

**REFLEX  
HYPERHIDROSIS:  
INCIDENCE, SURGICAL  
LEVEL ADDRESSED AND  
QUALITY OF LIFE AFTER  
THERMO-ABLATION  
SYMPATHECTOMY**

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## INTRODUCTION

“Hyperhidrosis” is the non-physiological condition of temperature regulation, where an amount of sweat is produced beyond homeostatic needs (KANG et al., 2015). Despite being physically harmless, primary or idiopathic diaphoresis, most of the time localized, brings with it psychic, social and professional consequences that are often disabling, with regard to activities such as handling papers, electronic components, wearing light or light clothing, a simple handshake. The medical professional must pay attention to excessive sweating when a symptom occurs, a manifestation of another implicit circumstance whose resolution leads to the cessation of the emitted sweat.

The pathophysiology and still unknown mechanisms of the primary form of the disease restrict its therapy, in most cases, to topical resources and, therefore, do not promote modification of the abnormal thermoregulatory pattern. Although developed primarily for other purposes, sympathectomy, conceived as a definitive therapy for hyperhidrosis, has undergone changes over the years (CAMPOS; KAUFFMAN, 2015; LEÃO, 2001; WOLOSKER et al., 2003) and, being adapted to videoscopic strategies, makes In our time, it is the treatment of choice for the different forms of hyperhidrotic presentation, for immediate, definitive resolution and with anhidrotic results close to 100%. (CAMPOS; KAUFFMAN, 2015; LEÃO et al., 1999; FURIAN, 2004).

As a surgical intervention, it brings with it risks and undesirable aspects even when performed under minimally invasive conditions. Among these, the “reflex” or “compensatory” configuration of hyperhidrosis stands out, a situation where a previously normal site before the procedure modifies its secretory parameter and becomes hyperhidrotic (KANG et al., 2015). Reflex

sweating, in addition to being one of the main late nonconformities of sympathectomy, is the prevailing reason for discontent and regrets regarding the practice (VALLIÈRIS, 2001; FURIAN, 2004; ARAÚJO et al., 2009; WOLOSKER et al., 2003).

Bearing in mind that other negative events can be satisfactorily controlled through rigid methodology and some precautions, special efforts are directed towards means, techniques, materials and guidelines in order to make sympathectomy a surgical procedure as close to ideal as possible, guaranteeing the best possible outcome. -being, inclusion and hope of these individuals.

## GOALS

### GOAL GENERAL

To analyze the development of compensatory/reflex hyperhidrosis in patients operated by sympathectomy in the city of Patos de Minas, correlating it with the approached ganglion, as well as their postoperative quality of life and degree of satisfaction.

### GOALS SPECIFIC

To evaluate the incidence, sex, age, body mass index (BMI) and perspiration site of primary hyperhidrotic patients seeking definitive treatment in the city of Patos de Minas;

To point out the basic motivations of the demand for the definitive treatment of primary hyperhidrosis in patients operated by sympathectomy in the city of Patos de Minas;

To describe the sympathectomy operative techniques used to treat primary hyperhidrotic patients in the city of Patos de Minas;

Describe the surgically addressed lymph node levels for each clinical presentation of the condition;

Relate the manipulated ganglion to the

onset of compensatory hyperhidrosis, its intensity and the new affected site;

To compare the peri and postoperative quality of life of these patients in terms of professional, social and psychological aspects.

## METHODOLOGY

This work was carried out in accordance with the recommendations of the Declaration of Helsinki and Resolution No. 196/96 of the Ministry of Health on research involving human beings and is under analysis by the Research Ethics Committee of the Centro Universitário de Patos de Minas before CAAE number 62456916.3.0000.5549. Furthermore, all the patients contacted agreed to participate in the study, through free and informed consent.

