

MEETING ABSTRACT

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Impact of assessment and treatment of neuropathic pain in patients with chronic diabetic neuropathy assisted in a diabetes reference service

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Background

Diabetic neuropathy is one of the chronic complications of hyperglycemia, which characterizes Diabetes Mellitus. As a result of an indolent course, the absence of signs and symptoms and nonspecific manifestations, it can remain undiagnosed for a long time. One of the clinical presentations is the presence of neuropathic symptoms, such as pain, cramps or paresthesia, which can compromise the quality of life.

Objective

The objective of this study was to demonstrate that the pharmacological treatment of neuropathic pain can promote a significant symptomatic improvement assessed by validated scores and that the establishment of a support center in neuropathy constitutes an important measure in the context of multidisciplinary care of the diabetic patient.

Materials and methods

53 patients were recruited with a mean age of 58 yrs., similar gender distribution (50.9% male and 49.1% female), mostly with type 2 Diabetes Mellitus (83%), average diagnosis time of 18 yrs. and median time for neuropathic symptoms of 2 yrs.

Results

At the first visit, subjects had pain intensity classified as moderate by the Analog Pain Scale, intensity of neuropathic symptoms classified as severe (56.6%) and neuropathic disability rated as moderate to severe impairment (41.5%). Following the prescription of specific pharmacological

treatment, 91.6% of patients reported maintenance or improvement of symptoms and only 2.8% reported worsening. It was observed significant improvement in Neuropathic Symptoms Score ($p=0.0006$) and Analogic Pain

Baseline characteristics of the patients			
Variable	n = 53		
Age (years)	58.6 ± 11.50	Comorbidities (%) #	
Gender (%)#		Obesity	2
Male	50.9	Hypertension	27.6
Female	49.1	Hypothyroidism	4.6
Weight (kg)*	77.65	Dyslipidemia	23
Height (cm)	1.67 ± 0.09	Diabetic Retinopathy	13.2
BMI (kg/m ²)	29.1 ± 5.72	Chronic Kidney Disease	11.8
Diabetes Mellitus type (%)#		Grade 1	30.2
Type 1	17	Grade 2	17
Type 2	83	Grade 3A	18.9
Time since diagnosis of Diabetes (years)	18 ± 9	Grade 3B	5.7
Time of neuropathic symptoms (years)*	2	Grade 4	0
Analogic Pain Scale	7 ± 3	Grade 5	1.9
Neuropathic Symptoms Score (%)#		No information	26.4
Mild	11.3	Erectile dysfunction	2.6
Moderate	28.3	Cardiovascular Disease	5.9
Severe	56.6	Chronic B hepatitis	0.7
Symptoms absent	3.8	Chronic C hepatitis	1.3
Neuropathic Disability Score (%)#		HIV	
Mild	15.1	Unreactive	63.2
Moderate	26.4	Not evaluated	36.8
Severe	15.1	Syphilis	
No disability	22.6	Unreactive	60.4
Uncooperative patients	30.2	Not evaluated	39.6
Fasting plasma glucose (mg/dl)	146.5	Alcohol abuse	11.3
HgA1c (%)	8.1 ± 1.53	Smoking	2.6
25 hidroxyvitamin D (ng/ml) (ref: 30-65)	20.5 ± 4.67		
Vitamin B12 (pg/ml) (ref: 180-980)	453 ± 366		

Figure 1 Baseline characteristics of the patients. # values expressed in relative frequency; Analogic Pain Scale: 0-2: mild; 3-7 moderate; 8-10: severe; Neuropathic Symptoms Score: 1-4: mild; 5-6 moderate; 7-10: severe; Neuropathic Disability Score 3-5: mild; 6-8: moderate; 9-10: severe; Uncooperative patients: patients in whose Achilles reflex couldn't be assessed; No information: information not find at the records.

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Comparison between clinical parameters before and after pharmacologic treatment of pain			
Variável	First assessment	Second assessment	P-value
Symptoms perception (%)#			
No change	-	29,6	-
Improvement	-	62	-
Worsening	-	2,8	-
Not informed	-	5,6	-
Monofilament (%)#			
Altered	56,6	52,8	0,7518
Normal	41,5	43,4	
Not informed	1,9	3,8	-
Neuropathic Symptoms Score (%)#			
Symptoms absent	1,9	26,4	0,0006*
Mild	11,3	22,6	
Moderate	28,3	22,6	
Severe	56,6	28,3	
Not informed	1,9	0	-
Neuropathic Disability Score (%)#			
Mild	15,1	9,4	NA
Moderate	26,4	11,3	
Severe	5,7	5,7	
Uncooperative patients	30,2	30,2	-
No disability	22,6	43,4	-
Analogic Pain Scale	6,5 ± 2,7	4,4 ± 3,62	< 0,0001*

Figure 2 Comparison between clinical parameters before and after pharmacologic treatment of pain. *statistically significant P-value (< 0.05); # values expressed in relative frequency; Analogic Pain Scale: 0-2: mild; 3-7 moderate; 8-10: severe; Neuropathic Symptoms Score: 1-4: mild; 5-6 moderate; 7-10: severe; Neuropathic Disability Score 3-5: mild; 6-8: moderate; 9-10: severe; Uncooperative patients: patients in whose Achilles reflex couldn't be assessed; No information: information not find at the records

Scale ($p < 0.0001$), especially in type 2 diabetic group. There was no change in Neuropathic Disability Score.

Conclusion

This study demonstrated that the existence of a support center for assessment and treatment of painful diabetic neuropathy in a Diabetes reference service allows early diagnosis and intervention in neuropathic symptoms in an effective way.

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