District of Columbia
College of Clinical Pharmacy

dc-ccp

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THE LOBBYIST

President's Letter

Greetings DC-CCP members,

As the summer winds down and fall brings cooler weather, we find ourselves once again in a time of transition. It is easy to feel scattered and overwhelmed by competing priorities – new students, new residents, potentially new colleagues fresh out of pharmacy school or residency training. Although I am increasingly further away from my time in pharmacy school and residency, this time of year always provides me with a feeling of a new start; and a chance to reflect on what is essential in my career and what can be improved upon in this next year ahead. This weekend, while moonlighting in two pharmacy settings very different from my fulltime position, I was quickly reminded that one of the crucial factors similar in all pharmacy environments is patient-centered care.

While staffing in the outpatient pharmacies, a patient newly discharged from the general medicine floors, approached the pharmacist consult area requesting assistance with his new diabetes supplies. He was admitted via the emergency room with hyperglycemia (glucoses >600 mg/dL), diagnosed with Type 2 diabetes mellitus, and discharged home with all of the accompanying prescriptions for monitoring his glucoses and injecting insulin. According to the patient, he was discharged without education on the disease or his prescriptions; he was told to follow-up with his new primary care provider in four weeks. Despite having a line of patients out the door and being a technician short due to a call-out, my pharmacist colleagues and I took charge of the situation. They covered the operational duties of the pharmacy allowing me to spend as much time as needed educating the patient on what it meant to have a diagnosis of diabetes, how to use his glucometer, how to administer his insulin, goals of therapy, and management of symptoms. While taking time away from the prescriptions piling up and ringing phones contributed to a stressful day in the pharmacy, it was essential to meet the patient's needs first. It is one of our calls as a pharmacist.

Similarly, while working the next day in a centralized inpatient pharmacy, I was shown an example of exemplary patient-centered care. Although the pharmacy is in the middle of the hospital far away from

INSIDE THIS ISSUE

An independent chapter of the American College of Clinical Pharmacy, the DC-CCP is dedicated to improvements in pharmacotherapy practice, education, and research in the District of Columbia, Maryland, and the Commonwealth of Virginia.

Membership Committee Update

Benefits of Membership:

- Continuing education opportunities on a wide variety of timely topics to help sharpen your clinical knowledge and improve pharmaceutical care for patients

- Networking with fellow pharmacists and pharmacy trainees who practice within the Washington, DC Capital Region

-Social gatherings with fellow members and other professional organizations

- Participation in pharmacy advocacy initiatives on a governmental level… and more!

Please contact Amol Joshi (ajoshirx@gmail.com) if you or anyone you know is interested in joining DCCCP.

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the outpatient pharmacy, a patient found his way to our window and requested assistance. He had recently been discharged from the SICU, and had a prescription for oxycodone 15-20mg every 4 hours as needed. Since the actual tablet strength of oxycodone was not included in the prescription, the outpatient pharmacist felt unable to fill the prescription without consultation from the physician who wrote it. The patient took matters into his own hands and set out to find the physician. At our pharmacy window, he requested assistance with a new order. Rather than redirecting the patient to the critical care pharmacy, or letting the outpatient pharmacy handle the situation, the pharmacist paged the physician and then walked the prescription to the SICU to be updated on the patient's behalf. He spent approximately an hour helping the patient maneuver through "the system" to ultimately obtain a new, acceptable prescription for his oxycodone. As a result, the pharmacist sacrificed his dinner break and his pharmacist colleagues partnered to cover his orders in his absence.

Both of these examples are small glimpses of what I am sure happens every day in our roles as pharmacists. Whether we serve in pharmacist roles in the community, in acute care, as researchers or anything in between, our daily focus always comes back to the patient. Thank you, DC-CCP for your commitment to our profession and to your patients!

Jessica Wellman, PharmD
DC-CCP President

A Special Thanks…

The chapter would like thank Doris Voigt for her dedication and hard work as the Co-Chair of the Education and Networking Committee. Dr. Voigt has helped with many of the chapter events including the meeting with WMSHP on May 18, 2013 as well as the Summer Business Meeting on June 21st. Please join me in thanking Dr. Voigt on her dedication and hard work in strengthening our chapter!

The chapter would like to welcome Min Kwon as our new Co-Chair of Education and Networking Committee!

Overview of the AACE Comprehensive Diabetes Algorithm—2013

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The American Association of Clinical Endocrinologists (AACE) published in 2013 both the "AACE Comprehensive Diabetes Management Algorithm 2013" and a corresponding consensus statement. The algorithm aims to provide a guide for comprehensive management of prediabetes and diabetes. This article briefly reviews the AACE algorithm and provides limited comparison with the 2012 joint American Diabetes Association (ADA) and European Association for the Study of Diabetes (EASD) "Management of Hyperglycemia in Type 2 Diabetes: A Patient-Centered Approach" the 2013 ADA "Standards of Medical Care in Diabetes" (SOMC).