As a descriptive-exploratory study on records of information in medical records and, therefore, retrospective, 41 patients undergoing surgical treatment of primary hyperhidrosis were evaluated, regardless of sex, age and body area involved, but also treated by thoracic sympathectomy with surgical excision by thermo-ablation varying between levels T2, T3 and T4, in different combinations, by a single thoracic surgeon working in two hospitals of the private service in the city of Patos de Minas, from January 2013 to September 2016.

Through the systematic analysis of medical records belonging to the aforementioned services, hyperhidrotic patients operated between those years in the city of Patos de Minas were detected and, through telephone contact, the invitation to participate in this research was formalized, a posteriori to the due dates. clarification.

Upon signing the Free and Informed Consent Term (Appendix A), a research instrument (Appendix B) was applied: a self-administered questionnaire designed by the

authors and equipped with questions (12) about situations in social and personal life before and after the operation, potentially included in the variables “very bad/bad”, “bad/bad”, “indifferent”, “good/well”, “very good/well”, as well as personal data relevant to the investigation, such as anthropometric elements, sex and age group. The veracity of the data was stimulated by the guarantee of confidentiality regarding the non-identification of the interviewees.

Now the evaluation of the incidence of compensatory hyperhidrosis and its link as a result of the surgical level addressed are found as the main purpose of this work, epidemiological (gender, age, profession, birthplace) and social perspectives were jointly explored. The study of information used the *Statistical Package for the Social Sciences 17* (SPSS 17) program, including descriptive statistical analysis of frequency, central tendency and dispersion, and inferential analysis of comparison between domains.

The evaluation of variables such as age group, sex and period of time uses the non-parametric Chi-Square test with a maximum error significance of 5% probability in detecting differences between proportions and assessing the homogeneity of the sample.

*odds ratio and confidence interval of the variables analyzed* were also calculated, using cross-tabulation for comparative investigation of social and individual situations before and after the surgical method. Differences for values corresponding to  $p < 0.05$  were considered significant.

## RESULTS AND DISCUSSION

Between 2013 and September 2016, 78 patients underwent sympathectomy in the city of Patos de Minas (Minas Gerais). Of these, 42 (53.84%) are female and 36 (46.15%) male, as shown in Table 1.

	2013	2014	2015	2016
<b>Female</b>	5	10	17	10
<b>Male</b>	8	16	9	3
<b>Total</b>	13	26	26	13

Table 1 - Number of patients operated on.

Source: Elaborate by the author, 2016.

	Frequency	percentage	Valid percent	cumulative percentage
<b>Valid</b>	Female	24	58.5	58.5
	Male	17	41.5	100.0
	Total	41	100.0	100.0

Table 2 - Sex of contactees.

Source: Elaborate by the author, 2016.

	Frequency	percentage	percentage valid	percentage cumulative
<b>Valid</b>	up to 2 years	34	82.9	82.9
	From 3 to 6 years	7	17.1	100.0
	Total	41	100.0	100.0

Table 3 - Time class of the survey among those contacted.

Source: Elaborate by the author, 2016.

<b>No</b>	<b>Valid</b>	<b>41</b>
	<b>Absent</b>	<b>0</b>
<b>Average</b>		25.71
<b>median</b>		25.00
<b>Standard deviation</b>		7,966
<b>Minimum</b>		14
<b>Maximum</b>		45
<b>percentiles</b>	25	19.00
	50	25.00
	75	33.00

Table 4 - Age of patients contacted.

Source: Elaborate by the author, 2016.

Of the total number of patients, 41 were randomly selected and submitted to the application of the questionnaire (Appendix B), and the exclusion of the remaining 37 patients was due to loss of contact in the late postoperative period.

## **SEX**

Of those contacted, 24 (58.53%) are women and 17 (41.46%) are men, as shows table 2.

