verbal and written instructions on home preoperative. The patients came to the hospital with their companion the same day of the intervention. The type of anesthesia the most used was local, according to the method recommended by Flánagan and Ponka [6-8]. Spinal anesthesia followed, General Endotracheal (ETG) and in a smaller number of patients, analgesia acupuncture. Regarding the operative technique, the criterion is based on the anatomical type of hernia found in the physical examination and that was confirmed during the surgical act, the alterations of the deep inguinal orifice and the state of the fascia transversalis. In general, the most commonly used surgical incisions were transverse, approximately 6 cm, in the inguinal region correspondent. It was observed that prophylaxis was not used with antibiotic in patients operated on a scheduled basis, but yes it was an absolute indication in emergency interventions.

Results

According to the chronological principle of old age, in the first phase, known as maturity, which ranges from 60 to 69 years of age, there were 1298 patients (59.3% of the total). Old age followed (between 70 and 79 years old) with a total of 718 patients (32.8%), the phase of senescence (80 and 89 years) with 144 patients (6.5%) and the longevity (90 years or more) with only 26 patients (1.4%). In the Table 1 shows that the most frequent location of the hernia inguinal was the right side, with 1028 patients for 47% of the total, of which 54.2% were indirect. There were 130 hernias recurrent (5.9%) and 50 femoral hernias that constituted the 2.4% of all hernias. According to Nyhus's classification, there was a total of 958 patients with hernias belonging to types I and II (43.8%), the most frequent in the sample.

Table 2 shows the operative techniques most used in the inguinal hernia. Non-prosthetic techniques were applied in 1,454 of the 2,136 inguinal hernias operated and of these the one that was performed the most was the Modified Mohan P. Desarda technique (450 patients; 31.0%). Prosthetic techniques were performed in 682 patients and the most applied was that of Lichtenstein (220 patients; 32.2%). In this table the application of other surgical techniques can be observed in the treatment of this disease. In addition, it shows the total of relapses in both groups of techniques, anatomical and prosthetic.

Table 3 shows the most anesthetic procedures used. Local anesthesia was applied in 1,648 patients (75.4% of the total), followed by spinal or spinal anesthesia in 364 patients (16.6%).

Table 4 shows the hospital stay. Most of the patients (76.4%) were operated on an outpatient basis and only the 2.4% of all patients had a long stay.

Table 5 shows the complications. The morbidity rate Overall it was 6.0% in those over 70 years of age and 2.0% in those who did not exceed this age, and did not register major complications in neither group.

Table 1: Location and classification of hernias.

Locations	No.	%
Right Inguinal Hernia	1028	47.0
Indirect	558	54.3
Direct	470	45.7
Left Inguinal Hernia	978	44.7
Indirect	578	59.1
Direct	400	40.9
Recurrent Inguinal Hernia	130	5.9
Right	40	30.7
Left	90	69.3
Nyhus Classification		
Type I-II	958	43.8
Type IIIa	870	39.7
Type IIIb	178	8.1
Type IIIc	50	2.2
Type IV	130	6.0

Table 2: Relationship between the technique performed and recurrences.

Locations	No.	%
Right Inguinal Hernia	1028	47.0
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Table 3: Anesthetic procedures.

Procedures	No	%
Local Anesthesia	1648	75.4
Spinal Anesthesia	364	16.6
Endotracheal General Anesthesia	58	2.6
Acupuncture Anesthesia	92	4.3
Epidural Anesthesia	16	0.8
Endovenous General Anesthesia	8	0.3
Total	2186	100.0

Discussion

In the research, a predominance of the male sex was observed, which is in correspondence with the literature reviewed [9]. The

Table 4: Hospital stay.

Hospital Stay	No.	%
Ambulatory	1672	76.4
Short Stay	462	21.2
Long Stay	52	2.4
Total	2186	100.0

Table 5: Complications.

