



Show Me Some Skin

Dr. Joseph Sonnabend analyzes Sean O. Strub's skin tests for immune function and TB

June 1, 1996 By Bob Lederer

*Medical measurements which help health practitioners make diagnoses can also help people with HIV track their health. **Joseph Sonnabend, M.D.**, is a trail-blazing physician who has cared for hundreds of people with HIV in New York City since before AIDS had a name. While continuing his practice, he serves as medical director of the Community Research Initiative on AIDS. He analyzes the skin test results of his patient, POZ founder Sean O. Strub.*

While the AIDS community's attention is riveted on blood tests -- particularly viral load measures -- to assess health, another kind of helpful test is being overlooked. An anergy panel measures immune reactions to proteins injected into the skin on the arm, providing information that might help with some treatment decisions. Also called a delayed type hypersensitivity (DTH) test, it shows whether you can still mount an effective immune response to inactivated forms of microbes such as tetanus, diphtheria and Candida. The test I use includes simultaneous, separate injections of several microbes (plus one empty solution for a control). If within 48 hours, any of the injection points (except the control) becomes reddish and forms a raised patch of 2 millimeters (mm) or more by the patient's measurement, that is a positive reaction. If you don't get a raised patch, you are said to be anergic.

I think this is one reasonable measure of cellular immunity -- the ability of your T cells (CD4s, CD8s and others) to recognize and respond to a foreign invader. Properly working T cells react by creating inflammation -- thus the red, raised patch. The larger the patch, the more potent the response. So, theoretically, you're measuring how well those T cells function, not simply counting them. Although no research has yet shown this, I think a strong response suggests a better prognosis. Others disagree, citing studies showing great variation from test to test.

Also, reduced or absent test responses are seen with the immune suppression caused by malnutrition and deficiencies in nutrients such as vitamin C.

Lots of people with HIV are anergic -- some between 200 and 400 CD4 cells, most between 100 and 200, and nearly all below 100. But amazingly, Sean, with a dozen or fewer CD4 cells for many months, reacted to this panel with three sizeable patches -- two of them 3 mm wide, the third 5 mm. That's almost unheard of. The only clue as to why this might have happened is that a few weeks before the test, he started on the antiretroviral 3TC, which perhaps caused this immune

response. Anyway, it can only be a good sign for his prognosis.

The next time Sean does this panel, if the sites of reaction are more numerous or bigger, that'll give even stronger evidence of genuinely improved cellular immunity. Meanwhile, I'd say that considering his condition (KS in the lungs, high viral load, very low CD4 count), overall he's doing pretty well on a day-to-day basis.

There are two possible ways to use the results of an anergy panel. One is to determine whether a separate skin test for exposure to tuberculosis (TB) -- a major problem for PWAs in certain big cities -- is likely to be giving accurate results. This test, called a purified protein derivative (PPD), also involves an injection which, in those previously exposed to TB, causes a raised red bump. But for those who are anergic, a negative PPD result may be a false negative and so requires doing an anergy panel as a cross-check. Sean's recent PPD was negative, which of course is very good news.

I perform PPDs and anergy panels on every HIV positive person when they first see me. A positive result doesn't necessarily mean you have full-blown TB and are contagious, but if you have never received either TB treatment or a BCG vaccine for TB, you should receive a complete medical history, physical exam, chest X-ray and other lab tests to determine if the disease is active, and you should probably get prophylactic treatment with INH. (You should also have a doctor examine anyone with whom you have close, regular contact.) Anyone testing anergic with a negative PPD result should have a chest X-ray. (Sean did this last year and was found TB-free.) And anyone who might get exposed to TB -- especially anyone often present in a hospital, prison, homeless shelter or similar institution -- should be retested yearly. TB should not be taken lightly.

The second way to use an anergy panel is as one more factor in making treatment decisions, particularly about starting drug prophylaxis (prevention) for *Pneumocystis carinii* pneumonia. This panel can be helpful when other tests give borderline results. For example, if someone has had a stable CD4 count in the mid-200s (above the 200 guideline for starting prophylaxis), a CD4 percentage of 22 (above the 20 percent guideline) and previously had positive skin test results but is now anergic, I might suggest prophylaxis. But regardless of anergy, I wouldn't recommend that if both the CD4 count and percentage were way above the danger range.

In the end, HIV management has many gray areas. The more information you have, the better your treatment decisions can be.