The predominance of the female gender is controversial and, at times, discordant in publications on the subject, although most of them report it (WESTPHAL *et al.*, 2011; CARDOSO *et al.*, 2009; NICOLEIT *et al.*, 2009; OLIVEIRA, 20013; ). In the present study, however, even if it does occur, such predominance does not imply a discrepancy, and does not predict, above all, that hyperhidrosis is more frequent in women, since the quantitative production of sweat is independent of anatomical or hormonal issues, despite its content and odor are results of the latter (CALLEWAERT *et al.*, 2013; JAMES *et al.*, 2013). The idea that female dominance results from aesthetic, visual ideologies or greater vulnerability emotional, as mentioned by Campos and Kauffman (2007) is an androcentric assumption and the basis for this finding may derive from a female characteristic common to all pathologies: women seek medical care earlier.

## **YEAR IN ACHIEVEMENT OF PROCEDURE**

Most of the procedures were performed in 2014 and 2015 (33.33% and 33.33%, respectively), however the amount for 2016 reflects only a nine-month installment (Table 3).

Even if small, the sample suggests the popularization of the method, an event inherent not only to sympathectomy, but to all

surgeries using the video technique, given the material advances and specialized training. Higher figures may exist when considering sympathectomy as a therapy for other comorbidities, such as arterial limb ischemia and causalgia.

Among the patients contacted, those operated in the last two years (2016 and 2015) stand out, an element that reproduces the facilitated contact: updated telephone numbers and addresses.

## **AGE**

The mean age of the operated patients was 25.71 years, ranging from a minimum of 14 to a maximum of 45 years, corresponding to a median of 25 years, an outcome similar to that found by Nicoleit *et al* (2009), Westphal (2001) and Fenili (2009). Table 4 shows the data regarding the age of the patients.

The low mean age of the interviewed patients probably reflects a dysfunction that has an early onset, coinciding with the time of exposure to trigger factors, such as stress and social influence (PETERSON, 2012).

## **WEIGHT**

Table 5 shows the classification of patients who responded to the survey in terms of Body Mass Index.

The organization of patients contacted in classes according to the Body Mass Index proposed by the World Health Organization (WHO) does not allow us to infer that overweight or obesity would be the trigger or direct reason for the primary figure of such pathology, even if in a rationale of physiological basis the variable thermal insulation requires corresponding thermal regulation.

But when dealing with post-surgical compensatory results, this assertion was, in this work, especially true, as can be seen in table 6, when obtaining a Pearson correlation coefficient equal to 0.003.

	Frequency		percentage	Valid percent	cumulative percentage
<b>Valid</b>	Under weight	3	7.3	7.3	7.3
	Normal weight	23	56.1	56.1	63.4
	overweight	15	36.6	36.6	100.0
	Total	41	100.0	100.0	

Table 5 - BMI Classification.  
Source: Elaborate by the author, 2016.

			Do you suffer from compensatory /reflex hyperhidrosis? That is: a place that became sweat more after surgery...	
			Yes	No
BMI classification	Under weight	Score	1	two
		% in Rating BMI	33.3%	66.7%
	Normal weight	Score	22	1
		% in Rating BMI	95.7%	4.3%
	overweight	Score	14	1
		% in Rating BMI	93.3%	6.7%
Total	Score	37	4	
	% in Rating BMI	90.2%	9.8%	

Table 6 - BMI Classification \* Do you suffer from compensatory/reflex hyperhidrosis? That is: a site that started to sweat more after the surgery... Cross tabulation.

Source: Elaborate by the author, 2016.

Weight loss as a postoperative therapeutic measure is provided for by the Brazilian Society of Thoracic Surgery (SBCT) in a guideline that proposes complementary therapies to compensatory hyperhidrosis, although it suggests the calculation of body fat percentage as the most appropriate means of defining the nutritional status of the patient. individual (KANG et al., 2015).

### **LOCAL AFFECTED**

The data collection instrument was designed so as not to delimit, even in a multiple-choice format, the initially hyperhidrotic places that gave rise to the search for treatment. That is, multiple points could be reported revealing superiority of the armpits and hands, to the detriment of other sites, with a percentage of 40.5% and 37.8% of cases (Table 7), respectively, information that varies widely in the available literature.

