The art of seeing clearly what others may miss is a crucial factor in the life of a dermatologist,” notes Dr. Eric Challgren of the Southern Dermatology and Skin Cancer Center in Raleigh.

“One of the attractions of dermatology for me is that, while it offers a great deal of variety, from pediatrics to geriatrics, and includes surgery, it is in large part a visual specialty.”

“My great-uncle, now deceased, offers an example of what I mean. He had a red lump on his neck, and he basically ignored it for a few months. There was no pain, it didn’t really bother him, but it kept getting bigger.

“Finally the lump did become a bit sensitive, and so he went to his primary care doctor, an internist. This doctor didn’t know what this red lump was, either, so he referred my great-uncle to a dermatologist who was immediately suspicious. A biopsy revealed that he had Merkel cell cancer, often an aggressive skin tumor of neuroendocrine cell origin. Generally, it offers a poor prognosis, even with early detection. It turns out that the cancer had metastasized to my great-uncle’s lungs, and after chemotherapy and radiation, he died.

“Even with very early detection, this would have been considered a serious problem. My point is that an affliction such as Merkel cell cancer is pretty rare, and it takes a very well trained eye—a visual skin expert, you might say—to pick it up quickly and give the patient the greatest chance of overcoming the problem.”

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As a related issue, Dr. Challgren points out, “dermatologists are trained, day after day, case after case, in the art and science of differential diagnosis. When we look at a skin cancer or something as common as atopic dermatitis—a condition which, by the end of residency, we’ve seen thousands of times—you can almost hear the clicking noise in our heads, as we tick off the possibilities. It could be this . . . or it could be this . . . or this. A half-dozen or more possibilities present themselves very quickly to the trained dermatologist and, to a very large extent, they come rapidly following visual inspection of the skin problem. And then, based on many factors, we rank-order the possibilities and continue the diagnostic process.”

Would visual inspection alone lead, for example, to a diagnosis of atopic dermatitis? “No, but it certainly would be an important factor,” Dr. Challgren says. “Atopic dermatitis is a chronic condition, much more common in kids than in adults. ‘Atopic’ refers to a group of diseases that are hereditary and often occur together, such as asthma; allergies such as hay fever; and atopic dermatitis.

“Dermatins’ means inflamed skin. Often these skin conditions are lumped together under the title of eczema. There are, it seems, multiple causes of atopic dermatitis, and it often goes into remission as the child ages. Often, by late adolescence or early adulthood, it clears up entirely, although there’s a tendency for the skin of these patients to continue to be sensitive and easily irritated.

“So we look at this skin condition, that typically is red, blistering, or oozing, and you can be sure that high on the differential diagnosis list will be the term ‘atopic dermatitis.’ The medical history is a vital tool, in this and in many other instances, as well. It’s more complicated because symptoms vary from one patient to the next. Each patient experiences a unique combination of symptoms, and the symptoms and severity of the disease may vary over time. The most common symptoms are dry, itchy skin, cracks behind the ears, and rashes on the cheeks, arms, and legs. Scratching—and it’s hard not to scratch because the itching sensation can be pretty intense—makes the condition much worse.

“As we do the medical history, we’ll ask about allergic diseases in the family, if there are other problems present such as hay fever or asthma, about the possibility of allergic reactions to foods, sleep problems, and much more. Certainly there is a genetic predisposition for this type of skin problem, and so we need to explore this aspect, as well. Basically, there is no useful test that will tell us, definitively—Yes, this is atopic dermatitis and nothing else. But we need to isolate possibilities so we can treat the condition most effectively. And there are very excellent treatment options open to us.”

AN ANALYTICAL APPROACH

Although he is a native of Kentucky, Dr. Challgren had the wisdom to come to North Carolina State University for his undergraduate degree, earning a BS, with honors, in chemical engineering with a biochemical science option and a minor in Spanish. He earned his medical degree from the Medical College of Ohio, completed an internship there in internal medicine, and went on to the Medical College of Wisconsin for the three-year dermatology residency program.

“While I enjoy and appreciate the visual aspects of dermatology,” he says, “I feel certain my training in engineering has made me a more analytical thinker.

“There are, in fact, many paths to the same destination, in terms of diagnosing illness. My pathway is invariably analytical. When a patient comes to me with something as common as acne, for example, I of course want to offer helpful treatment. But I am also intrigued by the cause of these skin conditions I see every day. Is this simply teenage acne, or is there something else going on? Is this young football player loading up on iodine and getting iodine-induced acne, or is he, perhaps, on steroids that are manifesting as acne?

“Even the simplest rash has the potential of signaling a health issue that deserves attention. Certainly we are trained to be ever alert.”

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