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Celiac Disease

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Is anyone surprised to see 2 articles about celiac disease in a single issue of the *Journal of Athletic Training*? I expect so, especially those who view the certified athletic trainer (ATC) in the more ''classic'' mode. But given the increased appreciation of the ATC's importance on the sports medicine team and the steady and appropriate expansion of the ATC's role in the health care system, it is proper and necessary that ATCs become familiar with the wide variety of both common and less common medical problems that can affect their athletes. The *Journal of Athletic Training* is an important venue for accomplishing this and should be congratulated, along with the authors of these 2 reports, for stretching the boundaries a bit.

I am delighted to be asked to comment about these 2 articles. They not only provide a good synopsis of what the ATC should know about celiac disease but also illustrate some important general principles that ATCs should follow when dealing with medical conditions in the populations for which they are responsible.

Celiac disease, or what is currently referred to as gluten-sensitive enteropathy (GSE), is uncommon in medical practice although, in addition to those cases recognized, a number of subclinical or atypical cases are certainly undiagnosed. Both groups of authors appropriately emphasize this point. The importance of making the diagnosis in symptomatic patients is 2-fold: symptoms can be relieved by dietary manipulation, thereby improving the patient's well-being and athletic performance, and complications of the disease, which are the result of malabsorption, can be prevented or reduced.

The presence of a known asymptomatic population having laboratory findings that are highly correlated with the presence of GSE (eg, a positive test result for endomysial antibody) raises the question of whether an asymptomatic person with serologic markers for a particular disease ought to be labeled as having that diagnosis. Should one treat such asymptomatic persons (eg, put them all on a gluten-free diet)? I do not think so. Similarly, I do not share the authors' anxiety about what might appear to be a large reservoir of patients with undiagnosed GSE doomed to inevitable serious consequences from the disease. Symptoms suggestive of the disease should trigger appropriate diagnosis and treatment, but I believe that truly asymptomatic persons, even if they have serologic markers for GSE, are not at significant risk of complications. In my opinion, screening an asymptomatic population for markers suggestive of GSE would certainly not be cost effective and is not to be recommended.

Although the classic picture of weight loss despite a good diet in a patient who has frequent soft, bulky, malodorous, oily, floating stools ought to suggest GSE or some other disease process that causes malabsorption, some patients with GSE have atypical symptoms without obvious malabsorption. These patients may present, for instance, with vague abdominal complaints, excessive flatulence, or symptoms of deficiency states caused by specific malabsorptions: vitamin A deficiency causing night blindness; vitamin D and calcium deficiency causing osteoporosis and osteopenia, which may present as traumatic or stress fractures; vitamin K deficiency leading to easy bruising; or failure of iron absorption, causing refractory iron-deficiency anemia without obvious blood loss. Making the diagnosis in the face of atypical symptoms is difficult, but I hope ATCs who read these case presentations will at least consider the diagnosis of GSE if faced with such patients. As is said of many difficult-to-diagnose diseases, ''You may not have seen it, but it has seen you!''

The definitive diagnosis of GSE (and many other diseases) requires fulfillment of 3 criteria: the history and physical examination must be suggestive of the diagnosis, the laboratory and pathologic findings must be confirmatory, and the specific treatment used must relieve the symptoms. Thus, the case reported by Eberman and Cleary is clearly celiac disease, whereas the case reported by Leone et al, although likely celiac disease, is not definitively diagnosed because laboratory and/or pathologic confirmation is lacking.

The technique of developing a differential diagnosis while evaluating a patient is practiced daily by physicians. Athletic trainers ought to do it also. Basically, a differential diagnosis is a list of possible diagnoses that fit the picture with which the patient presents. Sometimes the list is short, as with a common cold or a skin wart. Sometimes it is extensive, as in the 2 cases presented here. The diagnoses listed should be at least somewhat consistent with the presenting situation; they should also be ''reasonable'' and not just a rote recitation of all potential diagnoses that share any characteristic found in the patient's evaluation. The differential diagnosis should be dynamic: items are removed from the list as evidence that disproves them is gathered, and items may be added as further information or understanding develops. One should be careful to avoid ''tunnel vision,'' especially early in the diagnostic process, when it is entirely too easy to seize on an erroneous diagnosis prematurely and fail to consider alternatives. It is the action of constructing the differential diagnosis list, using it to define specific diagnostic steps to refine the diagnosis, repeatedly updating it, and ultimately homing in on the correct diagnosis that makes each patient evaluation an exciting educational experience and promotes a successful outcome. Nothing, except possibly making a serious mistake that will not be repeated, is more self-educational in medicine than evaluating a patient, committing to a specific diagnosis, and then com-

