

PERIPHERAL DIABETIC NEUROPATHY IN PATIENTS ON CHRONIC HEMODIALYSIS

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INTRODUCTION AND AIMS

Diabetic patients with hemodialysis are most often fragile and multi-handicapped. They have several degenerative complications. Peripheral diabetic neuropathy, a frequent complication, often leads to poorly supported chronic pain. This pain is still under-diagnosed and incorrectly treated. Our objective was to describe the clinical, biological and electrophysiological characteristics of peripheral diabetic neuropathy in 30 diabetic patients with hemodialysis and to investigate factors related to its severity.

METHODS

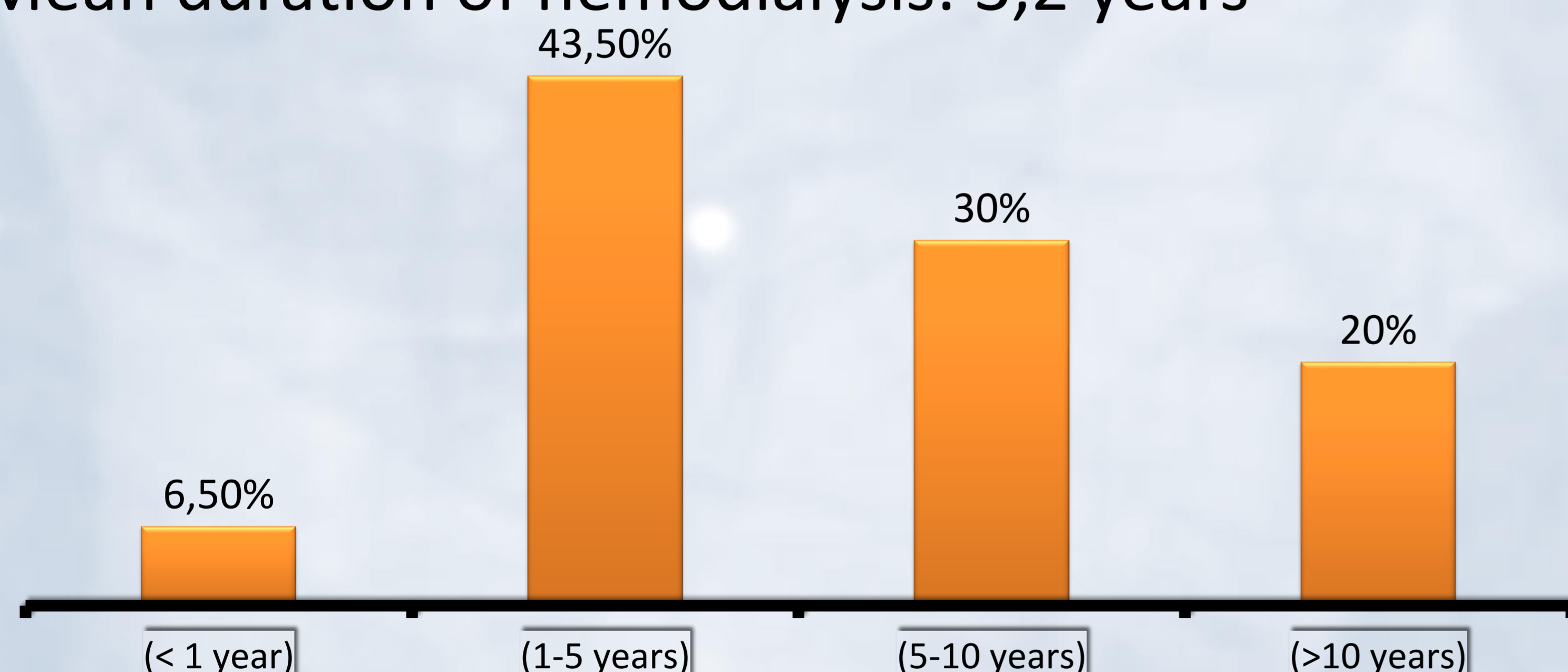
Thirty patients responded to a pre-established questionnaire after a DN4 questionnaire identified neuropathic pain.

The intensity of the pain was evaluated by the digital scale and analogic visual scale.

They received a neurological examination with electromyogram (EMG).

