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Bulletin

New York City Society of Health-system Pharmacists

MESSAGE FROM THE CURENT PRESIDENT

As my term as president comes to a close, I am filled with immense pride and joy reflecting on all that we have accomplished together over the past year. It has been a journey filled with growth, collaboration, and meaningful impact, and I am deeply grateful for the opportunity to have served you all.

Looking through this bulletin, you can see the myriad of events, activities, and continuing education opportunities that we have organized and participated in. Each event has contributed to the strength and vitality of our NYCSHP community!

This year's theme, "Leave it better than you found it," has guided us in our endeavors, inspiring us to make a positive difference in every aspect of our work and interactions and to always look for opportunities to enhance our current work. And indeed, I am proud to say that we have embodied this ethos wholeheartedly. Together, we have strived to leave our mark not only on our organization but also on the lives of those around us.

As I step down from my role, I want to express my heartfelt gratitude to each and every one of you for your dedication, passion, and unwavering support. It has been an honor to serve as your president, and I am confident that our community will continue to thrive!

Let us carry forward the spirit of collaboration, innovation, and service that defines us, always striving to leave our world a little better than we found it.

See you on the dance floor at Installation!

Rebecca Chu, PharmD, BCPS

Inside this Issue

Bulletin Editors

Grashma Vadakkel, PharmD, BCOP

Helen Li, PharmD

Student Clinical Pearl: Is Post Transplant Cyclophosphamide the New Standard of Care Graft-Versus-Host Disease Prophylaxis?

Sophia Aziz, PharmDc
St. John's University Pharmacy Student

Over the past five decades, the combination of methotrexate and a calcineurin inhibitor has been the standard of care in preventing graft versus host disease (GVHD) in allogeneic hematopoietic stem cell transplantation (HSCT). However, half of the patients undergoing allogeneic transplantation develop clinically significant acute GVHD and/or chronic GVHD (1).

Complications of GVHD can be fatal, as it can affect major organs such as the liver, gastrointestinal tract, skin, or lungs (2). Therefore, finding a prophylaxis regimen with better outcomes was imperative. Research on cyclophosphamide has discovered a unique mechanism of action. Cyclophosphamide is a nitrogen mustard alkylating agent that metabolizes to an active form capable of inhibiting protein synthesis through DNA and RNA crosslinking (3). Though the active metabolite exerts the alkylating effect throughout the cell cycle, it is most dominant during the G1 and S phases of cell division (3). What makes cyclophosphamide particularly different from other forms of therapy is its ability to induce T cell apoptosis, while other therapies inhibit T cells without inducing apoptosis (4). Hematopoietic stem cells, which are rich in aldehyde dehydrogenase (an enzyme required for the conversion of phosphoramide mustard into the inactive metabolite carboxy cyclophosphamide), are resistant to cyclophosphamide (5).Therefore, cyclophosphamide may be administered after allogeneic hematopoietic cell transplantation without impairing engraftment. Post-transplant cyclophosphamide (PTCy) was first developed for use in allogeneic HSCT from haploidentical donors (4). Due to the success in the haploidentical setting, clinicians investigated the effects of PTCy on full matched donor transplants (4). The Progress I trial comparing maraviroc-tacrolimus-methotrexate vs. bortezomib-tacrolimus-methotrexate, vs. cyclophosphamide-tacrolimus-methotrexate in 6/6 HLA matched related or 7-8/8 HLA matched unrelated donors showed that the combination of cyclophosphamide-tacrolimus-methotrexate led to superior graft-versus-host disease-free, relapse-free survival, lower rates of severe acute GVHD and chronic GVHD (6).

Due to these findings, a randomized multicenter phase 3 trial was conducted to compare the experimental prophylaxis of cyclophosphamide-tacrolimus-methotrexate to the standard prophylaxis of methotrexate-tacrolimus in patients receiving reduced intensity or nonmyeloablative conditioning and peripheral blood allogeneic HSCT. The experimental prophylaxis regimen consisted of cyclophosphamide 50 mg/kg/day on days 3 and 4 after HSCT, with mesna and hydration (1). Tacrolimus was initiated on day 5 orally at a dose of 0.05 to 0.06 mg/kg/day or intravenous at a dose of 0.02-0.03 mg/kg/day (1). The comparator arm, standard prophylaxis regimen, consisted of methotrexate (IV bolus of 15 mg/m2 on day 1 and an intravenous bolus of 10 mg per mg/m2 on days 3, 6, and 11) and tacrolimus (same dose as above, starting 3 days before HSCT (1). Both groups received reduced intensity conditioning regimens and the same supportive care (1).

