Pathogenesis and comparison of atypical spitz nevi vs benign spitz, and childhood melanoma

This presentation will review the clinical and pathologic features of the Spitz group of lesions that cause both clinical and histopathological difficulties in diagnosis. The clinical features of each entity will be described, followed by the appropriate histopathologic criteria that will also be illustrated. The benign Spitz nevus will be compared to atypical Spitz nevi, and atypical Spitz's tumors. Many of the latter lesions have the ability to metastasize but usually do not extend beyond regional lymph nodes. The criteria for the diagnosis of the atypical Spitz's tumor will be presented in detail. The malignant counterpart of the Spitz nevus will also be described. The treatment of each entity will be presented. A recently described entity, considered by many a variant of the Spitz nevus, the so-called BAPoma, will also be shown in clinical and histopathologic detail. The mutation that results in this tumor will be discussed, as well as the heritable nature of patients affected by this trait. Finally, the second portion of the talk will review malignant melanoma of childhood, its incidence, clinical presentation, and histopathology. Emphasis will be placed on the lesions that have the capacity to cause death in children. These lesions will be compared to and contrasted with the Spitz nevus and its associated atypical counterparts. Treatment of childhood melanoma will also be detailed. Recent molecular techniques including Frozen In-Situ Hybridization (FISH) will also be reviewed.

Biography

Martin C Mihm graduated “Summa cum laude” from Duquesne University in 1955. He obtained his medical degree from the University of Pittsburgh Medical Center in 1961. He specialized in Internal Medicine, Dermatology, Pathology, and Dermatopathology.

He started residency in dermatology at the Massachusetts General Hospital (MGH) in 1964 and after completing pathology residency joined the staff in 1973. In 1976, he founded one of the first five residency training programs in Dermatopathology in the United States. He became a professor at Harvard Medical School in 1980. He joined the faculty of Albany Medical Center in 1993 to establish a dermatology and dermatopathology training program. In 1996, he returned to MGH to continue work in melanoma and to establish a vascular malformation clinic as clinical professor.

On July 1, 2010, he assumed the position as Director of the Melanoma Program in Dermatology at the Brigham and Women’s Hospital and Associate Director Dana-Farber and Brigham and Women’s Cancer Center. Dr. Mihm holds now five adjunct professorships at different schools in the United States. He also was a co-founder of the Rare Tumor Institute of the WHO in Milan, Italy and acted as external coordinator for five years. He is currently co-director of the EORTC melanoma pathology program. He has written over four hundred articles and authored and co-authored twelve books.

His research interests have principally been related to malignant melanoma, the study of delayed hypersensitivity reactions in animals and humans with Dr. Harold Dvorak, and more recently has begun to investigate the pathogenesis of vascular anomalies. He began his melanoma studies with Dr. Wallace Clark in 1965 and coauthored the first publication of the classification of malignant melanoma into subtypes. He also contributed in establishing the importance of tumor infiltrating lymphocytes as an important prognostic factor in primary and metastatic melanoma. The research with Dr. Harold Dvorak led to the discovery of the role of basophils in human hypersensitivity reactions, as well a definitive description of delayed hypersensitivity in man led to the first description of the role of the vasculature in human allograft rejection. For the last sixteen years, he has been working as co-director of the World Health Organization melanoma pathology program mainly devoted to the study of TILS in melanoma. In 1994, he began working with Dr. Glenn Dranoff and subsequently Dr. Steven Hodi in the study of vaccine reactions to autologous melanoma cells. This collaboration also includes investigation into various factors affecting the host reaction and the relationship to survival. This work has led to critical insights in the dynamics of immune function and its regulation. In the last eight years, he has also begun to study vascular anomalies in children and in adults. With Dr. Paula North, the discovery of a specific phenotype, in infantile hemangiomas has led to extensive studies on pathogenesis of these lesions.