

LETTER TO THE EDITOR

Naoto Kuroda · Dmitry V. Kazakov · Michal Michal

Reply to letter to the editor: hybrid peripheral nerve sheath tumor

Received: September 5, 2010 / Accepted: September 8, 2010

To the Editor:

We would like to thank Dr. Teresa Pusiol and her colleagues for their interest in our paper and for their valuable comments¹. We agree with their comments that hybrid peripheral nerve sheath tumor has been previously reported in extradigital sites.^{2–4} The normal peripheral nerve sheath consists of Schwann cells, fibroblasts, and perineurial cells, and benign peripheral nerve sheath tumor including schwannoma, neurofibroma, and perineurioma is generally composed of these cells. Previous ultrastructural studies have elucidated that peripheral nerve sheath tumors contain these cells in various proportions. Recently, peripheral nerve sheath tumors with discrete areas of more than one histological type have been described, and these tumors have been designated as hybrid peripheral nerve sheath tumor (HPNST). HPNST consisting of two components is pathologically subdivided into schwannoma-neurofibroma, schwannoma-perineurioma, and neurofibroma-perineurioma.^{2–7} Furthermore, we believe that HPNST consisting of all three components with a discrete area, namely schwannoma-neurofibroma-perineurioma, actually exists, although this tumor may be extremely rare.⁸

tumors in extradigital sites. Comment on “Hybrid peripheral nerve sheath tumor of the nasal cavity showing schwannomatous, neurofibromatous, and perineuriomatous areas. *Med Mol Morphol* (2010) 43:82–85”. *Med Mol Morphol* (2010) 43:253

2. Feany MB, Anthony DC, Fletcher CDM (1998) Nerve sheath tumours with hybrid features of neurofibroma and schwannoma: a conceptual challenge. *Histopathology* (Oxf) 32:405–410
3. Emanuel P, Pertsemliadis DS, Gordon R, Xu R (2006) Benign hybrid perineurioma-schwannoma in the colon. A case report. *Ann Diagn Pathol* 10:367–370
4. Hornick JL, Bundock EA, Fletcher CDM (2009) Hybrid schwannoma/perineurioma. Clinicopathologic analysis of 42 distinctive benign nerve sheath tumors. *Am J Surg Pathol* 33:1554–1561
5. Michal M, Kazakov DV, Belousova I, Bisceglia M, Zamecnik M, Mukensnabl P (2004) A benign neoplasm with histopathological features of both schwannoma and retiform perineurioma (benign schwannoma-perineurioma): a report of six cases of a distinct soft tissue tumor with a predilection for the finger. *Virchows Arch* 445:347–353
6. Kazakov DV, Pitha J, Sima R, Vanecek T, Shelekhova K, Mukensnabl P, Michal M (2005) Hybrid peripheral nerve sheath tumors: schwannoma-perineurioma and neurofibroma-perineurioma. A report of three cases in extradigital locations. *Ann Diagn Pathol* 9:16–23
7. Shelekhova KV, Danilova AB, Michal M, Kazakov DV (2008) Hybrid neurofibroma-perineurioma: an additional example of an extradigital tumor. *Ann Diagn Pathol* 12:233–234
8. Kuroda N, Kazakov DV, Hes O, Michal M, Goda M, Miyazaki K, Hayashi Y, Okamoto S, Lee GH (2010) Hybrid peripheral nerve sheath tumor of the nasal cavity showing schwannomatous, neurofibromatous, and perineuriomatous areas. *Med Mol Morphol* 43:82–85

References

1. Teresa Pusiol, Maria Grazia Zorzi, Dorian Morichetti, Francesco Piscioli (2010) Inaccurate summary of peripheral nerve sheath

N. Kuroda
Department of Diagnostic Pathology, Kochi Red Cross Hospital,
2-13-51 Shin-honmachi, Kochi 780-8562, Japan
Tel. +81-88-822-1201(1610); Fax +81-88-822-1056
e-mail: kurochankochi@yahoo.co.jp

D.V. Kazakov · M. Michal
Sikl's Department of Pathology, Charles University Hospital, Pilsen,
Czech Republic

This author's reply refers to the letter to the editor at doi:
10.1007/s00795-010-0526-z.