Characteristics and outcome of patients presenting to the emergency department after autologous/allogeneic stem cell transplantation.

Abstract:
Hematopoietic stem cell transplantations are still associated with a high risk of complications. Here, we characterize patients after autologous or allogeneic transplantation presenting to the emergency department and investigate factors associated with patients' outcome after hospitalization. Patients who had previously undergone autologous or allogeneic stem cell transplantation were included in this study and data were collected retrospectively. We analyzed patients' characteristics and outcome, and identified factors associated with outcome. A total of 35% of presenting autologous and 52% of allogeneic patients were hospitalized for more than 7 days. In-hospital mortality was 4% (autologous) and 11% (allogeneic patients). In patients with a history of autologous transplantation, multivariate analysis indicated radiologic signs of pneumonia as an independent factor associated with the endpoint 'hospitalization of more than 7 days' (P<0.001). Furthermore, in multivariate analysis, C-reactive protein levels greater than 5 mg/l (P=0.006), low hemoglobin (P=0.002), and radiologic signs of pneumonia (P=0.004) were associated independently with an increase in the endpoint 'total duration of hospitalization'. In patients with a
history of allogeneic transplantation, multivariate analysis indicated radiologic signs of pneumonia (P<0.001) and graft-versus-host-disease (P=0.006) to be associated independently with the endpoint 'hospitalization of more than 7 days'. Furthermore, radiologic signs of pneumonia were associated independently with the endpoints 'ICU treatment' (P<0.001), the 'total duration of hospitalization' (P<0.001), and 'in-hospital mortality' (P=0.002). A low platelet count was associated independently with an increase in the endpoint 'duration of hospitalization' (P=0.001). Radiologic signs of pneumonia were associated independently with worse clinical outcomes including hospitalization, the need for ICU treatment, and death.