BENCHSIDE DISPATCHES
GRANULOMATOUS DERMATITIS

AN INTERVIEW WITH MISHA ROSENBACH, MD

Welcome to the sixth installment of Benchside Dispatches, a series of interviews with top researchers in the field of dermatology intended to highlight important advances in the care of medical skin disorders. Prominent thought leaders will explore the burgeoning research in specific dermatologic disease states and how significant advancements in basic science are fueling a healthy pipeline of new candidate therapeutics.

In this installment, we speak with Misha Rosenbach, MD, Assistant Professor of Dermatology at the Hospital of the University of Pennsylvania, Director and Founder of the Cutaneous Sarcoidosis Clinic in the Department of Dermatology at the Hospital of the University of Pennsylvania. Dr. Rosenbach is Associate Program Director, Residency Training Program, Department of Dermatology University of Pennsylvania School of Medicine and Director, Inpatient Dermatology, Department of Dermatology, Hospital of the University of Pennsylvania.

What is Reactive Granulomatous Dermatitis, and why is it a ripe area for research?

Dr. Rosenbach: Reactive granulomatous dermatitis is an interesting new way to think about granulomatous diseases. It's an area of confusion in dermatology to try to distinguish when patients have something called palisaded neutrophilic and granulomatous dermatitis (PNGD) or interstitial granulomatous dermatitis (IGD). Those entities share a lot of clinical overlap and potentially even histopathological overlap. So I and my colleague Joe English at University of Pittsburgh and a few others asked why we have these names and what these names really tell us when we're seeing a patient.

What does it mean if you diagnose someone with palisaded neutrophilic and granulomatous dermatitis or with interstitial granulomatous dermatitis? Is there a difference between those? The term reactive granulomatous dermatitis is what we've proposed recently as an all-encompassing umbrella to try to capture both patients who have PNGD and IGD and put them in one category that tells you exactly how you have to think about them. Instead of worrying which of the diseases you have, really the important thing is what you are going to do when you get that diagnosis back.

What are clinical implications of this classification?

Dr. Rosenbach: We've talked about a similar shared workup for patients with what we call reactive granulomatous dermatitis. Patients can have reactive granulomatous dermatitis as a reaction to a number of different things, primarily autoimmune diseases—lupus and other connective tissue diseases—but also inflammatory arthritides like rheumatoid arthritis, or sometimes from hematoproliferative disorders—myelodysplastic syndrome or paraproteinemias—and very rarely from other entities.

There are some cases of drug-induced reactive granulomatous dermatitides so we say that everyone should have ANA checked, rheumatoid factor checked, CBC checked, and maybe paraproteinemia checked and a careful review of their medications to look for a triggering agent; probably the most important one is calcium channel blockers.

What are the most active areas of research in GD currently?

Dr. Rosenbach: Granulomatous diseases are really interesting because for a long time I think they've been neglected by dermatologists and really have fallen on to other specialties. The best understood granulomatous disease is sarcoidosis, and that's because 90% of patients with sarcoidosis will have lung disease. Pulmonologists have done a fair amount of work in trying to help us understand what inflammatory pathways are involved in forming granulomas, what antigenic triggers are involved in setting off the granulomatous inflammatory pathway, and what treatments we can use to address patients who have granulomas. A lot of what we do in dermatology is based off of what we know about sarcoidosis and then a little bit of the work that some dermatologists have started doing in helping us understand better how we think about different granulomas in the skin.

Most of the exciting research at this time is probably with sarcoidosis, and there are a couple of reasons for that. One, it's a multisystem disease that can affect not just patients' skin, but their lives. So there's a lot of work being done in trying to figure out how we can measure sarcoidosis. Some dermatologists, including me, are involved in developing validated scoring metrics…If we have a standardized way of looking at patients with standardized measuring systems, it lets us do for sarcoid what we've done for diseases like lupus with the CLASI or even for psoriasis with the PASI.

Some of my personal research in granulomatous diseases is focused on that concept of how we measure how active the disease is, and when we treat people, how much better they get. Until we have a standard way to do that, it becomes really hard to compare different papers that report one treatment and one response rate versus a different treatment and a different response rate…Now, the work that we've done in developing what's called the CSAMI or cutaneous sarcoidosis activity and morphology instrument, and using some objective tools and patient-reported outcome instruments to measure disease severity and impact of the disease, allows us to standardly take patients who we see on their skin have active disease. We can measure how bad their disease is, enroll them in studies or treat them with standard of care treatments, and watch how their disease goes away.

Once we're all speaking the same language, it lets us report, "Well patients who are treated with hydroxychloroquine tend to have this kind of response rate, patients who are treated with methotrexate or TNF inhibitors tend to have that kind of response rate." ■

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