Mediterranean Journal of Hematology and Infectious Diseases

Letter to the Editor

Internal Medicine Ward with Hematological Skills for the Treatment of Complications Suffered by Hematological Patients on Therapy: Experience of Villa Betania Hospital in Rome.

Keywords: Hematological patients; Medical Complications; Emergency Room; Comorbidity.

Published: March 01, 2024 **Received: January 22, 2024** **Accepted: February 12, 2024**

Citation: Andriani A., Marchetti L., Rossi F., Perretti M.A., Raja S., Recine U. Internal medicine ward with hematological skills for the treatment of complications suffered by hematological patients on therapy: experience of Villa Betania Hospital in Rome. Mediterr J Hematol Infect Dis 2024, 16(1): e2024030, DOI: http://dx.doi.org/10.4084/MJHID.2024.030

To the Editor,

Due to the availability of more and more new biological therapies, outpatient/DH treatment of most hematological patients has become the standard cure regimen. New therapeutic strategies are orally or subcutaneously administrated and only in a few cases intravenously. For these reasons, the majority of patients are treated at home or as an ambulatory/Day Hospital regimen. The Hematological Department admits for treatment in ordinary hospitalization H24 exclusively patient candidates for intensive and high-dose or biological therapies that need strict, continuous, and skillful supervision.

New drugs have different toxicities, not only hematological but also cardiovascular, pulmonary, neurological, and cutaneous. For these reasons, when a side effect occurs, many patients are hospitalized in Internal Medicine wards.[1,2] Often, in these departments, physicians should have training to face hematological problems. For this reason, we proposed to activate a section inside the Internal Medicine ward of Villa Betania Hospital in Rome, where a team of hematologists and hospitalists could take care of frail hematological patients with comorbidity or complications of hematologic therapy.

Patients and Methods. From January 2022 to July 2023, 112 pts (53 M, 60 F, median age 77 years) were admitted to our ward, forwarded by various Hematological Departments or by the Emergency Departments of General Hospitals in Rome (Policlinico Umberto I°, S. Filippo Neri, S. Spirito, S. Giovanni, S. Eugenio, S. Andrea and Cristo Re). All patients were followed and treated at home for their hematological disease, and they came to the emergency room due to the complications or progression of the disease; before being transferred to our Department, patients were evaluated by the referring hematologist's final decision to send them back home or to admit them into hospital. The transfer request was sent by mail or fax to the emergency room together with the patient's clinical report. The patient admittance in our ward has been granted within 12-72 hours of the invoiced request.

Patient Typology. During the study period, our hospital received 112 requests by mail or fax for admitting patients affected by hematologic disease or complications of hematologic therapy, such as diabetes, cardiac failure, second primary neoplasm, sepsis, other infections, hemorrhages, etc. The main characteristics of patients and the type of hematological disease are shown in **Table 1**.

All admitted patients were assisted with specific therapies according to the specific complications or

Table 1. Main characteristics of hematological patients at the address to our Department.

Variables	Total (N=112)
Gender, n (%)	
Male	53 (47.32)
Female	59 (52.68)
Median age, years (range)	80 (41-96)
Hematologic disease, n (%)	
Multiple Myeloma (MM)	26 (23.21)
Chronic Lymphocytic Leukemia (CLL)	21 (18.75)
Myelodysplastic Syndrome (MDS)	19 (16.96)
Acute Leukemia (AL)	7 (6.25)
Non-Hodgkin Lymphoma (NHL)	11 (9.82)
Myelofibrosis (MF)	7 (6.25)
Myeloproliferative Neoplasm (MPN) other than MF	7 (6.25)
other	14 (12.5)

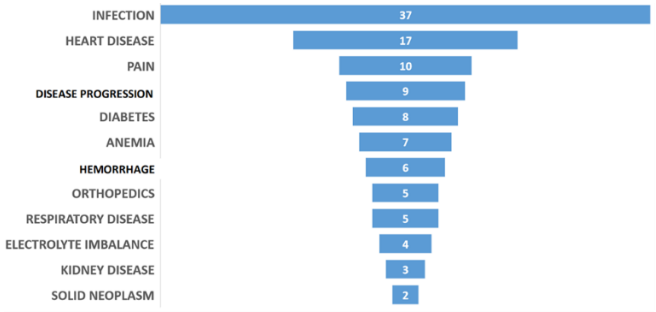

Figure 1. Main reasons for hospitalization.

