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Diagnosis of lupus: A glass half full

IT'S HARD TO BE DOGMATIC about the diagnosis of a disease of which the cause is unknown, the clinical presentation is extremely variable, there is no pathognomonic finding, and the diagnostic criteria are promulgated by a consensus committee. It may even be harder to differentiate between two such diseases that have some overlapping characteristics and which often coexist in the same patient.

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Yet in this issue of the *Journal*, Dr. Blumenthal convincingly draws the line between systemic lupus erythematosus and fibromyalgia.[1] In so doing, he correctly focuses on the features that differentiate them from each other rather than those that they share, and he points out the ambiguities that the laboratory cannot adequately resolve in many patients.

LABORATORY TESTS CAN CONFUSE

At issue are the various tests for antinuclear antibodies (ANAs) and how they sometimes confuse us. Assayed by a variety of methods, the ANA is the most frequently positive test in patients with lupus.

There are several subcategories of ANAs, notably anti-double-stranded DNA and anti-Sm, and tests for these subcategories, like the overall ANA test, may also be positive in lupus patients. If the ANA test is negative, that is strong evidence against the diagnosis of lupus. If tests for anti-double-stranded DNA or anti-Sm or both are positive, that is strong evidence in favor of the diagnosis.

But what of the many patients who have positive ANA tests but negative results for anti-double-stranded DNA and anti-Sm? This is the situation in which the laboratory test results are not helpful, and the diagnosis has to be made on other grounds. Unfortunately, this situation is fairly frequent in fibromyalgia, and it also occurs in lupus, especially during remissions.[2]

USING TESTS EFFECTIVELY

It is impossible to use these tests effectively without knowledge of the positive and negative predictive values of each one for the diagnosis of lupus, and these values are method-dependent. They are well documented for some of the test methods, but not so well worked out for some of the newer methods.

To use a test effectively, you must know what it means

Laboratories must describe the characteristics of new tests

As Dr. Blumenthal points out, many laboratory tests for ANAs have changed in recent years, and data regarding these new tests are scant. Unannounced implementation of new methods for immunologic tests without determining their diagnostic characteristics is, at best, confusing to physicians, and this is certainly not good for their patients. Laboratories introducing such assays to save cost, but in the process replacing older tests that have better-known characteristics, have an obligation to do the necessary parallel testing so that the clinicians ordering them can interpret the results with confidence.[3]

Physicians must avoid 'fishing expeditions'

For their part, clinicians must order responsibly; these are not tests to use on a fishing expedition, as Dr. Blumenthal points out.

In the long run, better establishment of new test characteristics will save money, since it should reduce the need for "ANA consults" to explain unexpected test results. It should also avoid the assignment of an inappropriate diagnosis, with all the insurance hassles and other unfortunate implications this may carry for the patient. Clinical laboratories have the responsibility to work with clinicians to gather and disseminate these data before establishing new tests and discontinuing old ones.

The tests will always be imperfect, but with better knowledge of how they perform, we can look at the clinical laboratory's role in lupus diagnosis as a glass half full rather than half empty.

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