Hand-held myometry

In their recent articles, Vander Ploeg et al provided information that should prove useful to clinicians who use hand-held dynamometers. The reference values presented by the authors provide a much needed basis for establishing the normality of a patient's strength. The ratios between the forces measured during make tests and break tests may, as the authors suggest, be diagnostically discriminating. The purpose of this letter is to provide some additional information relevant to reference values and make test and break test forces.

Reference values, based on hand held dynamometer measurements, have been published before. The authors (which were for make tests rather than break tests) were limited, however, to 10 upper extremity muscle groups of healthy young women. Comparisons of the ratio of break test forces to make test forces have also been published previously. The ratios, however, are higher than those reported by Vander Ploeg et al. Specifically, Bohannon reported that the force measured at the elbow during break tests was a mean of 3-4:1, compared with 2:1 that measured during make tests. The ratio was demonstrated in both healthy subjects and on the nonparetic side of patients with stroke. On the paretic side of the stroke patients, the break test to make test force ratio was a mean 1:7 to 1:0. Why the ratios reported by Bohannon are so different from those of Vander Ploeg et al is uncertain. What I believe is certain is that hand held dynamometry is a much underused clinical measurement procedure and that further research needs to be conducted on the procedure.

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Paroxysmal kinesigenic choreoathetosis

A recent letter discussed paroxysmal kinesigenic choreoathetosis (PKC) as a presenting symptom of multiple sclerosis. Excitement, emotion (stress or hypertension) and sudden movements have been reported to provoke such attacks in multiple sclerosis. There is a lack of consensus on their nomenclature: terms include tonic spasms, tonic clonic spasms, paroxysmal dystonia, tetanoid attacks and sensorimotor seizures. For simplicity in the case of multiple sclerosis, one might suggest that these attacks are variants of a single disorder, PKC. This letter will address the case of a patient with PKC and multiple sclerosis.

The patient, a 42 year old man presented with an acute onset of unsteadiness of gait and falling tendency. He was not able to walk without using his arms. Examination revealed a profound bilateral inverted foot posture, dystonic trunk with a dysmetric gait. The left upper extremity showed repeated, rhythmic and incoordinated movements. These movements were accentuated by voluntary movement and were inhibited by ocular fixation and voluntary movement restriction. The movements were abolished by intravenous administration of a-butyrylcholine. The movements were accompanied by a hyperactive deep tendon reflexes and bilateral extensor plantar responses. The patient was admitted to hospital for further evaluation.

Neurological examination revealed a normal cranial nerve function and normal motor and sensory function of the upper and lower extremities. The patient was not able to perform any voluntary movement of the left upper extremity. The patient was unable to walk without using his arms. Examination revealed a profound bilateral inverted foot posture, dystonic trunk with a dysmetric gait. The left upper extremity showed repeated, rhythmic and incoordinated movements. These movements were accentuated by voluntary movement and were inhibited by ocular fixation and voluntary movement restriction. The movements were abolished by intravenous administration of a-butyrylcholine. The movements were accompanied by a hyperactive deep tendon reflexes and bilateral extensor plantar responses. The patient was admitted to hospital for further evaluation.

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Angiostrongylus cantonensis abscesses in the brain: what do we learn?

It was interesting to read, in the article by Purohit et al, that Angiostrongylus cantonensis abscess was mistakenly treated initially as tuberculoma with antituberculous drugs, because of the CT picture of enhancing disc lesion. The lesion had apparently not increased in size even after two months, although the authors did mention about the repeat CT findings. It would be altogether an interesting issue to know the natural history of such lesions.

Unfortunately, in India an enhancing single small ring or disc lesion on CT of the brain is presumed to be tuberculoma and antituberculous therapy is indiscriminately instituted without histological verification. The fact that such lesions "disappear" after a few months of antituberculous therapy falsely reinforces the physicians' faith in continuing such treatment. It has been found, however, that such lesions are cysticercosis or parasitic granulomas and not tuberculosis.

Is there a role of empirical antituberculous therapy while treating such lesions? The answer to that crucial question is definitely no. It is hoped that one considers the parasitic diseases affecting the brain as the first possibility in diagnosing single, small, enhancing ring or disc lesions especially in countries like India where hygienic conditions are extremely poor.

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Purohit et al reply:

Dr Prakash has correctly pointed out that antituberculous treatment is indiscriminately instituted in India without histological confirmation. In the present case, however, the antituberculous treatment was started because of the following genuine reasons.

1) The enhancing disc shaped solid morphology on CT scan is a common feature of tuberculoma etiology.
2) The patient belongs to that part of India where cisticercosis is not at all a common disorder but tuberculoma is surely a more common disease.

Lastly, we would like to draw the attention to the inference which has been quoted from the study of other cases and cannot be applied to the present case because the cases they have studied had CT lesion of less than 10 mm in size whereas with our case the diameter was 20 mm.

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