POPULATION

- Sex: 18 men; 12 women [sex ratio M/F: 1,5]
- Mean age : 55 years [25 – 82 years]
- Diabetes Type I in 7 cases ; Type II in 23 cases
- Mean duration of diabetes : 19,6 years
- Insulinotherapy: 29 patients
- Mean serum glucose: 11,7 mmol/l [4 - 25 mmol/l]
- Mean glycosylated hemoglobin: 9,8% [7,8 - 12,3%]
- Mean duration of hemodialysis: 3,2 years

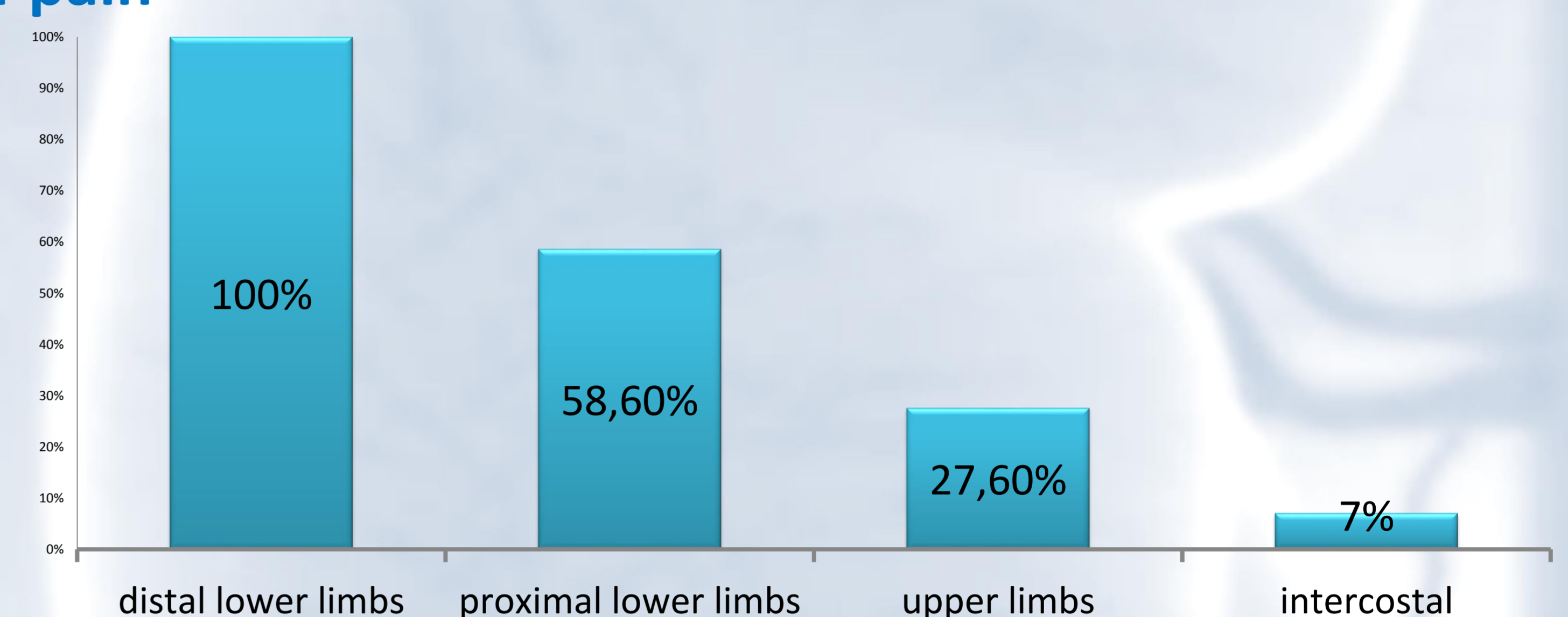


- HMD: 3 times a week by AVF in 93% of cases.

Description of peripheral diabetic neuropathy

Symmetric distal sensory-motor polyneuropathy was observed in all cases. The neuropathic pain is the main symptom.

Site of pain



Frequency of pain

<i>Paroxystic</i>	73,5 %
Continuous	33,5 %
<i>Nocturn</i>	96,5 %
Diurn	36,5 %
Per-dialytic	16,5 %

Type of pain

<i>Electrical discharge</i>	96,5%
Burning	76,5%
Crushing	76%
painful cold	64,3%

Severity of pain

By numeric scale (mean) 6,4 [4 et 10]
By analogic digital scale (mean) 6,2 [4 et 10]

Neurologic examination

<i>The affection of superficial sensitivity</i>	76 %
Decreased deep sensitivity	26%
<i>Abolished Achillian reflex</i>	96,7%
Abolished patellar reflex	56,6%

EMG

Motor and sensory Polyneuropathy type axonal predominating of lower limbs.

STUDY OF SCORE DN4

The score DN4 is higher in male patients having size of $\geq 1,7$ m (NS)
diabetics for more than 20 years(NS)
having a glycosylated hemoglobin $\geq 10\%$ (NS)
presence of neuro-vegetative involvement (NS)
presence of vascular calcifications (NS)
presence of intermittent claudication (p<0,05)

The evolution of pain was favorable in four patients treated with a gabapentinoid antiepileptic; the other patients were not treated.

CONCLUSIONS: Neuropathic pain in diabetic patients with hemodialysis remains under-diagnosed and incorrectly treated. An interrogation based on the DN4 questionnaire; a rigorous clinical examination, early management of neuropathic pain can improve the quality of life of these patients.