Presentation and Management of Chronic Graft-Versus-Host Disease in Real-World Clinical Practice: A Medical Chart Audit

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INTRODUCTION

- Chronic graft-versus-host disease (cGVHD) is a complication of allogeneic hematopoietic cell transplantation (HCT) that manifests with multi-organ involvement and, in cases, often may present with fibrosis.
- Fibrosis can lead to disability due to decreased range of motion, respiratory deficiency, and other adverse clinical outcomes, resulting in increased morbidity, resource utilization and mortality.[1,2]
- Additional therapies are needed to address the underlying unmet need for patients with multiorgan involvement and fibrosis.[3]

OBJECTIVE(S)

- The aim of this study was to use medical chart data to characterize cGVHD organ involvement, fibrotic manifestations and treatment patterns in real-world patients.

METHOD(S)

- A medical chart audit was designed to obtain cGVHD-specific clinical characteristics on patients and their treatment plan.
- 31 board-certified U.S. oncologists and hematologist-oncologists each abstracted 3 cGVHD de-identified patient charts in an online survey.
- Patient selection criteria included receipt of ≥ 3 lines of systemic therapy, diagnosis between October 2015 and October 2017, and age ≥ 18 years old at diagnosis. Organ involvement, including inflammatory and fibrotic manifestations, were evaluated per physician clinical assessments.
- This study was approved by the University of Mississippi Institutional Review Board.

RESULT(S)

- A total of 93 cGVHD patient charts were abstracted. The median patient age at diagnosis was 56 years. Patients previously having acute GVHD comprised 54% of the chart sample. Patients were diagnosed with cGVHD a median of 87 days post-HCT (Table 1).

Table 1: Respondent and Patient Sample Characteristics

Respondents	
Hematology Oncologist	77%
Oncologist	23%
Patients	
Median age at cGVHD symptom presentation, years (range)	56 (27 – 84)
Median age at diagnosis, years (range)	56 (27 – 84)
Male	65%
Median time to cGVHD diagnosis post-HCT (days)	87
Prior acute GVHD	54%
Quiescent cGVHD	30%
Progressive cGVHD	24%

ORGAN INVOLVEMENT, INFLAMMATION, AND FIBROSIS

- Among patients with documented organ involvement at diagnosis (n=71), organ system involvement, along with inflammatory and fibrotic manifestations, were captured per physician clinical assessment. 65% of patients had ≥3 organs involved at diagnosis.
- At diagnosis, 38%, 45%, and 11% of patients had mild, moderate, or severe cGVHD per NIH consensus guidelines, respectively.[4] Organ involvement was most often found in the skin, mouth, and eyes, with 86% of patients having involvement in at least one of these organs at diagnosis (Figure 1).
- Inflammatory and apparent fibrotic processes in at least one organ system were observed in 87% and 59% of patients at diagnosis (Figure 2). At diagnosis, 69% and 49% of patients showed inflammation and apparent fibrosis processes in the skin, mouth, or eyes; and 44% and 31% of patients showed inflammation and fibrosis in ≥3 organs, respectively.
- The current/last known severity of cGVHD was 35%, 51%, and 8% amongst mild, moderate, and severe patients.

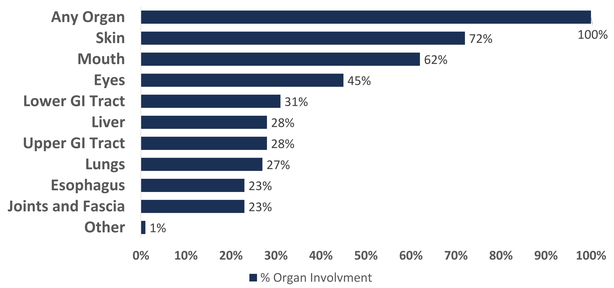


Figure 1: Proportion of Patients with Organ Involvement
Note: Percentages reported for patients with documented organ involvement at diagnosis.

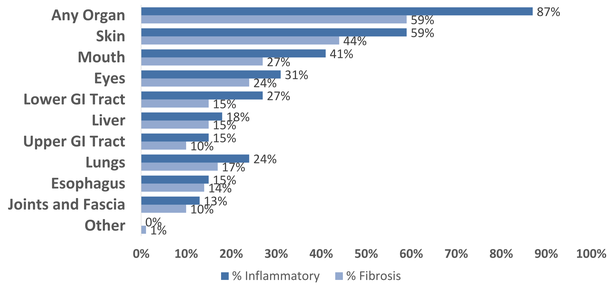
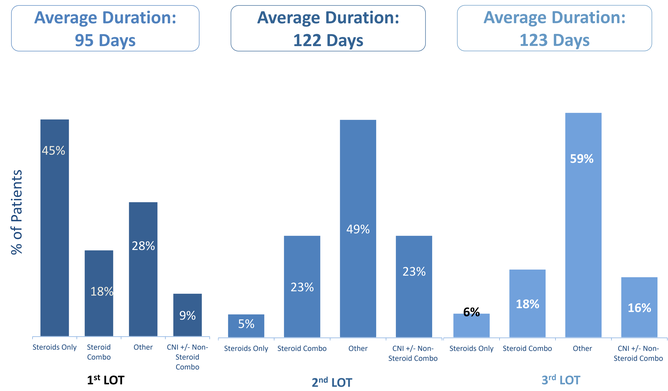


Figure 2: Proportion of Patients with Inflammatory or Fibrotic Manifestations at Diagnosis
Note: Percentages reported for patients with documented organ involvement at diagnosis.

TREATMENT PATTERNS

- Most patients (63%) received systemic steroids as 1st LOT (line of treatment/therapy), either alone or in combination.
- Systemic steroid use decreased in 2nd and 3rd LOT. In 3rd LOT, 6% and 16% of patients used ruxolitinib or ibrutinib, with or without a non-steroid combination, respectively.
- Duration of therapy increased as patients progressed, from an average of 3 months for 1st LOT to 4 months for 2nd and 3rd LOT (Figure 3).
- The most common reasons for change in regimen in all LOT were progression of cGVHD symptoms/lack of efficacy, relapse of underlying disease, patient preference and adverse event/tolerability.



Note: 1. All steroid use referenced in figure is systemic 2. Other regimens used include tacrolimus, cyclosporine, imatinib, mycophenolate mofetil (MMF), infliximab, etanercept, IL-2 Receptor Antibodies, hydroxychloroquine, bortezomib, alemtuzumab, sirolimus, pentostatin, azathioprine, methotrexate (MTX), extracorporeal phonophoresis (ECP), belatacept, ruxolitnib, psoralen ultraviolet irradiation (PUVA), everolimus, cytotoxics, ursodeoxycholic acid (UDCA), topical corticosteroids, thalidomide, and mesenchymal stem cells, anti-thymocyte globulin (ATG)

Figure 3: Treatment and Average Duration by Line of Therapy (LOT)

CONCLUSION(S)

- cGVHD is a significant complication of allogeneic HCT and presents with multiorgan involvement characterized by inflammation and fibrotic manifestations.
- Currently, systemic steroids are the primary treatment, though many patients progress rapidly through multiple therapies. The threshold for cycling through therapies could be higher in later LOT due to lack of proven therapeutic options.
- The short average duration (3-4 months) of treatment(s) creates a major challenge for this chronic disease.

REFERENCES

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