

What Are Dysplastic Moles?

By Charles Camisa, MD

To better understand the concept of “dysplastic moles,” we must agree on definitions of terms. *Dysplastic* from *dysplasia* means abnormal development of tissue. A *mole* in this context usually refers to a growth in skin that may be pigmented, flesh-colored, flat or raised, hairy or non-hairy. A mole, also called a *nevus*, usually consists of pigment-producing cells called *melanocytes* which migrate to the skin where they settle and mature along with the normal skin cells. Interestingly, melanocytes are derived from neural tissue in the developing embryo, and not from skin cells.

Moles may be present at birth, called congenital, but most are acquired during a lifetime. It is normal to have moles. The average Caucasian adult has about 40 moles. New moles may appear at any age, but their growth tends to fall off by age 40 years. After that, some moles may actually get smaller, lighter in color, or actually disappear.

The concept of dysplasia in moles has been around for a long time, with the understanding that some moles may transform into malignant melanomas. However, from studies of biopsy material, we know that most melanomas arise from normal-appearing skin. Some arise from congenital moles where the risk is higher when these moles are very large, sometimes covering an entire extremity or segment of the body. Some arise from previously normal-appearing moles, and still others arise from abnormal or dysplastic-appearing moles.

During my 30+ years in the specialty, I have followed the evolution of the “dysplasia” concept starting with the reports of the Familial Atypical Mole and Melanoma syndrome by Lynch in 1978, whereby patients and their first degree relatives demonstrated many large and bizarre-appearing moles on their trunks. These patients had a very high risk of developing melanoma, approaching 100%. Subsequently, these patients were determined to have the Familial Dysplastic Nevus Syndrome by Clark and others. Then it was noted by observant investigators such as Al Kopf and his disciples that many persons, perhaps all Caucasians, had one or more dysplastic moles on their bodies whether or not they had a personal or family history of melanoma. These patients were then said to have Sporadic Dysplastic Nevi (Moles).

The clinical description of dysplastic moles is that they tend to be large, irregular in outline, and have different colors within them. A typical example is one that looks like a fried egg with a dark brown color in the center and a lighter brown or red around it. The problem is of course that this description may also fit many melanomas. Then how do you tell them apart? The best way is by skin biopsy or surgical removal. There is also another method of direct microscopy on the skin surface with an instrument called the dermatoscope which is similar to an ophthalmoscope. A computerized system which scans the mole and compares all of its features to thousands of moles and melanomas which it has previously learned and which were confirmed by biopsy has been worked on by Harold Rabinovitz and others. Such a device is not yet generally available, but I think it will be a very helpful adjunct to clinical diagnosis, planning, and prognosticating.

One of my mentors, and perhaps the most innovative dermatopathologist who ever lived, was A. Bernard Ackerman. Everyone called him Bernie. Bernie had a different opinion about the so-called dysplastic mole. He agreed that they existed, but he also believed that their distinctive features under the microscope made them the *most common mole of humans*. He called them Clark's nevus in what was perhaps ironic tribute.

In current dermatologic practice, when we see a mole which shows features of the ABCD's, that is, asymmetry, border irregularity, color variegation, and diameter larger than a pencil eraser, we think of melanoma and perform a biopsy. What if the person has 10 of these, or 20, or 100? Do you remove them all? Not practical. You can biopsy a few of the most abnormal appearing moles. When these are examined under the microscope by the dermatopathologist, she will grade the atypical appearance of individual melanocytes as mild, moderate, or severe and report whether the entire mole was removed by the procedure. If the mole was not entirely removed by the biopsy, then it is prudent to go back and perform a conservative re-excision of the biopsy site. The reason for this is that some authorities consider a dysplastic nevus a precursor of melanoma while others believe that it is merely a marker for a higher risk for developing melanoma in a lifetime *anywhere else on the body*. Both camps agree that the risk is greater for the more severely atypical cells and that such patients should perform self skin exams regularly and have an annual full body skin exam by a dermatologist.
