THE USE OF POSTURAL STABILITY TESTS IN THE DIAGNOSIS OF HEREDITARY ATAXIA

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Friedreich ataxia (FRDA) and autosomal dominant spinocerebellar ataxia type two (AD SCA 2) are among the most-often diagnosed hereditary ataxias in the Czech Republic. The onset of related problems manifests itself among one third of adult patients diagnosed with FRDA. While there are known basic criteria for differentiating between these ataxias, precise definition prior to DNA examination proved to be at times difficult.

The goal of our study was to test whether posturographic examination is suitable for differentiation in hereditary ataxia diagnosis.

17 patients with AD SCA2 and 12 patients with FRDA with 10 health controls were examined. Posturographic examination was carried out on a tensometric multisensoric platform, in stance with visual control and without and in tiptoe standing, where in time changes were noted in foot pressure.

On the basis of 'upright stance with visual control', patients were clearly differentiated from health controls; It was not, however, possible to differentiate between patients with FRDA and SCA. In cases of 'upright stance without visual control', the group of FRDA patients were distinctly differentiated from health controls ($p<0,01$), whereas tiptoe standing differentiated that AD SCA2 group ($p<0.01$). The selected posturographic tests, therefore, clearly indicated differences between the patient group and the group of health controls as well as among the groups themselves-- important for setting indication of DNA diagnosis.

Recently, work has been published comparing clinical tests with posturographic parametres, which did not bring significant results. Due to the variety of provocative moments included in clinical scales, it appears worthwhile to compare results with posturographic parametres-- also after 'provocation', such as stance without visual control or tiptoe standing.

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