The present study is similar to its equivalents in terms of the interference of age in relation to the location of the affected body (Table 8), since it raises a correlation between these two variables: the palm situation is usually a manifestation inherent to older individuals. young people, which Wolosker and Estevan (2015) found in a recent review.

On the other hand, the mediation of sex in the determination of the hyperhidrotic site primarily, although it is not an element explored in most analyses, made axillary symptoms male (76.5%), while women exhibit phenomena, mostly palmar (79.2%). , in fact, with almost equivalent competition from the axillary location (70.8%), as shown in table 9.

### **LEVEL SURGICAL ADDRESSED**

Regardless of the time elapsed between the years, the sympathectomy procedure by thermo-ablation was performed in a standardized way by the same professional, considering, above all, the recommendations

of the SBCT in its guidelines (KANG et al., 2015). Table 10 at which surgical levels the patients underwent the procedure.

As observed in the previous topic, the joint and bilateral approach of the third and fourth thoracic ganglia demonstrates, once again, the epidemiology of the most affected body areas (armpits and hands). In parallel, more proximal and extensive approaches, including the second thoracic ganglia, were reserved for patients with facial complaints of hyperhidrosis. The low use of single ablation of the fourth thoracic ganglia allows us to infer that, although it was not the objective of the questionnaire, the majority of patients who had palmar hyperhidrosis had it as moderate to severe.

### **INCIDENCE IN HYPERHIDROSIS COMPENSATORY AND CORRELATION WITH ADDRESSED SURGICAL LEVEL**

At the critical point of this study, a percentage of reflex or compensatory hyperhidrosis equal to 90.2% of the operated patients was examined (Table 11).

Of those who reported suffering from reflex or compensatory hyperhidrosis (Table 12), most of the time, moderately (43.9%), according to the classification proposed by the SBCT (KANG et. al, 2009), exceeding the average (80.22 %) of the authors mentioned here.

Therefore, it contradicts the most preferred and conservative surgery (T3 and T4), as shown in table 13, denoting the complex and unknown nature of the physiological essence of this form of hyperhidrosis.

Furthermore, individual perception and the possible distortion of natural sweating processes must be considered as a consequence of the intervention, by means of comparisons between the anhydrous site and surfaces not addressed. In addition, the expected body

	Answers			Percentage of cases
		No	percentage	
Hyperhidrosis site <sup>10</sup>	Hands	28	37.8%	68.3%
	armpits	30	40.5%	73.2%
	Feet	14	18.9%	34.1%
	Face	two	2.7%	4.9%
<b>Total</b>		74	100.0%	180.5%

Table 7 - Location Frequencies.

Source: Elaborate by the author, 2016.

			Primary hyperhidrosis sites		
			Hands	armpits	Feet
Age groups	up to 20 years	Score	9	8	4
		% in Age_Groups	64.3%	57.1%	28.6%
	From 21 to 30 years old	Score	10	12	6
		% in Age_Groups	66.7%	80.0%	40.0%
	more than 30 years	Score	9	10	4
		% in Age_Groups	75.0%	83.3%	33.3%
<b>Total</b>		Score	28	30	14

Table 8 - Cross-tabulation Age Groups and Affected Locations.

Source: Elaborate by the author, 2016.

			Sites of primary hyperhidrosis <sup>10</sup>				Total
			Hands	armpits	Feet	Face	
Sex	Male	Score	9	13	3	1	17
		% in P4	52.9%	76.5%	17.6%	5.9%	
	Female	Score	19	17	11	1	24
		% in P4	79.2%	70.8%	45.8%	4.2%	
<b>Total</b>		Score	28	30	14	two	41

Table 9 - Cross Tab P4\*\$Locations

Source: Elaborate by the author, 2016.

	Frequency		percentage	Valid percent	cumulative percentage
Valid	T3 + T4	35	85.4	85.4	85.4
	T2 + T3 + T4	3	7.3	7.3	92.7
	T4	3	7.3	7.3	100.0
	Total	41	100.0	100.0	

Table 10 - Surgical Level.