Student Clinical Pearl: Is Post Transplant Cyclophosphamide the New Standard of Care Graft-Versus-Host Disease Prophylaxis?

The trial included a total of 431 patients who were at least 18 years of age and were undergoing their first allogeneic transplantation with the use of peripheral-blood grafts from either unrelated or matched sibling donors after reduced-intensity conditioning (1).In order to be eligible to be included in the study patients had to either have: acute leukemia or chronic myeloid leukemia with no circulating blasts and less than 5% blasts in the bone marrow or myelodysplasia or chronic myelomonocytic leukemia with no circulating blasts and fewer than 10% blasts in the bone marrow, chronic lymphocytic leukemia or small lymphocytic lymphoma, or lymphomas that were sensitive to therapy (1). The patients primarily had acute lymphoblastic leukemia (5.6% experimental prophylaxis, 12.4% standard prophylaxis), acute myeloid leukemia (50% experimental prophylaxis, 46.1% standard prophylaxis), and myelodysplastic syndrome (15% experimental prophylaxis, and 11.5% standard prophylaxis) (1). For sibling donors to be eligible they needed to be a 6/6 match HLA match. Unrelated donors were 7/8 or 8/8 matched. The number of 6/6 related donors for the experimental prophylaxis group was 28%, and 31.3% for standard prophylaxis (1). As for 7/8 unrelated donors it was 3.3% for the experimental group, and 3.7% for the standard prophylaxis group (1). As for 8/8 unrelated donors it was 68.7% for the experimental prophylaxis group, and 65% for the standard prophylaxis group (1).

Table 1

	Post Transplant Cyclophosphamide, % (95% CI)	Standard of Care Tacrolimus-Methotrexate, %, (95% CI)
Adjusted GVHD-free, Relapse-free Survival	**52.7 (45.8-59.2)**	**34 (28.6-41.3)**
Acute GVHD, Grade III or IV	**6.3 (3.5-10.2)**	**14.7 (10.3-19.8)**
Cumulative Chronic GVHD at 1 year	21.9 (16.4–27.9)	35.1 (28.7-41.6)
Adjusted Disease-Free Survival	67 (60.2–72.8)	62.4 (55.6–68.4)
Adjusted Overall Survival	77 (70.8–82.1)	72.2 (65.7–77.6)
Cumulative incidence of 1 year relapse and progression	20.8 (15.5–26.7)	20.2 (15.0–25.9)
Cumulative incidence of neutrophil recovery at day 28	90.3 (85.3–93.6)	93.4 (89.0–96.1)
Cumulative Incidence of Infections at 1 year, Grade 3	12.2 (8.2–17.1)	13.3 (9.1–18.3)
Immunosuppression Free survival at 1 year	50 (42.8–57.2)	39.7 (32.9–46.8)

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When comparing the two regimens, the primary outcome event of 1-year GVHD-free, relapse-free survival was 52.7% (95% CI, 45.8 to 59.2) in the group receiving the experimental prophylaxis vs. 34.9% (95% CI, 28.6 to 41.3) in the standard prophylaxis group (1). Although there were similar incidences of grade II to IV acute GVHD at day 100 in both groups, the incidence of grade III or IV acute GVHD was lower in the experimental prophylaxis group. The higher the grade of GVHD, the more fatal the outcomes are, therefore the experimental group had fewer fatal outcomes due GVHD. Further outcomes are highlighted in Table 1. Overall, the results of this phase 3 trial demonstrate that patients who received PTCy had longer GVHD-free, relapse-free survival than those who received tacrolimus methotrexate in a population of patients receiving matched donors, making it a new and efficacious for all patients receiving allogeneic HSCT, challenging current standard of care prophylaxis in patients receiving matched donor transplant.

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Top CE Takeaways

Marybec Griffin
PhD, MA, MPH

Reproductive Rights in Post-Roe Era

1. Abortion remains legal in the United States at the federal level - though availability differs by state.
2. New York State is an abortion sanctuary. This means people from states where abortion is illegal may access abortion services from providers in New York State - this includes pharmacists who may fill medication abortion prescriptions.
3. New York State Bill A1060-A/S1043-A (2023) allows trained pharmacists to distribute self-administered hormonal contraceptives (i.e. birth control pills, vaginal rings, and the patch) to patients who do not have a prescription. This program is set to begin in November 2024 and will require additional training (to be finalized by NYS).

