

colour and indistinct margins which shows rapid growth. Routine light microscopy detects primitive small malignant cells growing in diffuse, organoid or ribbon-like fashion. Immunohistochemically, neuron-specific enolase and cytokeratin are important diagnostic markers [2]. Most of the tumours occur in the head and neck region and subsequently in the extremities and trunk. The reported incidence of local recurrence varies between 30 and 45%. The risk of regional lymph node involvement is >50% and for distant metastases 20–40%, respectively. Approximately 30% of the patients die of metastatic disease [3–7].

Treatment of the primary lesions should be wide excision, which especially in the head and neck region, is difficult to achieve. After less extensive surgery, tumours >2 cm should be irradiated with generous margins up to 50–60 Gy. This dose has also been recommended by other authors [7, 8]. There is no consensus about adjuvant treatment of regional lymph nodes, nor for prophylactic dissection or radiotherapy. Short-term follow-up is mandatory due to the rapid growth of recurrence and metastases. Metastatic disease can be treated either with radio- or chemotherapy regimens which are normally used for small cell lung cancer. Merkel cell carcinoma is known to be highly radiosensitive, confirmed in Case 2 with a complete regression of gross disease after 60 Gy. Complete clinical remissions have also been reported with various cytotoxic drugs, i.e. doxorubicin, etoposide, cyclophosphamide and vincristine [8–10].

Dissemination usually appears within 2 years after diagnosis of the primary. Most commonly involved are soft tissues, liver, lymph nodes, bone, lung, spine and bone marrow whereas the brain, kidney, pancreas, parathyroid gland and pleura are less frequently affected [5]. Metastases of Merkel cell carcinoma in the breast, to our knowledge, have not been reported before. We therefore recommend careful review of the pathological specimen if a rapidly growing tumour in the breast of an elderly patient has been excised and primary histopathological diagnosis indicates metastases of small cell lung cancer or lymphoma. Immunohistopathological staining with neuron-specific enolase and cytokeratin should be performed to exclude or confirm Merkel cell carcinoma. In this case, axillary clearing might be unnecessary, but postoperative radiotherapy of the breast with at least 50 Gy should be initiated without delay.

1. Toker C. Trabecular carcinoma of the skin. *Arch Dermatol* 1972, 105, 107–110.
2. Gould E, Albores-Saavedra J, Dubner B, Smith W, Payne CM. Eccrine and squamous differentiation in Merkel cell carcinoma. An immunohistochemical study. *Am J Surg Pathol* 1988, 12, 768–772.
3. Morrison WH, Peters LJ, Silva EG, Wendt CD, Ang KK, Goepfert H. The essential role of radiation therapy in securing locoregional control of Merkel cell carcinoma. *Int J Radiat Oncol Biol Phys* 1990, 19, 583–591.
4. Shaw JH, Rumball E. Merkel cell tumour: clinical behaviour and treatment. *Br J Surg* 1991, 78, 138–142.
5. Sibley RK, Dehner LP, Rosai J. Primary neuro-endocrine (Merkel cell?) carcinoma of the skin. A clinicopathological and ultrastructural study of 43 cases. *Am J Surg Pathol* 1985, 9, 95–116.
6. Marks ME, Kim RY, Salter MM. Radiotherapy as an adjunct in the management of Merkel cell carcinoma. *Cancer* 1990, 65, 60–64.
7. Pacella J, Ashby M, Ainslie J, Minty C. The role of radiotherapy in the management of primary cutaneous neuroendocrine tumors (Merkel cell or trabecular carcinoma): experience at the Peter

MacCallum Cancer Institute. *Int J Radiat Oncol Biol Phys* 1988, 14, 1077–1084.

8. Raaf JH, Urmacher C, Knapper WK, Hiu MH, Cheng EWK. Trabecular carcinoma of the skin: treatment of primary, recurrent, and metastatic disease. *Cancer* 1986, 57, 178–182.
9. Taxy JB, Ettinger DS, Wharam MD. Primary small cell carcinoma of the skin. *Cancer* 1980, 46, 2308–2311.
10. Wynne CJ, Kearsley JH. Merkel cell tumor. A chemosensitive skin cancer. *Cancer* 1988, 62, 28–31.

European Journal of Cancer Vol. 32A, No. 9, pp. 1618–1619, 1996.

Copyright © 1996 Elsevier Science Ltd. All rights reserved.

Printed in Great Britain

0959-8049/96 \$15.00 + 0.00

PII: S0959-8049(96)00141-4

Myocardial Infarction Associated with Vinorelbine (Navelbine[®])

A. Zabernigg and C. Gatteringer

Department of Internal Medicine and Oncology,
General Hospital Kufstein, Krankenhausgasse 7–9,
6330-Kufstein, Austria

VINORELBINE (NAVELBINE[®]) is a unique semisynthetic vinca alkaloid. The drug is effective as a single agent in inoperable/advanced non-small cell lung cancer (NSCLC), producing objective response rates of approximately 15–30% [1]. Myelosuppression is the most frequent side-effect, while neurotoxicity, nausea, emesis, alopecia and mucositis occur less often.

In this letter, we report on the case of a 87-year-old Caucasian man who developed acute myocardial infarction that was probably related to the administration of vinorelbine. He had a history of coronary heart disease with a posterior Q-wave infarction 35 years ago. However, over the last 30 years, the patient had not experienced any cardiac problems. He was in excellent physical condition, when locally advanced NSCLC was diagnosed. At that time, levels of electrolytes, haemoglobin and thrombocytes, and liver and kidney function and coagulation tests were all in the normal range. An electrocardiogram (ECG) and two-dimensional echocardiography confirmed the old myocardial scar. Vinorelbine monotherapy was initiated (30 mg/m²) and 10 h later the patient developed long-term angina pectoris. Repeated ECG controls revealed an acute anteroapical infarction that was stuttering in nature, with only slightly elevated levels of creatinine kinase (100 U/ml) and troponin-T. Treatment with aspirin, low-dose heparin and mononitrate was initiated. Repeated echocardiography confirmed the diagnosis of an anteroapical myocardial infarction and showed a marked depression in left ventricular function.

To the best of our knowledge, this is the third report of a vinorelbine-related myocardial infarction [2, 3]. We conclude

Correspondence to A. Zabernigg.

Received 18 Mar. 1996; accepted 27 Mar. 1996.

that this drug should be used with caution in patients with a history of coronary heart disease.

-
1. Goa KL, Faulds D. Vinorelbine. A review of its pharmacological properties and clinical use in cancer chemotherapy. *Drugs Aging* 1994, 5, 200-234.
 2. Bergeron A, Raffy O, Vannetzel JM. Myocardial ischemia and infarction associated with vinorelbine. *J Clin Oncol* 1995, 13, 531-532.
 3. Dubos C, Prevost JN, Brun J, Rousselot P. Myocardial infarction and vinorelbine. Report of a case. *Rev Mal Respir* 1991, 8, 299-300.