Neurol Sci (2005) 26:S150–S151
DOI 10.1007/s10072-005-0431-8

ORAL COMMUNICATION

R. De Simone • E. Marano • V. Brescia Morra • A. Ranieri • P. Ripa • M. Esposito • G. Vacca • V. Bonavita

A clinical comparison of trigeminal neuralgic pain in patients with and without underlying multiple sclerosis

Abstract Despite clinical similitude, there is a tendency to consider trigeminal pain in multiple sclerosis (MS) as a distinct condition. To evaluate clinical differences in trigeminal pain presentation in patients with and without underlying MS, we compared clinical characteristics of facial pain found in 15 consecutive MS patients with those reported by 13 consecutive subjects diagnosed with classical trigeminal neuralgia. The only significant difference between MS and non-MS neuralgic patients was the age of onset of pain (43.4±10.5 in MS *vs.* 59.6±11.50 in non-MS patients, p=0.000629, unpaired Student's t-test). No differences were observed for side, duration and quality of pain, trigeminal branches involved, presence of trigger areas or factors, pain refractive period, remitting-relapsing or chronic course. There was only a trend without statistical significance in interval pain and trigeminal hypoesthesia, more frequent in MS population. Only one patient in the MS group presented with long-lasting episodes (45–60 min) of atypical odontalgia. Our findings support the view of a common pathogenetic mechanism underlying TN in the two groups, possibly related to demyelination of the trigeminal entry root in the pons. Typical TN in MS patients should be considered as "symptomatic trigeminal neuralgia".

Key words Trigeminal neuralgia • Multiple sclerosis • Facial pain • Symptomatic

R. De Simone (✉) • E. Marano • V. Brescia Morra • A. Ranieri
P. Ripa • M. Esposito • G. Vacca • V. Bonavita
Headache Centre
Department of Neurological Sciences
"Federico II" University of Naples
Via Pansini 5, I-80131 Naples, Italy
e-mail: rodesimo@unina.it

Background

The prevalence of trigeminal neuralgia (TN) is higher (2%) in multiple sclerosis (MS) [1] as compared to the prevalence in the general population (15/100 000) [2]. Despite clinical similitude, there is a tendency to consider trigeminal pain in MS patients as a distinct condition, resulting in the recent proposal by the International Headache Society [3] of a new headache subtype, "*13.18.3 Facial pain attributed to multiple sclerosis*", with a separate set of diagnostic criteria.

To evaluate clinical differences in trigeminal pain presentation in patients with and without underlying MS, we compared clinical characteristics of facial pain found in a group of MS patients with those reported by a group with classical TN.

Methods

Clinical characteristics of facial pain reported by 15 MS patients consecutively observed at the day-hospital of our Neurological Institute were compared with corresponding data of 13 consecutive patients attending the Headache Centre of the same department, diagnosed as "*13.1.1 Classical trigeminal neuralgia*" according to the ICDH-2 criteria [3]. All data were collected by a single neurologist with experience in headache and facial pain, using a computerised semi-structured interview [4].

Results

The only significant difference between MS and non-MS neuralgic patients was the age of onset of pain (43.4±10.5 in MS *vs.* 59.6±11.50 in non-MS patients, p=0.000629, unpaired Student's t-test). No differences were observed for side, duration and quality of pain, trigeminal branches involved, presence of trigger areas or factors, pain refractive period, remitting-relapsing or chronic course (for more details see Table 1). There was only a trend without statistical significance in interval pain and trigeminal hypoaesthesia, more frequent in MS

Table 1 Comparison of clinical characteristics of trigeminal pain in MS patients *vs*. non-MS patients. Data are expressed as n (%) if not otherwise indicated

	MS+ (n=15)	MS- (n=13)	*p*
Age of onset, mean±SD	43.4±10.5	59.6±11.5	0.000629
Side			
Left	6 (40.0%)	4 (30.7%)	n.s.
Right	9 (60.0%)	9 (69.2%)	
Pain duration			
<1 s up to 2 min	14 (93.3%)	12 (92.3%)	n.s.
Pain quality			
Superficial and stereotyped	14 (93.3%)	13 (100%)	n.s.
Trigeminal branches involved (alone or in combination)			
I	3/23 (13.6%)	8/25 (32.0%)	n.s.
II	10/23 (43.47%)	10/25 (40.0%)	
III	10/23 (43.47%)	7/25 (28.0%)	
Trigger areas/factors	14 (93.3%)	12 (92.3%)	n.s.
Pain refractive period	6 (40.0%)	6 (46.1%)	n.s.
Periodicity of pain			
Remitting-relapsing	10 (66.7%)	8 (61.5%)	n.s.
Primary chronic	3 (20.0%)	2 (15.4%)	
Secondary chronic	2 (13.3%)	3 (23.1%)	
Trigeminal hypoaesthesia	10 (66.6%)	4 (30.7%)	n.s.
Interval pain	6 (40.0%)	3 (23.0%)	n.s.

patients. Only one patient in the MS group presented with long-lasting episodes (45–60 min) of atypical odontalgia, extended to extra-trigeminal areas.

Discussion

Our data indicate that differences in trigeminal pain characteristics between MS and non-MS patients are limited to the age of onset, while no differences in other variables can be detected. These findings support the view of a common pathogenetic mechanism underlying TN in the two groups, possibly related to demyelination of the trigeminal entry root in the pons [5, 6]. In our series 14 out of 15 MS patients with facial pain shared the clinical features of symptomatic TN. Typical TN in MS patients should be considered as "*13.1.2 Symptomatic trigeminal neuralgia*", reserving for MS patients with atypical facial pain the diagnosis of "*13.18.3 Facial pain attributed to multiple sclerosis*".

References

1. Hooge JP, Redekop WK (1995) Trigeminal neuralgia in multiple sclerosis. Neurology 45:1294–1296
2. Penman J (1968) Trigeminal neuralgia. In: Vinken PJ, Bruyn GW (eds) Handbook of clinical neurology, Vol 5. North Holland, Amsterdam, pp 296–322
3. Headache Classification Subcommittee of the International Headache Society (2004) The International Classification of Headache Disorders, 2nd edn. Cephalalgia 24[Suppl 1]
4. De Simone R, Marano E, Bonavita V (2004) Towards the computerisation of ANIRCEF Headache Centres. Presentation of AIDA Cefalee, a computer assisted diagnosis database for the management of headache patients. Neurol Sci 25[Suppl 3]:S218–S222
5. Love S, Coakham HB (2001) Trigeminal neuralgia. Pathology and pathogenesis. Brain 124:2347–2360
6. Love S, Gradidge T, Coakham HB (2001) Trigeminal neuralgia due to multiple sclerosis: ultrastructural findings in trigeminal rhizotomy specimens. Neuropathol Appl Neurobiol 27:238–244