paring that diagnosis with what the final diagnosis eventually proves to be. Athletic trainers must understand that, as health care professionals, these responsibilities fall within their job descriptions. No ATC should refer an athlete to the team physician or another practitioner without having a firm differential diagnosis in mind.

Evaluation of the patient's history may be the most important step in the diagnostic process, whether one is dealing with an ankle sprain or a complex medical problem. In both of the celiac disease cases presented, the history initially suggested the diagnosis. All physicians have heard variations of "Listen carefully to your patient and he or she will tell you what the diagnosis is," and that is not bad advice for ATCs. Actively listening to the patient, being sure that you understand what the patient is telling you, recording the patient's story accurately, and being willing to go back over it again and again until you've got it right is an important process for the ATC in each patient encounter. Remember that the patient's history includes the family history, which usually encompasses 2 or 3 generations. The case described by Leone et al dramatically shows the value of family history. In my experience, ATCs tend to give the patient's personal and family history relatively short shrift, and in doing so, they fail to use what may be their most useful diagnostic tool.

Athletic trainers ought to have a low threshold for referring patients to the team physician or other experts for consultation. Having a good working relationship with the team physician and other consultants helps to make this process easier and more productive. It is important that ATCs view the act of seeking consultation as a positive and appropriate action performed by a capable professional rather than as an unflattering reflection on their competence. Use of consultation is actually an important indicator of medical wisdom. Athletic trainers should, with experience, come to know what they feel comfortable with and should refer the patient as soon as they approach the limits of that comfort. They should never refer the patient for consultation without forming, and writing down, their own diagnostic opinion first. The consultation will be all the more educationally valuable if it reinforces, or rejects, the ATC's consciously held opinion. Writing it down first makes it harder to "hedge" later and can prompt the consultant to provide valuable educational feedback. The ATC can assess the accuracy and value of a consultant's view by contrasting it with the opinion he or she formed before making the referral. If the 2 opinions differ and the ATC is not fully convinced that the consultant's opinion is correct, continued questioning should ensue. I have been greatly impressed on several occasions by ATCs who, having come to a firm opinion and referred their patient to me, questioned my subsequent opinion sincerely enough to cause me to reevaluate it, ultimately bringing me around to their point of view.

Both of these articles reflect the often critical role that ATCs can play in applying and monitoring the therapy of medical conditions once the diagnosis is made. Frequently nobody is in a better position than the ATC to monitor the day-to-day application of prescribed therapy or to observe the effects of that therapy on an athlete when he or she is meeting high physical demands or is under peak stress. The ATC is often in the best position to understand other resources that may be available for the athlete within the setting and trigger helpful involvement by other members of the sports medicine team. Doubt not your great value to the athlete-patient in this role.

Many diseases, especially those that require fairly complex or life-altering therapeutic programs, have national organizations or support groups that can be of great help to patients. The Internet provides ready access to such organizations' Web sites, and an ATC who is somewhat knowledgeable about the particular disease in question can help the patient find reliable Web sites. For GSE patients, the following resources, among others, might be recommended: Gluten Intolerance Group of North America (http://www.gluten.net), Celiac Sprue Association/United States of America Inc (http://www.csaceliacs.org), and the Celiac Disease Foundation (http://celiac.org).

I would urge ATCs who read these and similar reports to appreciate what a critical difference they can make in case finding, diagnosis, and therapy of not only celiac disease but also of many other medical problems that can affect athletes and enthusiastically accept that part of their role as health care professionals.