Bednar tumor

To the Editor

I read with interest the paper by Drs. Kuruvila and Ramadan regarding Bednar tumor.[1] Pigmented dermatofibrosarcoma protuberans (DFSP) (Bednar tumor) is indeed an uncommon neoplasm whose microscopic features were neatly described by the authors. There are 2 distinct cell types in this neoplasm: a spindle (fibroblast-like) mesenchymal cell, which is CD_{34} +ve; and a melanin-containing bipolar/multipolar dendritic cell, which is CD_{34} –ve and S_{100} +ve. The exact histogenesis of Bednar tumor is uncertain, although various theories abound, essentially to explain the presence of the 2 different cellular populations. Neuroectodermal differentiation and melanocytic colonization are 2 such opposing theories, which have been proposed over the years. The authors pointed out recent studies, which support the dual cell origin theory,[2,3] in which it is speculated that Bednar tumor originates from 2 different cell lines. I wish to remind the authors that an alternative theory is supported in some quarters, namely, the neuromesenchyme theory,[4] in which it is purported that a partly committed stem cell (neuromesenchymal cell) can differentiate towards either mesenchymal cells (the CD_{34} +ve cells of pigmented DFSP) or neuroectodermal cells (S_{100} +ve cells of pigmented DFSP). In support of this theory, Goncharuk et al[5] describe a case of Bednar tumor, which developed on a pre-existing nevus of Ito (dermal melanocytosis) implicating the dermal melanocytes as cellular precursors of both cell types in the Bednar tumor, and providing a boon to the multidirectional differentiation theory. As the authors state, more studies are indeed required to resolve the issue of Bednar tumor histogenesis.

Naseem A. Ansari
Department of Pathology
College of Medicine and Medical Sciences
Arabian Gulf University
Kingdom of Bahrain

Reply from the Author

No reply received from the Author.

References

1. Kuruvila S, Ramadan FA. Bednar tumor. ***Saudi Med J*** 2004; 25: 2016-2017.
2. Seo I, Goheen M, Min K. Bednar tumor: Report of a case with immunohistochemical and ultrastructural study. ***Ultrastruct Pathol*** 2003; 27: 205-210.
3. Kobayashi T, Hasegaura Y, Konohana A, Nakamura NA. Case of Bednar tumor: Immunohistochemical positivity for CD34. ***Dermatology*** 1997; 195: 57-59.
4. Reed RJ. Neuromesenchyme: the concept of a neurocristic effector cell for dermal mesenchyme. ***Am J Dermatopathol*** 1983; 5: 385-395.
5. Goncharuk V, Mulvaney M, Carlson JA. Bednar tumour associated with dermal melanocytosis: melanocytic colonization or neuroectodermal multidirectional differentiation? ***J Cutan Pathol*** 2003; 30: 147-151.