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Invasive Aspergillosis in Cancer Patients

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INVASIVE ASPERGILLOSIS is the commonest form of aspergillosis in the immunocompromised patient and is often fatal even if diagnosed and treated [1, 2].

In an effort to identify predisposing factors for *aspergillus* infection we undertook a review of all patients diagnosed with aspergillosis in the Medical Oncology Department at the Christie Hospital, Manchester between April 1987 and October 1991.

Patients were included in the study on the basis of two or more positive sputum cultures or a single positive culture from bronchoalveolar lavage associated with symptoms, signs and investigations compatible with a diagnosis of invasive aspergillosis or on the basis of histologically proven *aspergillus* infection at autopsy.

A diagnosis of invasive aspergillosis was made in 27 patients out of a total of 3651 treated in the department during the 55-month period. 22 (81%) of the patients were male and 5 (19%) were female, the age range being 30–68 years with a median of 56. The largest subset of patients with aspergillosis had acute myeloid leukaemia (AML). Their median age was 61 as compared with a median of 54 for all AML patients seen in the same period. Disease details are shown in Table 1.

Neutropenia was a probable contributing factor in 19 (70%) of the 27 patients and 11 (41%) of the patients were on corticosteroids. All patients had received intensive chemotherapy. 5 had had bone marrow transplants. 25 (93%) of the 27 patients had had one or more courses of systemically administered broad

spectrum antibiotics in the 2-month interval preceding the diagnosis of aspergillosis.

All patients were symptomatic. The commonest symptoms were cough, dyspnoea and fever. 4 of the 27 patients had normal chest X-rays. Chest X-ray abnormalities included non-specific inflammatory changes, cavities and nodular opacities. Initial diagnosis was by sputum culture in 11 patients; clinically suspected in 14 patients, followed by a positive sputum culture for *aspergillus* in 8 of these; and at postmortem in 2 patients where the diagnosis was not suspected during life. 4 patients underwent bronchoscopy for suspected pulmonary aspergillosis and all 4 bronchial washings grew *A. fumigatus*. All of the isolates were *A. fumigatus*. 21 of the 25 (84%) died within 4 months of diagnosis of aspergillosis, with a median survival time of 4 weeks. The 4 patients who survived had either non-Hodgkin lymphoma or Hodgkin's lymphoma. The lung was the commonest site of invasion, found in 13 (81%) of the 16 patients who had postmortem examinations. 5 of the 16 patients had extrapulmonary involvement including gastrointestinal tract, heart, thyroid, kidneys and brain. 8 patients had evidence of vascular invasion on autopsy. Thirty-nine percent of the 23 patients who died were still neutropenic at death.

As a result of our study we identified elderly males as being particularly at risk of invasive aspergillosis. We also emphasise that the diagnosis should be considered even in patients who are not neutropenic and who appear to be in remission.

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Table 1. Disease status at time of diagnosis of aspergillosis

Disease	Total number of patients	Remission induction	Disease status Complete remission	Relapse
AML	11	4	7	0
ALL	5	2	0	3
NHL	6	2	1	3
Hodgkin's lymphoma	3	0	0	3
Multiple myeloma	1	0	1	0
Others	1	0	0	1
Total	27 (100%)	8 (30%)	9 (33%)	10 (37%)

AML = Acute myeloid leukaemia; NHL = non-Hodgkin lymphoma; ALL = acute lymphoblastic leukaemia.

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The Information Given to the Terminal Patient With Cancer

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THE APPROACH to the provision of information to patients varies from one country to another, especially in oncology [1, 2]. In EEUU, for instance, doctors usually tell their patients everything regarding the diagnosis and prognosis of the disease. In other countries, such as Spain, the truth is seldom revealed. Which is the better option?

We interviewed 50 oncologists to assess how they inform their patients and 56 terminal patients and their relatives to discover what they thought about this information. The survey was performed in the Departments of Medical Oncology of three general hospitals in Madrid.

66% of the patients thought that the information provided was scanty. They were more worried about the prognosis than about diagnosis or the side-effects of therapy. This could have been

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