4CPS-238

Pharmaceutical care program for patients undergoing allogeneic hematopoietic stem cell transplantation (PHARALLO): impact on clinical outcomes

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Background and importance

Patients undergoing allogeneic hematopoietic stem cell transplantation (allo-HSCT) require complex pharmacotherapeutic regimens for disease treatment and complication prevention.
International recommendations, such as those from the European Society for Blood and Marrow Transplantation (EBMT), emphasize the integration of clinical pharmacists into transplant teams to optimize therapy and enhance patient outcomes.

Objective

The **primary objective** was to explore whether PHARALLO impact on the **incidence of acute graft-versus-host disease (aGVHD) by day +100 post-transplant.**

Secondary objectives included survival outcomes, incidence of acute renal/liver failure, total and aGVHD-related readmissions, length of hospital stay and time to platelet/neutrophil engraftment by day +100.

Materials and methods

Historical controlled intervention study comparing a pharmacist-driven program vs standard care

Inclusion
- Patients ≥18 years undergoing allo-HSCT

Exclusion
- No informed consent
- Study withdrawal
- Death or loss to follow-up before transplantation

Demographic and clinical data extracted from electronic medical records.

Comparisons between-groups:
- aGVHD cumulative incidence → Chi-square / Fisher's exact test
- Survival outcomes → Kaplan Meier
- Other categorical/continuous variables → Chi-square, Fisher's exact, Wilcoxon

Software: STATA
Significance level: $p < 0.05$

Three-phase pharmaceutical follow-up:

Pre-HSCT interview :
- Telephone interview including medication reconciliation
- Pharmacotherapeutic recommendations report

Inpatient phase:
- Conditioning /daily pharmacotherapy review
- Detection of drug-related problems
- Discharge report with usual medication and patient education

Outpatient follow-up (until day +100)
Biweekly clinical interviews:
- Reinforcement of medication knowledge, adherence
- DRP detection
- Quality of life, satisfaction

Results

67 patients included: 37 intervention | 30 control

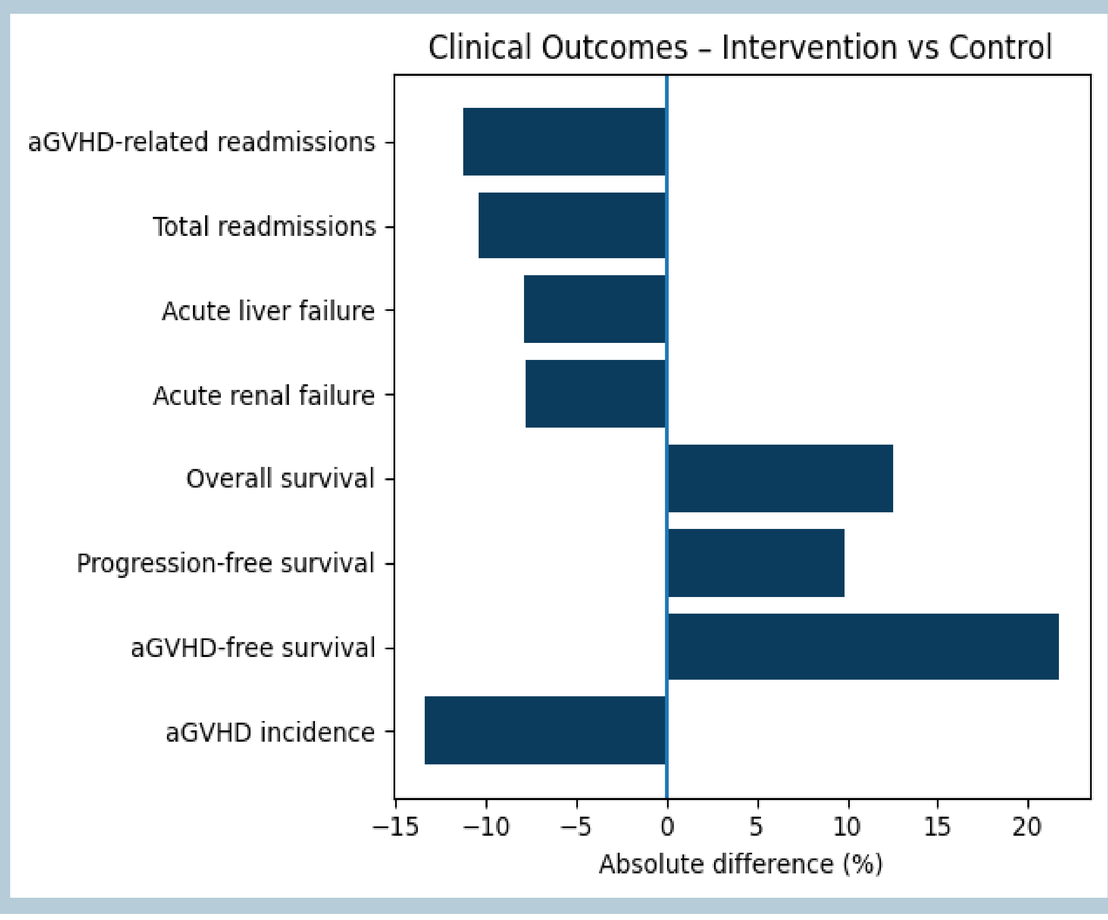
- **aGVHD incidence by day +100:** 13.4% reduction in the intervention group (p = 0.19)

- **aGVHD-free survival:** +21.7% (**p = 0.05**)
- **Progression-free survival**: +9.9% (p = 0.31)
- **Overall survival:** +12.6% (p = 0.23)

- **Acute renal failure**: −7.8% (p = 0.57)
- **Acute liver failure**: −7.9% (p = 0.13)

- **Total readmissions:** −10.4% (p = 0.10)
- **aGVHD-related readmissions**: −11.3% (p = 0.23)

- **Length of hospital stay**: 6.3 days shorter (**p = 0.018**)
- **Platelet/neutrophil engraftment:** 5 days earlier (**p = 0.022**)



Conclusion and relevance

The integration of the clinical pharmacist into the HSCT team **showed favorable trends toward improved outcomes, fewer complications, shorter hospital stays and faster grafting**.

These findings suggest the **potential value of pharmaceutical care** in post-transplant management and support the need for further multicentered prospective studies.