Table 2. Days of hospitalization, main treatment and type of discharge.

Variables	Total (N=112)
Day of hospitalization, days (range)	9 (1-31)
Main therapy, n (%)*	
Antibiotics	45 (40.18)
Hematologic disease-specific treatment	17 (15.18)
RBC transfusions	12 (10.71)
Supportive therapy for anemia (other than RBC transfusions)	11 (9.82)
Intravenous fluid therapy	10 (8.93)
Diagnostic exams	7 (6.25)
Steroid therapy	6 (5.36)
Pain therapy	4 (3.57)
Type of discharge	
Planned discharge/referred to his/her hematologist	80 (71.43)
Planned discharge only after one onsite encounter	9 (8.04)
Transferred to long-term care unit	8 (7.14)
Death	6 (5.36)
Trasferred to hospice	3 (2.68)
Trasferred to riabilitative units	3 (2.68)
Trasferred to emergency	2 (1.78)
Leave against medical advice	1 (0.89)

complaints (transfusional or supportive therapy as antibiotics, hydration, etc.) (**Figure 1**).

89 out of 112 were referred back to their hematologist; 9 patients were followed after discharge at least once before referring back to sending hematologists; 11 were sent to long-term or motor rehabilitation hospitalization, 3 pts were entrusted to the hospice, 1 patient left without medical consent and 6 pts died for complications. Only 2 pts were sent back to the emergency room for complications during the hospitalization (**Table 2**).

Discussion and Conclusions. In recent years, the treatment of hematological diseases has been continuously evolving. New target therapies can be administered in ambulatory or in Day-Hospital regimen. More drugs can be taken orally or subcutaneously,[3,4] and patients can also be treated at home.[5,6] These new modalities of treatments have changed the quality of life of patients, their family, and their habits.[7] Certainly, these new types of treatments have led to a bed number reduction in Hematology Departments, reserving them only for the most complex and intensive therapies. These new molecules are more effective in terms of therapeutic results, but they can cause side effects worsening comorbidities which require the internist skills.

An ever-increasing number of hematologic patients on therapy are forced back toward the nearest hospital for complications. In the emergency room only, the acute problem is usually treated. Then, the patients are transferred to medical divisions where hematologists are rarely on duty, and physicians are frequently not used to treating this type of pathology. For this reason, the birth of departments of internal medicine with hematological skills can help and support the outcome of these frail patients.

The median life of the population has been prolonged, so the majority of hematological diseases appear over sixty years in patients with comorbidities, and the possibility of treating complications and comorbidity at the same time can determine a better outcome and survival. For this reason, we have implemented, as a pilot section in a generalist hospital, some beds to admit and treat these patients by a team of hematologists and hospitalists working together.

Our results are encouraging because we have managed to ameliorate the outcome of these particularly frail patients, referring most of them back to their hematological team for continuing specific treatment. Only a few patients died of complications, so almost all patients had their acute medical complications resolved. This type of organization can lighten the workload of hematological departments, integrating more specialists in the treatment of these complex patients. Moreover, we have to consider health cost reduction by employing non-specialist departments, which are less expensive for technical resources and medical personnel than specialist wards.[8]

In conclusion, this new specific regimen of assistance has achieved its expected goal of taking care of comorbid, frail patients with complications of hematological disease or therapy. An internal medicine department, where hematologists with knowledge of hematological protocols and side effects of the new molecules work together with the hospitalist, can improve the assistance and outcomes of these patients.

Our initiative is the first operating in our city, and the hematological departments have very much welcomed it.

UO of Internal Medicina, Villa Betania Hospital, Rome.

Competing interests: The authors declare no conflict of Interest.

Correspondence to: Alessandro Andriani, Villa Betania Hospital, Via Pio IV 42, Rome. E-mail: alessandro.andriani1@tin.it

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