Kelsey Hennig
PharmD, BCPS

Updates in Inflammatory Bowel Disease Treatment

1. Crohn's disease (CD) and ulcerative colitis (UC) are complex autoimmune disorders effecting the gastrointestinal tract that may greatly effect a person's quality of life
2. There have been many new treatment options approved within the last 3 years, including mirikizumab-mrkz (UC), etrasimod (UC), risankizumab (CD), upadacitinib (UC and CD), and ozanimod (UC)
3. Pharmacy technicians and pharmacists can play a pivotal role on interdisciplinary care teams through helping gain access to these costly treatments both through prior authorizations/appeals and financial assistance application support as well as ensuring their appropriate use and safety and efficacy monitoring

Top CE Takeaways

Emily Lawrence, PharmD, BCPS

Application of Human Factors in Healthcare to Improve Patient Safety

1. Human factors engineering is a tool that can be used to better understand and address medication safety issues
2. Provides us with a framework to understand why things didn't go as planned and avoids blaming individuals
3. Improving human performance by focusing interventions on those that make it easier to do the right thing, make it easier to detect if an error has occurred, decrease reliance on memory, minimize chances for confusion, provide cues and reminders, decrease distractions

Tom Magaldi, LMHC, MS, RPG, CMTM, CI

Don't Stress the Small Stuff

1. The enhancement of the mental health and wellness of a professional increase's productivity, self-awareness and creativity to enrich the profession. Also, it decreases burn out and potential medication errors. Also, a positive outlook puts a person in a better positive mind set to cope with adversity and stress.
2. Therefore, it is my objective to discuss the importance of self-awareness and evaluate the importance for individuals, especially new practitioners (NP) to recognize the realistic role they chose when they entered the pharmacy profession.
3. I will also introduce some major coping skills to combat burnout or prevent it from occurring by reinforcing their strengths and use of resilience especially from their past experiences coping with these stressors.
4. Finally, I will attempt to nurture and maneuver NPs through the challenges of the workforce and discuss copings skills to deal with disappointment, discouragement, adversity with colleagues and assimilating into a clinical role while dealing with other possible non-cooperative healthcare providers.

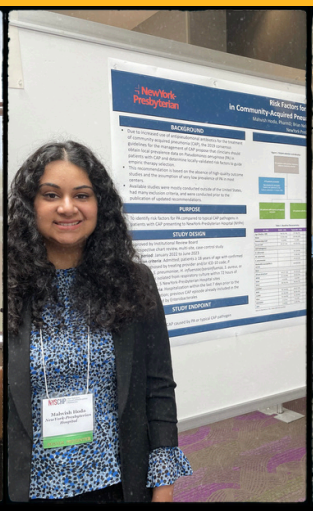
Annual Assembly 2024 in Saratoga Springs, NY

Thank you to our members who represented our Chapter in the House of Delegates on Thursday, April 18th. At the House of Delegates, our members voted on topics related to health-system pharmacists in New York State and the operation and activities of the NYSCHP. This year, our chapter submitted 3 resolutions and 1 resolution in combination with Westchester Society of Health System Pharmacists. All these resolutions were accepted!

We also had a few Chapter members who served as moderators and speakers for various CEs. Our Chapter is proud to see so many Chapter members in attendance and working to educate others!

We are also so incredibly happy and proud of Chapter Members John Manzo, Charrai Byrd, and Lelia-Tibi Scheri who were installed into positions at the the State Council's Board of Director.

Annual Assembly 2024 in Saratoga Springs, NY











Event Spotlights

We hope you've enjoyed the programing this year!

Some of our events included our monthly Board of Director/Committee Chair Meetings, Continuing Education Programing hosted by our various Committees, Well-being and Resilience led Paint Night, and Membership Networking events with our New Practitioner Committee. We were also very fortunate to host our Annual Industry Relations/Winter Exhibit Event at NYU Tisch.

Thank you all for coming and we look foward to seeing you at other upcoming events such as our 3rd Annual Pharmacy Technician Symptoium and Annual Installation!