

Juvenile fibromyalgia syndrome: clinical experience at a university hospital

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Background: Fibromyalgia syndrome (FMS) is one of the relatively common overlapping syndromes characterized by unexplained chronic pain and fatigue. The aim of this study was to evaluate the clinical and laboratory features of FMS in children.

Methods: The clinical data of 6 children with FMS treated at the Department of Rheumatology of People's Hospital Affiliated to Jiangsu University during the period of 1997-2004 were retrospectively analyzed.

Results: Abdominal pain was the first complaint in 5 of the 6 patients with FMS. All the 6 patients were misdiagnosed before rheumatological examination. Diffuse pain, fatigue, sleep disturbance, exacerbated pain caused by low temperature or physical exercise were the main complaints. The mean pain score was 8.8 and the mean initial tender point count was 13.7. Arthrodynia, joint swelling, abdominal pain, irritable bowel symptoms and urinary urgency were observed in 5 patients (83%). Dysmenorrhea was seen in 4 patients (67%), depression in 3 (50%), morning stiffness in 2 (33%), paresthesia in 2 (33%), and anxiety in 2 (33%). Laboratory examination showed normal results and the outcomes of treatment were satisfactory.

Conclusions: FMS, a common disease in children, needs more attention to prevent misdiagnosis.

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Introduction

Yunus and Masi^[1] reported 33 children with fibromyalgia syndrome (FMS) treated at the Rheumatology Department of their hospital, who had been diagnosed with the criteria including diffuse pain and 5 or more tender points in 1985. In these patients, an average of 13 tender points were found, and prominent symptoms in addition to diffuse pain included tiredness (100%) and fatigue (91%). A population-based study of 338 school children^[2] showed a 6.2% (21 children) prevalence of FMS according to the 1990 diagnostic criteria of American College of Rheumatology (ACR). However, there is no report on FMS in children in China.

Clinical summary

We reviewed 6 children with FMS aged 7-16 years (mean 13.2 years) diagnosed according to the ACR diagnostic criteria^[3] and the criteria set by Yunus and Masi^[1] in 1985. These patients had been treated at the Department of Rheumatology of People's Hospital Affiliated to Jiangsu University from March 1997 to November 2004. The mean disease duration was 10 months (ranged 4-24 months). The mother of 1 of the 6 patients suffered from FMS. All the patients were free of rheumatoid arthritis, systemic lupus erythematosus, ankylosing spondylitis and other spandylarthropathies, polymyositis/dermatomyositis, primary Sjogren syndrome, mixed connective tissue diseases, and chronic fatigue syndrome.

The clinical data of the patients included degree of pain (visual analog scale, VAS), tender points, joint pain, morning stiffness, fatigue, sleep disturbance (increased wake during sleep, periodic limb movement in sleep, restless leg syndrome), chronic headache, depression, anxiety, arthrodynia, joint swelling, Raynaud's phenomenon, abdominal pain, irritable bowel symptoms, urinary urgency, dysmenorrhea, paresthesia, changes of illness with weather, worsening with exercise, and laboratory results.

Abdominal pain was the first complaint of 5 girls with FMS. Diffuse pain and left knee aching were

noted in the boy. The 6 patients were misdiagnosed before rheumatological evaluation.

Diffuse pain, fatigue, sleep disturbance, changes of symptoms with weather and worsening with exercise existed in all patients. The mean pain score was 8.8 and the mean initial tender point count was 13.7. Arthrodynia, joint swelling, abdominal pain, irritable bowel symptoms and urinary urgency were noted in 5 patients. Dysmenorrhea developed in 4 patients, depression in 3, morning stiffness in 2, paresthesia in 2, and anxiety in 2.

Laboratory examination showed normal results except peripheral white blood cell count in 3 patients. The 6 patients had received standard therapy for FMS, including non-steroidal anti-inflammatory agents and amitriptyline (25 mg/d). Aerobic exercise and psychotherapy were also taken. The symptoms were improved obviously except fatigue, irritable bowel symptoms, conditional changes or worsening due to weather and exercise.

Discussion

FMS in children is one of the FMS types, which was first described in 1985 by Yunus and Masi.^[1] Clark et al^[4] reported the prevalence of FMS reached 1.2% in 548 school children. A population-based study of 338 school children^[2] revealed a 6.2% prevalence of FMS by the 1990 ACR diagnostic criteria. In clinical practice, FMS in children ranked the third, or 7% in the diagnosis of new cases in the period of 1995-1998.^[5] Thus, FMS is not rare, but one cause that makes school children and adolescents suspend from school.

FMS as a common musculoskeletal pain syndrome is characterized by persistent pain, fatigue, sleep disturbance, conditional changes or worsening due to weather and exercise. In the study of Yunus and Masi,^[1] 100% of patients complained of persistent pain and sleep disturbance, 70% anxiety, and 45% stress. In Gedalia's study^[6] of 59 children with FMS, diffuse pain developed in 57 patients (97%), headache in 45 (76%), and sleep disturbance in 41 (69%). In Siegel's study of 45 children with FMS,^[5] sleep disturbance developed in 96% of the patients and diffuse pain in 93%. In our study, diffuse pain, fatigue, sleep disturbance, conditional changes or worsening due to exercise existed in all the 6 patients. Arthrodynia, subjective joint swelling, abdominal pain, irritable bowel symptoms, and urinary urgency were found in 5 patients. Dysmenorrhea developed in 4 patients, depression in 3, morning stiffness in 2, paresthesia in 2, and anxiety in 2, respectively.

Whether FMS in children is different from FMS in adults is not clear. After a 7-year follow-up, Seigel et al^[5] noted that FMS seems to be different in children from

in adults in two important aspects: (1) there is a high prevalence of sleep disturbance in children, and (2) the number of tender points in children appears to be smaller than that in adults. In our study, abdominal pain was the first complaint of 5 girls. Irritable bowel symptom and urinary urgency existed in 5 of the 6 patients.

Laboratory examination for FMS usually shows nothing abnormal, which is even listed in the diagnostic criteria. In our study, the results of laboratory examination were normal except peripheral white blood cell count in 3 patients.

The prognosis of FMS in children is good. The outcome of FMS is more favorable in children than in adults in a 30-month follow-up study, which is shown by Buskila et al.^[7] We prefer using combined non-steroidal anti-inflammatory agents and amitriptyline, supplemented with other therapies including aerobic exercise and psychotherapy. The clinical symptoms of patients may be improved except fatigue, irritable bowel symptoms, and conditional changes or worsening caused by weather and exercise.

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