Source: Elaborate by the author, 2016.

		Frequency	percentage	Valid percent	cumulative percentage
<b>Valid</b>	Yes	37	90.2	90.2	90.2
	No	4	9.8	9.8	100.0
	Total	41	100.0	100.0	

Table 11 - Do you suffer from compensatory/reflex hyperhidrosis?

Source: Elaborate by the author, 2016.

		Frequency	percentage	Valid percent	cumulative percentage
<b>Valid</b>	Light	10	24.4	26.3	26.3
	moderate	18	43.9	47.4	73.7
	intense	10	24.4	26.3	100
	Total	38	92.7	100	
<b>Absent</b>	System	3	7.3		
<b>Total</b>		41	100		

Table 12 - Compensatory hyperhidrosis classification.

Source: Elaborate by the author, 2016.

		Do you suffer from compensatory/reflex hyperhidrosis? That is: a place that became to sweat more after The surgery...		Total	
		Yes	No		
<b>Surgical Level</b>	T3 + T4	Score	31	4	35
		% in Level Surgical	88.6%	11.4%	100.0%
	T2 + T3 + T4	Score	3	0	3
		% in Level Surgical	100.0%	0.0%	100.0%
T4	Score	3	0	3	
	% in Level Surgical	100.0%	0.0%	100.0%	
<b>Total</b>	Score	37	4	41	
	% in Level Surgical	90.2%	9.8%	100.0%	

Table 13 - Surgical Level \* Do you suffer from compensatory/reflex hyperhidrosis? That is: a site that started to sweat more after the surgery... Cross tabulation.

Pearson's chi-square = 0.684

Source: Elaborate by the author, 2016.

		Percentage answers		
		N	Percentage	of cases
<b>Locations affected by reflex hyperhidrosis</b>	crotch	5	6.9%	13.9%
	Feet	5	6.9%	13.9%
	abdomen	15	20.8%	41.7%
	Thighs	11	15.3%	30.6%
	Back	25	34.7%	69.4%
	Face	1	1.4%	2.8%
	Breasts/Chest	7	9.7%	19.4%
	armpits	two	2.8%	5.6%
	Hands	1	1.4%	2.8%
<b>Total</b>		72	100.0%	200.0%

Table 14 - \$Local Frequencies.  
Source: Elaborate by the author, 2016.

mentions		
Key words	Number	percentage
<b>Discomfort/Discomfort</b>	23	54.70%
<b>Embarrassment</b>	13	30.90%
<b>Interference with daily activities</b>	10	23.80%
<b>Interference in social life</b>	8	19%
<b>choice of clothing</b>	8	19%
<b>bromhidrosis</b>	1	2.30%

Table 15 - Percentage of the main reasons that led patients to undergo surgery.  
Source: Elaborate by the author, 2016.

		Frequency	percentage	percentage valid	percentage cumulative
<b>Valid</b>	Yes	15	36.6	36.6	36.6
	No	26	63.4	63.4	100.0
	Total	41	100.0	100.0	

Table 16 - Did you suffer from bromhidrosis? That is, bad smell in the place affected by hyperhidrosis.  
Source: Elaborate by the author, 2016.

response for tropical climates, such as those recently experienced in the studied region of the country, is added.

In a similar way to the research of the primary territories, those affected by compensatory hyperhidrosis were freely obtained through an open question as susceptible to a sweating reflex, with the back (34.7%), the abdomen (20.8%) being more frequent. and thighs (15.3%), in that order, as shown in table 14.

It is worth critically analyzing the report of compensatory hyperhidrosis in areas such as hands, armpits and face which, if not classified as recurrence or surgical failure, lack scientific reason when faced with the section of a nervous chain over which synaptic stimulation does not occur.

