

Early Diagnosis of SLE in Childhood

By: *Thomas J. A. Lehman, M.D.*

Early diagnosis is the key to getting the best possible outcome for children with systemic lupus. With early diagnosis and treatment, much of the long-term organ damage associated with SLE can be prevented and the prognosis is greatly improved. Unfortunately, prompt diagnosis of SLE in childhood is the exception, not the rule. What are the problems? How can we correct them?

Consider the possibility of SLE

The most important cause for delay in the diagnosis of childhood SLE is the failure of the initial physician to consider the possibility of a lupus diagnosis. Many times, primary care physicians who are told that a young patient has systemic lupus will say, “That’s a really rare disease. I haven’t seen a case of SLE since medical school.” Even physicians who are aware of childhood SLE often fail to consider the diagnosis in boys and younger children.

Furthermore, most primary care physicians expect any child with SLE to walk into their office with a classic “butterfly rash.” In reality, fewer than one-third of children with systemic lupus will have this facial rash when they first see a physician. And even when the butterfly rash is present, it is often ascribed to another cause.

Findings may indicate SLE...or not

The ACR (American College of Rheumatology) guidelines for “a definite diagnosis of SLE” are often incorrectly used as a guide for when to consider *the possibility* of SLE. This is not what these 11 criteria were created for! The criteria were created to allow physicians to *describe patients who most definitely did have SLE*. They don’t include the most common initial symptoms of systemic lupus, which are fever, malaise (not feeling well), and aches and pains. But there are a number of findings that should make the pediatric physician include systemic lupus in their diagnosis.

For example, children with SLE will often describe having felt tired and achy for several months before the diagnosis of SLE was considered. Many times they had begun to do poorly in school, lost interest in their friends, and become withdrawn. In several cases, SLE was recognized only because the primary care physician was wise enough to do a complete work-up prior to the start of psychotherapy.

Some children diagnosed with SLE have a long history of being evaluated—always “without explanation,”—for anemia, easy bruising, or fatigue, fever, and weight loss. There is a wide variety of other “unexplained” findings; systemic lupus is extremely varied in the way it starts. At the same time, all of these findings may be caused by many different diseases.

In the end, most of the children with these types of signs and symptoms do not have SLE. So how do we proceed?

The ANA test and what it suggests

We have established that the most important key to early diagnosis of SLE is to remember that lupus is one of the possibilities in children who become ill. If physicians remember this, they can be sure that a test for antinuclear antibodies (ANA) is included in the laboratory tests that they order. A positive test for ANA should prompt further consideration of SLE. Although some cases of ANA-negative SLE in children have been reported, these instances are very rare; virtually all children referred for ANA-negative SLE have some other illness. However, it cannot be stressed enough that a positive test for ANA is *only a screen* for childhood lupus. Today's ANA test is very sensitive (it detects almost every case of SLE), but it is not very specific (many of the children with positive tests do not have SLE).

The diagnosis process continues

Once a physician has found a child's ANA test to be positive, more complete testing is needed to seek other evidence of SLE. This is where it becomes important to consider the presence or absence of ACR criteria for a "definite diagnosis of SLE." The first four of the 11 criteria involve the skin: malar rash, discoid rash, photosensitivity, and oral ulcers. The next four are based on systemic criteria: arthritis, serositis, kidney disorder, and neurologic disorder. Finally, there are three laboratory criteria: blood abnormalities, positive antiphospholipid antibody test; and immunologic disorder, including lupus anticoagulant, positive anti-double-stranded DNA, false-positive syphilis test, or positive anti-Smith test (such as anticardiolipin).

Children with a positive ANA who do not fulfill ACR criteria deserve careful consideration. Most either have another illness, or may not be ill at all. I've seen many children in whom an ANA was found as part of the initial workup, but the ultimate diagnosis was not SLE. On the other hand, I've seen children who fulfilled only three of the ACR criteria, but definitely had SLE.

Early in the course of this disease a child may fulfill only three criteria, with findings which fulfill a fourth criteria coming later. To distinguish a "false positive ANA" result from an actual case of SLE takes a careful work-up by an experienced physician.

What can the family history tell us?

One area of great concern for families is the child with a strong family history of SLE. Often, one-third of the relatives of an individual with SLE will be ANA-positive, but will have no disease. However, there is an increased incidence of SLE in families.

Many years ago I examined all the relatives of a large group of children with SLE. In this group, there were 30 (yes, thirty!) sisters who were ANA positive. Although they did not realize it, two of the girls had SLE, and were started on therapy. The remaining 28 were followed for several years. For the next two years, no-one developed disease. However, between years three and five, several of the other girls developed definite SLE.

While it is clear that this group was at increased risk relative to the normal population, most of them did not develop disease over a period of more than five years. Other studies have suggested that a form of lupus may occur at some point in about one out of 20 people whose siblings have lupus, although whether this risk is different in the pediatric group is not currently known. This situation is best addressed by having the children's physician examine them every

year for any evidence of problems, and more importantly, remembering the possibility of SLE whenever problems develop in these children.

Conclusion

SLE in childhood can usually be easily diagnosed and treated by an experienced physician. When the disease is detected early it can often be treated successfully, and significant long-term complications may be prevented. But the real key to early diagnosis is greater public and physician awareness that SLE occurs not only in teenage girls, but in younger children and in boys. If we can make primary care physicians more aware of the varied and sometimes subtle ways in which SLE can begin, we can stimulate them to screen for SLE more quickly.

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Early childhood autism is a serious developmental disorder that is difficult to correct. Nowadays the key moment in the development of autism syndrome is considered as a violation of the normal functioning of ontogenesis of the brain. Distortions of the temporal parameters of the maturation of the nervous system, impaired development of separate zones, as well as the pathol with a diagnosis of early childhood autism. The purpose of the study is to study the relationship of EEG data with the clinical manifestations in children diagnosed with early childhood autism. Materials and research methods. The study was conducted using clinical, psychopathological and neurophysiological methods. In a neurophysiological study, a qualitative analysis of the background EEG was performed.

@article{Martinati1995ClinicalDO, title={Clinical diagnosis of wheezing in early childhood.}, author={Laura C. Martinati and Attilio Loris Boner}, journal={Allergy}, year={1995}, volume={50 9}, pages={. 701-10 } }. Laura C. Martinati, Attilio Loris Boner. View on PubMed.

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Developmental difficulties in early childhood: prevention, early identification, assessment and intervention in low- and middle-income countries: a review. 1.Child development. 2.Child welfare. — The Lancet: Child Development 2: Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries.