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The mythical concept and untoward consequences of a diagnosis of dysplastic nevus: an overdue tribute to A. Bernard Ackerman, MD

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The so-called dysplastic nevus first entered medical parlance in 1980 [1], originally known as the B-K mole in 1978, only to evolve over the next 34 years into a variety of names including familiar and atypical sporadic mole, melanocytic nevus with persistent lentiginous melanocytic hyperplasia, junctional or compound nevus with architectural atypia/disorder with or without cytological atypia, and Clark's nevus, to mention but a few [2-6]. It is common knowledge that there is significant discordance and diagnostic uncertainty among consultants in the histopathologic diagnosis of difficult melanocytic neoplasia, i.e., benign or malignant [7]. The fact is there is disagreement among the experts [8,9] as to what constitutes the so-called dysplastic nevus clinically and histopathologically [10]. This is so because there is inadequate and conflicting clinical and histopathologic criteria for a so-called dysplastic nevus. Both a melanoma and a dysplastic nevus have the same clinical features of the notorious ABCD's (asymmetry, border irregularity, color variability, diameter greater than 6 mm) What was and still is most disturbing and concerning, is the fact that there were reports, studies, theories and beliefs suggesting that the so-called dysplastic nevus is pre-malignant or a precursor of melanoma. Furthermore, it is said that the so-called dysplastic nevus may evolve into a malignant melanoma in either the patient or in family members, or both. Overlapping criteria in melanocytic neoplasia are features that are seen in both benign melanocytic nevi and superficial melanoma, such as seen in some nevi on occasion shortly after birth, persistent (recurrent) nevi, or traumatized nevi. In addition, overlapping criteria may be seen in nevi on special sites such as the palm/sole, genitalia (especially vulva of young women), umbilicus, perianal, scalp, and intertriginous folds. "Although the diagnosis of cutaneous malignant melanoma is usually based on histopathologic criteria may at times be inadequate in differentiating melanoma from certain types of benign nevi." [11] Collectively, overlapping melanocytic criteria may well be the answer for such confusion between a so-called dysplastic nevus, melanocytic nevus and a superficial melanoma [12].

Unfortunately, when a physician labels a nevus as so-called dysplastic, or used as a hedge when unsure whether the lesion is benign or malignant, and therefore, "premalignant," there are consequences as this diagnosis evokes considerable

apprehension, concern and anxiety in patients and their families. Furthermore, reports mushroomed forth suggesting genetic transmission [13], but nowhere is there objective evidence that links the so-called dysplastic nevus or the so-called dysplastic nevus syndrome to malignant melanoma genetically or familial [14]. What is most distressing about the assumption that such dysplasia presages frank malignancy is that the assumption lacks sufficient objective validation, and is likely erroneous. The fact is that in melanocytic neoplasia, there are a variety of melanocytic nevi [15] and a variety of melanomas, e.g., melanoma in situ, superficial melanoma, and melanoma, but there is no dysplastic nevus.

Likely causes for the formation of false mythical conclusions operative in this untoward and ill-fated issue are the following [16]:

1) Simple "logic," that is, a conclusion based upon something that seems reasonable, e.g., heavy objects will fall faster then lighter ones.
2) Notions provided by (respected?) teachers and, therefore, assumed to be "valid," but later shown to be mythical.
3) A false belief arises when a condition is named in such a way that implies future progression, e.g., "pre-cancerous" lesion.

Treatments for this so-called dysplastic nevus and so-called dysplastic nevus syndrome regrettably have had the support and are promoted by many in the medical community, and sorry to say, in the legal community as well. What's more, there is disagreement among experts regarding screening guidelines for high-risk characteristics of cutaneous melanoma [17]. Among others, management includes repeated total body skin exams, repeated total body photographs, and aggressive avoidance of sun exposure. These procedures often lead especially and above all to the re-excision with margins of the so-called dysplastic nevus. Along these lines, excision of additional so-called dysplastic nevi (Figure 1) must also

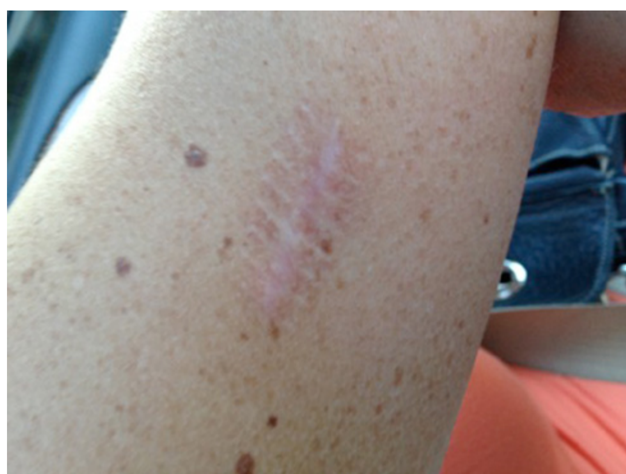

Figure 1. Scar on the right deltoid of a 40-year-old woman with numerous scattered melanocytic nevi on the trunk and extremities, following a 5 mm margin re-excision of a so-called Spark's nevus (features of a dysplastic and Spitz nevus). (Copyright: ©2015 Hurwitz et al.)

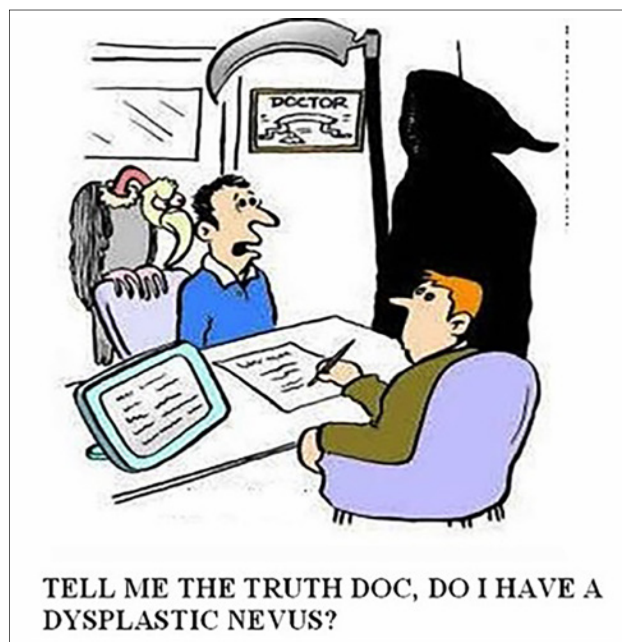

Figure 2. Source of cartoon unknown; text modified by author.

be considered meaningless. Sentinel lymph node biopsy is often considered in so-called dysplastic nevi with severe architectural disorder and/or cytologic atypia. This procedure is indeed unbelievable, extremely alarming, if not outright shocking. They result in traumatic psychological e.g., worry anxiety and fear, as well as physical e.g., unsightly cutaneous scars. The consequences for these far-reaching therapeutics and prognostications for the so-called dysplastic nevus are barely credible, if not potentially tragic. (Figure 2) [18,19]. Rarely, regrettably and inappropriately to some, additional procedures are thought to avoid future litigation, and/or are thought to be good for business.

These surgical maneuvers are reminiscent of other myths originating years ago, such as the mythical theory promoted dogmatically by Halsted—respected for his status—at Johns Hopkins Hospital. He postulated that attacking even small cancers with aggressive local surgery was the best way to achieve a cure, e.g., radical surgery for breast cancer, which included breast tissue, bone, muscle and lymph nodes, in the late 1890's and early 1900's [20]. Similar radical surgery was performed in New York with wide and deep surgery including amputation for melanoma [21]. Yet surprisingly, only about 50% of Halsted's mutilated radical mastectomy patients survived over three years, which was not superior to simpler procedures such as lumpectomy, introduced later.

Credible academic dermatologists and dermatopathologists have disagreed with the theories surrounding the so-called dysplastic nevus [22-25], that they inevitably evolve into malignancy, another example of mythical thinking. Medical history is replete with examples of destroyed myths. For instance, it was believed for decades that peptic ulcer disease was simply a result of stress and anxiety, but now we

understand from Barry Marshall and Robin Warren that the problem is the result of the bacterium *Helicobacter pylori* [26], and from Harald zur Hausen that cervical squamous cell carcinoma is not due to sexual promiscuity, but in point of fact to the human papillomavirus, HPV16/18 [26]. Myths regarding the over diagnosis of breast cancer are yet another [27,28]. Furthermore, the myths of blood letting, cataract formation with UV light, extraterrestrial aliens, goblins, Bigfoot, and remedies of questionable repute (snake oil) exist are often impossible to prove or disprove, because if truth be told, they do not exist, akin to the mythical dysplastic nevus [29].

In summary, branding the so-called dysplastic nevus as tantamount to a malignancy is clearly another, unacceptable devastating myth. As a result, we are creating needless fear and anxiety to patients and physicians alike, as well as placing patient lives in jeopardy. If we are to maintain any sort of ethics in the medical profession, then this myth of the so-called dysplastic nevus must be stopped. It is imperative that the discussion herein be a stimulus for sincere and genuine re-thinking and dialogue, of what has been a disastrous policy, and should not be flippantly dismissed as rhetoric or hyperbole without due consideration [30]. The late A. Bernard Ackerman, MD, for thirty years, strongly believed in this point of view, and so consequently lectured, published scores of videos and articles repeatedly stating that the idea surrounding a so-called dysplastic nevus is in fact a myth. To him, and too many informed, knowledgeable and well-versed colleagues, the so-called dysplastic nevus clearly is mistaken for a one of a variety of different types of melanocytic nevi, or a misdiagnosis of what is in reality a superficial melanoma. In the sincere and respectful words of the late A. Bernard Ackerman, MD, "The so-called dysplastic nevus has had thirty-one synonyms over the past thirty years, and thus this term should be relegated to the scrap heap." [31]

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