## QUALITY IN LIFE

Of the motivations

The search for a reliable quotient encouraged free speech among the participants regarding the main motivations for resorting to definitive therapy. From the point of view of Collective Subject Discourse Analysis, it is possible to obtain a broad overview of the main limitations experienced by such individuals within, including, their own subjectivities, with regard to environmental influences (climate, profession, age, weight, among others), and therefore, suitable for comparison with national publications on the same topic.

It can be judged that, in fact, certain topics overlap and underlie others, and their separation is only for the sake of scientific analysis.

Campos (2003) argues that, if the patient's quality of life is the ultimate goal of medical practice, pathologies originated or worsened by psychosocial issues are better evaluated through questionnaires. Despite not having serious organic complications, even personal

and entirely individual reasons should be considered sufficient to justify the approach.

The argument was repeated among the different patients and is compatible with studies already published, such as the degree of general discomfort caused by hyperhidrosis, observed by Fiorelli (2011), on a subjective scale from 0 to 10, obtaining an average of 9.4 and published by Cardoso (2009), present in 54% of respondents. Thus, it is imposed as the first stimulus to resort to medical support. Not least, the social and professional damage imposed by the condition are limiting agents and, why not, its morbidities.

### Topics specific

Through cross-tabulation, it is possible to compare pre- and postoperative experiences of specific aspects related to the quality of life of this population. However, pertinently, only the items that demonstrated statistical significance are shown below, that is, with Pearson's correlation coefficient (chi-square) less than or equal to 0.05.

Table 1 shows the results in relation to paper handling before and after surgery.

Since the second highest incidence resulted in palmar hyperhidrosis (Table 18), this particularity, in a consonant way, announced a positive repercussion: 53.65% of the patients felt "very bad". More than half (68.18%) of them have benefited and feel "well" or "very well" after sympathectomy. And yet: one level below, 14.63% felt "bad" and, following the procedure, 83.3% felt "very good".

This conjunction underwent significant variation after the surgical method, in which 63.41% of the patients experienced it as "bad" and "very bad" before the procedure, converting into recognizing themselves as "well" and "very well" in 65.38 % of these cases. And, even among the patients who identified themselves as "well", 66.7% chose to classify it as "very well" in the late postoperative period.

			When handling papers and writing, how did you feel and how do you feel in the present moment? [After surgery]				Total
			Bad	Indifferent	Well	Very well	
When handling papers and writing, how did you feel and how do you feel in the present moment? [Before surgery]	Very bad	Score	0	7	two	13	22
		%	0.0%	31.8%	9.1%	59.1%	100.0%
	Bad	Score	0	1	0	5	6
		%	0.0%	16.7%	0.0%	83.3%	100.0%
	Indifferent	Score	3	7	1	0	11
		%	27.3%	63.6%	9.1%	0.0%	100.0%
	Well	Score	0	0	1	1	two
		%	0.0%	0.0%	50.0%	50.0%	100.0%
	Total	Score	3	15	4	19	41
		%	7.3%	36.6%	9.8%	46.3%	100.0%

Table 17 - When handling papers and writing, how did you feel and how do you feel at the present moment?

Pearson's chi-square = 0.005

Source: Elaborate by the author, 2016.

			When greeting someone and shaking their hand, how did you feel and how do you feel today? in day? [After surgery]			Total
			Indifferent	Well	Very Well	
As you greet someone and shake their hand, how did you feel and how do you feel today? [Before surgery]	Very bad	Score	6	0	15	21
		%	28.6%	0.0%	71.4%	100.0%
	Bad	Score	3	0	two	5
		%	60.0%	0.0%	40.0%	100.0%
	Indifferent	Score	9	1	two	12
		%	75.0%	8.3%	16.7%	100.0%
	Well	Score	0	1	two	3
		%	0.0%	33.3%	66.7%	100.0%
	Total	Score	18	two	21	41
		%	43.9%	4.9%	51.2%	100.0%

Table 18 - When greeting someone and shaking their hand, how did you feel and how do you feel today?

Pearson's chi-square = 0.011

Source: Elaborate by the author, 2016.