	<70 Años n 1298		>70 Años n 888	
Complications	No.	%	No.	%
Surgical site infection	6	0,5	12	1,3
Seroma	6	0,5	11	1,2
Hematoma	3	0,2	5	0,5
Recurrence	5	0,4	15	1,7
Mesh Removal	2	0,1	0	0
Neuralgía	1	0,07	1	0,1
Orchitis	2	0,1	3	0,3
Bradyria	1	0,07	3	0,3
Global Morbilidity	26	2,0	53	6,0

values according to age, they agree with that reported by other authors, in regarding the decrease in incidence at the extremes of life. In the present work, the ages ranged between 60 and 69 years, with an average age of 73 years, which is similar to that reported in the literature reviewed [10]. Right inguinal hernia was the most frequent, as well as the indirect variety on both sides (Table 1), which coincides with what other authors document [11,12]. It is also observed that recurrent inguinal hernia accounted for 5.9% of the patients and femoral hernia by 2.4%, data that are also similar to those found in the literature reviewed [11,12]. The highest number of hernias corresponded to Nyhus variety I and II, with 958 patients and variety III a with 870 patients. Any surgeon who frequently intervenes on patients with herniated the inguinal region knows that there are innumerable techniques described surgical procedures, to which advantages and disadvantages are pointed out, always in search of reducing complications and, above all, to avoid recurrences. There are the so-called classical techniques (anatomical) that repair the defect of the inguinal wall with the own tissues of the patient, and the so-called prosthetic techniques, which use synthetic materials that have had a great development in the last decades, and whose application always carries the same aims than anatomical ones. In this review it was observed that the technique. The most widely used anatomy was that of Mohan P. Desarda Modified, followed by the Zimmerman I technique. It should be noted that since a few years ago a basic working group of our service of surgery applies the anatomical technique of Professor Desarda and has obtained good results. This technique, as the creator of it has pointed out, it has some advantages, among which are its easy learning and execution, available to residents and surgeons not specialized in the treatment of this disease. The technique provides a wall posterior inguinal canal strong, mobile and physiologically active. To the do not use mesh (foreign body) fibrosis is minimal or does not exist, no foreign body rejection and postoperative pain on the fifth day of the operation is less than with the techniques that use prosthesis. The author also points out that it can be done in an ambulatory, with local anesthesia or spinal anesthesia, and lately proposes to use a resorbable suture material and continuously, which results in greater benefit economical and reduces surgical time [13-15]. The technique the most frequent prosthetic in this sample was that of Lichtenstein, and Rutkow-Robbins followed in order. The rest of the techniques are shown in the corresponding table. The most common complication was recurrence (6, 0.8% in patients operated on by techniques prosthetic and 14 (0.9%) in the group of anatomical techniques). The Wound sepsis and bradycardia after local anesthesia occupied the second place. The observed complications do not differ from those found by other authors [12,16,17]. Local anesthesia was the more frequent anesthetic procedure, followed by spinal anesthesia, but other types of anesthesia were also used in a number minor of patients. Like other authors [4,18] we believe that the local anesthesia gives good results and should be applied to all patient who is to be operated on for an inguinofemoral hernia will not complicated, and that age alone should not be a contraindication for its use, as pointed out by Asuar López [18] in this case, outpatient surgeries were more frequent, followed by short-stay and long-stay interventions. The average cost of an elective herniorrhaphy, in a patient hospitalized, is 979.50 in national currency (MN), while for the same operation on an outpatient basis; the cost is 279.06 MN, with a saving in each patient of 700.44 MN. We can affirm that surgical interventions in ambulatory and short-stay patients constituted a high percentage among all elderly patients operated on in the general surgery service of our hospital. The results were good, which is consistent with the literature reviewed.

Conclusion

Surgical treatment of hernias inguinofemoral, on an outpatient basis or with short hospitalization, is an appropriate procedure in elderly patients, since which increases patient comfort, decreases the risk of hospital infection, reduces waiting lists and costs hospitable.

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