20 YEARS CLINICAL FOLLOW-UP IN PATIENTS WITH OCULOPHARYNGEAL MUSCLE DISEASE (OPMD)

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INTRODUCTION

Oculopharyngeal muscle dystrophy (OPMD) is an autosomal dominant muscle disease, that is clinically characterized by ptosis, eye movement abnormalities, dysphonia and dysphagia. It is caused by an abnormal (GCN) triplet expansion within the PABPN1 gene located on chromosome 14 (14q11.2-q13). The pathologic hallmark in the disease is the accumulation of unique 8.5 nm tubulofilamentous inclusions within skeletal muscle fibers nuclei. Rimmed vacuoles of autophagic nature are also often observed in the muscle biopsy of OPMD patients.

Sex	Onset age	Onset symptom	GCG Expansion
F	55	ptosis, dysphonia	6/10
F	50	ptosis	6/9
M	60	ptosis, dysphonia, dysphagia	6/9
M	55	dysphagia, ptosis	6/9
F	40	ptosis	6/8
M	50	ptosis, dysphagia,dysphonia	6/9
F	50	ptosis, dysphagia	6/8
M	56	ptosis, dysphagia	6/8
F	60	ptosis	6/8
M	44	ptosis, dysphagia	6/11
F	46	dysphagia	6/11
M	45	ptosis, dysphagia	6/11
F	60	ptosis	6/9
F		asymptomatic patients	6/10
F	55	ptosis	9/9
F	56	ptosis, dysphagia	6/9
F	58	ptosis, dysphagia	6/10
F	50	ptosis, dysphagia	6/9

Table 1

AIM OF THE STUDY

To evaluate retrospectively natural history in a cohort of OPI patients with a follow-up of 5 to 20 years.

A secondary goal is to better characterize the distribution muscle involvement.

PATIENTS AND METHODS

✓Since the onset of symptoms each OPMD patient underwent a neurological evaluation twice per year

✓Clinical evaluation (MRC score)

✓Margin Reflex Distance 1 (MRD1)

✓Quantitative electromyography and electroneurography

✓Muscle biopsy (12 out of 18 pts)

✓Molecular analysis of PABPN1 gene in all patients

✓Eating Assessment Tool (EAT-10),performed in the last 4 years follow up (fig.1)

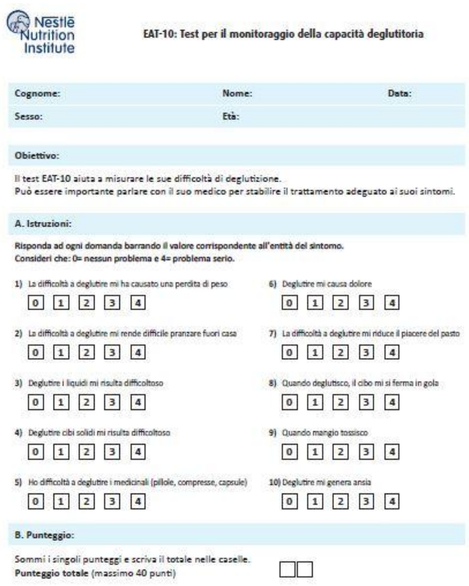

Fig. 1

RESULTS

During the course of the disease the ptosis evaluated trough MRD1 worsened (fig. 2). In addition, we observed that other muscle groups, especially posterior thigh muscles were progressively affected. (fig. 3,4).

EAT 10 score worsened even in patients that didn't complain for dysphagia at onset (Fig.5).

All these clinical features were found in all patients except one.

In 6 out of 18 patients we found a myogenic pattern on electromyografy with normal electroneurography.

In ten patients out of twelve who underwent muscle biopsy we found:

✓ Myofiber size variability

✓ Rimmed vacuoles in atrophic fibers (fig.6)