		Frequency	percentage	Valid percent	cumulative percentage
Valid	Yes	34	82.9	82.9	82.9
	No	7	17.1	17.1	100.0
	Total	41	100.0	100.0	

		How did it feel to wear clothes white? And nowadays? [After surgery]						Total
			Too bad	Bad	Indifferent	Good	very good	
How did it feel to wear white clothes? And nowadays? [Before surgery]	Too bad	Score	two	two	0	4	11	19
		%	10.5%	10.5%	0.0%	21.1%	57.9%	100.0%
	Bad	Score	1	1	two	two	two	8
		%	12.5%	12.5%	25.0%	25.0%	25.0%	100.0%
	Indifferent	Score	0	0	11	1	1	13
		%	0.0%	0.0%	84.6%	7.7%	7.7%	100.0%
	Good	Score	0	0	0	0	1	1
		%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Total	Score	3	3	13	7	15	41
		%	7.3%	7.3%	31.7%	17.1%	36.6%	100.0%

Table 19 - Did you justify yourself to other people for sweating excessively?

Source: Elaborate by the author, 2016.

Table 20 - How did it feel to wear white clothes? And nowadays?

Pearson's chi-square = 0.004

Source: Elaborate by the author, 2016.

		Frequency	percentage	Valid percent	cumulative percentage
Valid	Very dissatisfied	3	7.3	7.3	7.3
	Dissatisfied	3	7.3	7.3	14.6
	Satisfied	19	46.3	46.3	61.0
	Very satisfied	16	39.0	39.0	100.0
	Total	41	100.0	100.0	

Table 21 - Overall satisfaction.

Source: Elaborate by the author, 2016.

Of the 41 interlocutors, 82.9% have already justified themselves to other people, in some context, because they sweat excessively, as shown in table 19.

It is a recently recognized disorder and, generally, strange to the population: therefore, underdiagnosed. It was in 1947 that Erhard Kux, in Germany, together with his nephew Dr. Peter Kux, performed the first thoracic sympathectomy for the treatment of palmar hyperhidrosis, a resource performed in Brazilian territory only two years later (CLÍNICA NATURALE, 2014).

The last item that showed statistical significance was the item related to wearing white clothes (Table 20).

Interestingly, a considerable portion of the people contacted are health workers, whose justification is given by the greater popularity of the method among them. In this way, 65.85% had a “bad” or “very bad” feeling when wearing white clothes, a reality changed to “good” or “very good” perceptions in 70.37%.

### **GIVES SATISFACTION**

Finally, the participants were asked about their general satisfaction regarding the surgery as a whole, which could be categorized as “very dissatisfied”, “dissatisfied”, “indifferent”, “satisfied” and “very satisfied”. Most (46.3%) are satisfied, followed by “very satisfied” patients (39%), as shown in Table 21.

Despite the reasons for feeling “dissatisfied” or “very dissatisfied” have not been explored for individual preservation, it is interesting to mention that these are patients, in their entirety, operated in extensive limits, approaching the second to fourth thoracic ganglia and, supported by current bibliography, susceptible to a greater degree not only to maximum rates but also to a higher intensity of compensatory hyperhidrosis.

### **CONCLUSION**

The outcome of this work is optimistic as it foresees advances and improvements in definitive therapy for such a pathology that, if innocent on the one hand, once causes important psychosocial disorders and already legitimized by the literature.

If it is still an underdiagnosed condition, and, when recognized, susceptible to mitigation by alternative therapies, samples from small centers are insufficient in terms of statistical and scientific impact, even if the relationship and longitudinal follow-up of these patients imply satisfactory results.

Therefore, it is up to the context of current references and knowledge on the subject to encourage research, especially in large services, and reproduction of expressive numbers, respecting the good practice of Evidence-Based Medicine in Brazil.

Meanwhile, this work begins the study of primary hyperhidrosis in the State of Minas Gerais, faithful to the search for improvements in the quality of life of these patients and ends up encouraging future sequential investigations.

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