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Cardiomyopathy After Acute Myocardial Infarction After Therapy with Interleukin-2 and Tumour Infiltrating Lymphocytes

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ACUTE CARDIAC toxic effects during interleukin-2 (IL-2) therapy occur in about 10% of patients [1-3]. Usually, cardiac functions return to baseline within a few days. However, some patients die from acute myocarditis or myocardial infarction [1-7]. We report a case in which a chronic cardiac impairment succeeded an acute myocardial infarction after therapy with IL-2 and tumour infiltrating lymphocytes (TIL).

A 35-year-old man, with cervical, axillary and retroperitoneal lymph nodes from a melanoma, had smoked but had none of the other risk factors for coronary heart disease. TILs were expanded from an axillary lymph node. An electrocardiogram (ECG) before treatment was normal, as well as the left ejection fraction (82%) with a normal cardiac kinetic. On day 1, he received 5×10^{10} TIL. There were no change in ECG and transaminases. On day 3, the left ejection fraction was 71% with normal cardiac kinetics. Because of progression in retroperitoneal lymph nodes, the patient received another 5×10^{10} TIL infusion (day 21) followed by 18×10^6 IU/m² of IL-2 for 5 days via a constant infusion (100% of the planned dose). 24 h after receiving IL-2, the patient did not have any cardiac pain, the ECG showed ST-segment elevations in D₁-V_L, transaminases (AST 600 IU/l) and cardiac enzymes (serum creatinine kinase 1905 IU/l, with MB fraction 252 IU/l) were increased. A Q wave appeared in the lateral leads (D₁, V_L), when ST-segment returned to normal. An echocardiography, done 4 and 15 days later, showed a significant and current decrease in left ejection fraction (42%) with hypokinetic anterior ventricular wall. A coronary angiography was not done.

Such acute events during or just following IL-2 therapy have been reported [1-6]. Nevertheless, the course was usually either a return to baseline status or death. Chronic cardiac sequelae has been exceptionally reported [4]. Such events, with chronic morbidity, have to be taken into account to evaluate the current therapeutic index of IL-2 therapy. On the other hand, this cardiac event, especially the cardiomyopathy, also supports the view that IL-2 may be directly or indirectly toxic to the heart muscle.

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Cancer in Oman

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RAPID DEVELOPMENT in Oman since 1970 has led to an acute demand on secondary and tertiary medical services and a dramatic fall in infant mortality. More than 40% of the 1.5 million population are under age 15. The Oman National Cancer Registry, which opened in 1984, uses the recommended form for the Gulf states, including demographic data and clinical data, topography and morphology according to ICD-O extent of disease and treatment received. The opening of a new 630-bed Royal Hospital in 1987, improved data collection and analysis on a central computer.

Most of the hospitals in Oman (except the Southern Region of 120 000 inhabitants) refer pathological tissue to the Royal Hospital's central histopathology laboratory. This also applies to bone marrow examination and other relevant haematological tests.

Because of limited staff, we depend on histopathology/blood test results for the cancer registry, which means that cancer patients diagnosed in other ways are missed. To complete the registry, a close relation with the Southern Region has been built up and their data is sent regularly for computerisation to the Royal Hospital. The improvement gained in the quality of the cancer registry forms the basis for developing future programmes for cancer control and treatment.

Approximately 800-1000 new cancer patients are diagnosed per annum. There has been an increase, particularly from gynaecologists, of breast disease referrals to surgeons for tissue diagnosis and management. However, the figures for breast carcinoma remain low compared with other countries. The most common cancer in males is gastric cancer (15.5% of the total in males) with lung cancer ranking sixth (4.7%). Although this may represent under-diagnosis, it is worth noting that a large community of Omanis do not smoke for religious reasons.

From hospital discharge data, stomach cancer accounts for 17% of malignancies. The cancer registry shows that gastric cancer accounts for 15.5% of male cancer and 8% of female cancer. The highest percentage of gastric cancer patients live on the coast in the Batinah region. In 1987, stomach cancer accounted for 20% of deaths due to malignant neoplasms.

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