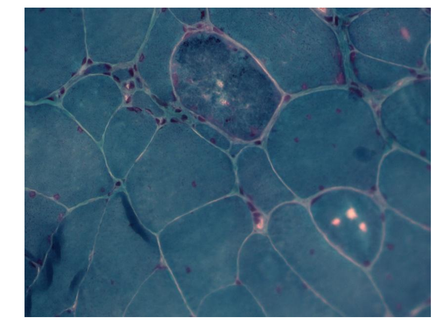

Fig. 6

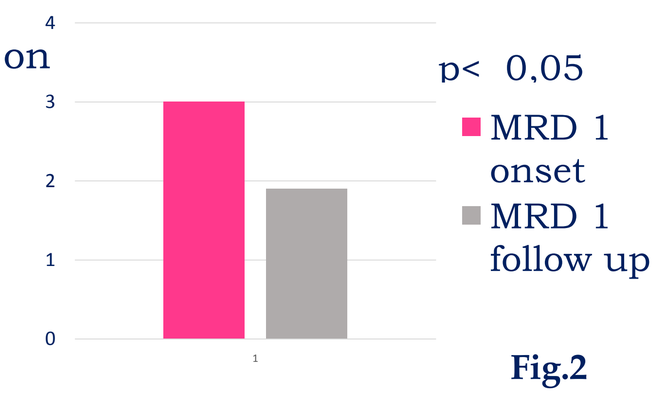

Fig.2

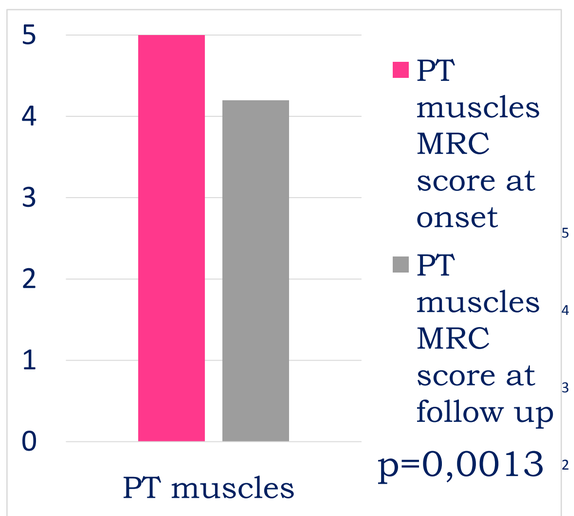

Fig.4

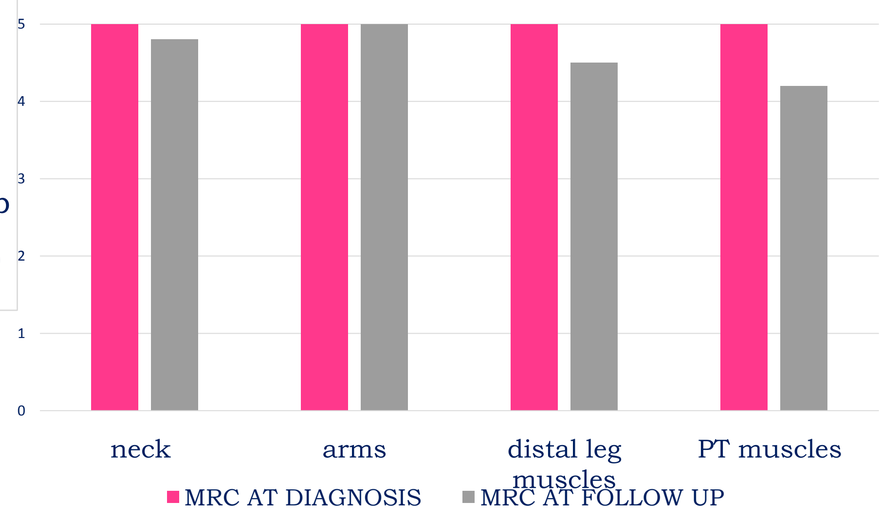

Fig.3

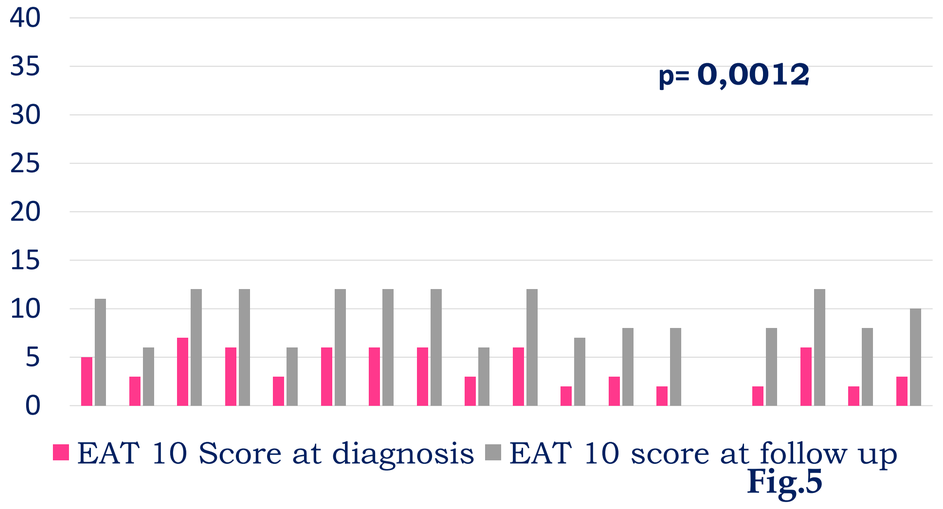

Fig.5

CONCLUSIONS

Our data confirm that, at disease onset, that eyelid elevators are the most affected muscles followed by posterior thigh muscles. However, during the clinical progression, OPMD variably shows a progressive weakness of other muscle groups as posterior thigh muscles.

The EAT 10 is a valuable tool to evaluate the progressive worsening of dysphagia.

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