

served by the practice. Cooperation with the public health department in the initiation and follow-through of a community screening effort provides a true service to the community.

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# Hysterical Paralysis

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Case reports of hysterical paralysis without psychiatric orientation are rare in the literature. One of the reviews by Dubowitz and Hersov<sup>1</sup> presented five case reports of children who had had countless diagnostic tests prior to their workups, but who, once the diagnosis of hysterical paralysis was made, showed marked improvement after intense rehabilitation and psychological counseling. It is important to recognize the psychosomatic aspects of this entity and to list it in the differential diagnosis of disorders that cause muscle weakness or paralysis.

## Case Report

A 15-year-old boy was referred by his scout master, who was also a physician. The patient said

that he had always had difficulty with coordination from childhood and had never really been able to keep up with other children. Because of this, he had had no physical education in school for many years and was involved in very little physical exercise. He had had several episodes during the previous years when he could not move very well, particularly when he got overexcited, was exposed to cold weather, or had had more exercise than usual. He had one particular episode the year prior to being seen when he was trying to learn to ski in the mountains with some other boys. He had fallen and for a short time seemed unable to get up. He said that this had occurred several times in the past, once on a hiking trip with his scout troop. The longest period of time that he was "paralyzed" was two or three hours. This was accompanied by a feeling of being sick, difficulty in breathing, a dry throat, and coughing. No fever accompanied these episodes. His only previous medical workups were several x-ray films showing a spondylolisthesis and protruding acetabula. System review was negative except for a history of epistaxis, hemorrhoids, syncope with exercise, a

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nervous foot, and marked obesity. He noted that his weight continued to increase steadily. Socially the young man had no real friends and no hobbies except for watching television (he said that he watched approximately eight to ten hours of television a day, even on a school day) and playing "sit-down games." He also had a room full of stuffed animals and was very much aware that his animals and television were replacements for friends and family, as he came home every day to an empty house. His two older brothers had left home, and the mother was busy with her career.

On physical examination the boy was markedly obese and appeared to be immature for his 15 years. Blood pressure was 120/70 mmHg, and positive findings included a left exotropia and poor dental hygiene. He had very small genitalia with no pubic hair (corresponding to Tanner stage 2). Minimal neurological soft signs were found, which included tightness of the heelcords, hyperactive deep tendon reflexes, and poor coordination, with difficulty in performing finger-to-nose and finger-to-finger opposition as well as rapid alternation of the hands. No muscle weakness was found, and there were no other abnormal findings.

The family would not accept the diagnosis of hysterical paralysis without a basic muscle work-up. Creatinine phosphokinase (CPK) was within normal limits, and urinalysis showed no myoglobin. Complete blood count, urinalysis, electrolytes, and blood urea nitrogen were within normal limits. A muscle biopsy was taken from the right quadriceps and showed histologically unremarkable muscle, and enzyme study results were also within normal limits.

The family, presented with these normal findings, was then able to accept that their son's condition was not the result of a muscle disorder; unfortunately, they refused any counseling. It was felt important that the young man be started on an intense physical therapy program, and arrangements were made with a local hospital in the physical therapy department for an exercise program three times a week. The family was also requested to purchase a stationary bicycle with a pedometer, and the young man was asked not to watch any television without bicycling. The patient has readily adhered to this regimen. A low-calorie diet was also given to him, and as a result, he has shown

steady improvement in muscle ability and gradual weight loss. His television time has been cut down to approximately two hours a day, and family therapy is still being encouraged.

### Comment

This teenager had marked coordination and obesity problems, and the "paralysis" prevented him from having to compete in sports with his peers. Thus, following Friedman's criteria,<sup>2</sup> the patient's symptoms had symbolic meaning, as they certainly decreased his anxiety about his difficulty in participating in sports. He was also very dependent and overprotected, which too is frequently seen with teenagers with conversion reactions. His symptoms occurred at times of stress, and there was a definite past medical history of unexplained symptoms. The history and physical findings were not compatible with a muscle disorder.

The diagnosis of hysterical paralysis was an early consideration after the history was taken, particularly because of the inordinate amount of television watched each day, the lack of socialization with his peers, no evidence of muscle weakness, the delay in the onset of puberty, and the rather marked minimal neurological soft signs found on physical examination. His sex being male suggested something other than the diagnosis of hysterical paralysis, as this problem occurs more frequently in teenage girls than in boys. However, it is interesting that in Dubowitz and Hersov's five case reports, three of the patients were male. The diagnosis of hysterical paralysis was very important, as too frequently patients such as this boy are given many tests and are often put to bed and immobilized.<sup>1</sup> Consequently, physicians can potentially aggravate the underlying emotional difficulties if hysterical paralysis is not considered in the differential diagnosis. The other muscle disorders that can cause periodical paralysis are often difficult to treat; thus, finding a treatable disorder is certainly very satisfying.

In the differential diagnosis of periodic muscle weakness, several entities should be considered,<sup>3</sup> including hyper- and hypokalemic paralysis as well as the normokalemic form. Paramyotonia congenita is another disorder that can be characterized by episodic weakness. Metabolic disorders,

such as McArdle's syndrome, do not have true episodic weakness, but may have severe cramping with pain following mild exercise.

A high index of suspicion is probably the most valuable diagnostic aid when the examiner is presented with a clumsy, obese child or teenager with the presenting diagnosis of muscle paralysis or weakness. A detailed history of the number of hours spent viewing television each day and specific questions about interaction with the child's peers and the family are most important. Once the diagnosis of hysterical paralysis is established,

rehabilitation measures with a good physical exercise program should be combined with family therapy.

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## Clinical Pharmacy Services in Family Practice Residency Programs

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The provision of clinical pharmacy services in a variety of health care programs has increased in the past decade and has been described in hospital settings,<sup>1,2</sup> ambulatory care clinics,<sup>3-5</sup> and private practice settings.<sup>6,7</sup>

Juhl and his co-authors<sup>8</sup> have described the provision of clinical pharmacy services to third-year family practice residents and their patients in a model family practice residency office site. Robertson and his associates<sup>6</sup> have described a clinical pharmacist-family physician partnership operating in a private practice setting. Efforts to promote the utilization of clinical pharmacists by family physicians have been considered desirable by pharmacists and physicians.<sup>9,10</sup>

Characterization of these services to residents in all family practice residency programs has not been previously reported. In the summer of 1980,

a study was undertaken to examine the extent of clinical pharmacy services in family practice residency programs.

#### Methods

A sample of programs to be studied was selected from the 373 accredited US family practice residency programs and was randomly stratified into a I or II portion of a Solomon four-group design.

A survey form was developed to assess the degree and type of clinical pharmacy involvement in the residency program. This form consisted of a list, drawn from the literature, of 14 clinical pharmacy functions designed to be checked off as they pertained to the individual program.

A packet consisting of the survey form, a group of resident questionnaires (to be used for another portion of this project), and a self-addressed return envelope was mailed to the director of each program in phase I on August 1, 1980, and to all of the

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