AACE provides a 3 step algorithm for management of overweight and obese patients stratified by cardiometabolic risk and biomechanical complications (1,2). Step 1 is evaluation and staging by presence of cardiometabolic disease or biomechanical complications. In Step 2 treatment targets and modalities are selected. Step 3 is reassessment and intensification.

Prediabetes is defined by AACE as fasting blood glucose (FBG) 100-125 mg/dl, blood glucose 140-199 after 2-hour glucose tolerance test (OGTT) and presence of metabolic syndrome (1,2). ADA uses the same glycemic measures with the addition of A1c 5.7 – 6.4% and omission of metabolic syndrome (3). ADA and AACE focus on the importance of Therapeutic Lifestyle Choices (TLC) including weight loss in treatment of prediabtes and diabetes. ADA states treatment with metformin may be considered in very high risk patients. AACE recommends TLC and metformin or acarbose as low risk treatment options for patients with 1 prediabetes criterion who fail TLC and in all patients with 2 or more prediabetes criteria. Therapeutic goals for obesity dyslipidemia, and hypertension are the same as in overt diabetes. ADA and AACE both stress the importance of individualizing glycemic goals based on patient specific factors such as age, comorbidities, risk of hypoglycemia, and duration of diabetes (1-4). AACE continues to recommend goal A1c ≤6.5% but now allows for goals > 6.5% in select patients. ADA continues to recommend goal A1c < 7% with goal A1c < 6.5% (recent diagnosis, younger, no significant CVD) or goal A1c < 8% (older, complications, comorbidities, longstanding severe hyperglycemia) for selected patients.

...a 3 step algorithm for management of overweight and obese patients stratified by cardiometabolic risk and biomechanical complications.

AACE color codes the glycemic control algorithm with green (few adverse effects or possible benefits) and yellow (use with caution) (1,2). Initial treatment is based on A1c level. Monotherapy with metformin is recommended for A1c <7.5%, dual therapy is for A1c ≥ 7.5% or not at goal on metformin, and triple therapy if not at goal on dual therapy or A1c > 9% without symptoms. Glucagon-like peptide -1 (GLP-1) agonists, dipetidyl-peptidase-4 inhibitors (DPP-4), and alpha-glucosidase inhibitors are considered preferred alternatives to metformin. GLP-agonists are the top choice mainly due to possible weight loss. Basal insulin is yellow until failure of triple therapy or initial A1c > 9% with symptoms. AACE recommends intensification of insulin regimen with a GLP-1 agonist or a DDP-4 inhibitor prior to adding prandial insulin. The AACE algorithm for insulin shows intensification with prandial insulin added always in a 50/50 regimen. The consensus statement discusses other options such as the addition of prandial insulin prior to the largest meal as discussed in the ADA/EASD position statement. ADA does not list any one medication as superior add on therapy unless A1c ≥ 9% when insulin is considered the best third line agent. Rapid progression to multiple daily injections (MDI) can be considered for A1c ≥ 10.0% - 12.0%. AACE recommends always starting

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basal insulin first and intensifying first with GLP-1 agonists out of concern for weight gain with prandial insulin.

AACE proposes a new risk stratification for dyslipidemia (1-3). AACE Risk categories are defined as "Moderate" (no major risk factors and/or < 40 years of age) and "High" (diabetes and a major CVD risk factors or overt CVD). The moderate risk goal LDL-C < 100 mg/dl is consistent with SOMC recommendations. The High risk goal LDL – C < 70 mg/dl is considered optional in SOMC for patients with overt CVD. AACE also provides goals for triglycerides, TC/HDL-C ratio, Apo B, and LDL-P in the CVD risk factor modification algorithm. Guidance on frequency of follow-up lipid panel evaluations is not provided on the algorithm. Statins therapy is considered first line treatment for elevated LDL-C. No guidance for frequency of reassessment is provided.

AACE's blood pressure (BP) goal of ~130/~80 mmHg contrasts with ADA 2013's BP goal of <140/80 mmHg (1-3). Both ADA and AACE reference similar data but arrive at different interpretations of the data. AACE stratifies initial treatment to mono-therapy (ACEI or ARB) and dual therapy for BP > 150/100 mmHg with ACEI or ARB and thiazide, calcium channel blocker, or beta-blocker. Month 2-3 and 4-6 assessments therapy can be intensified with addition of thiazide, calcium channel blocker or beta-blocker. Alpha blockers, central agents, vasodilators, and spironolactone can be considered at the 6-8 month assessment.

AACE utilizes stricter therapeutic goals and focuses heavily on avoidance of weight gain and promotion of weight loss for both pre-diabetes and diabetes. Multiple medication options are provided as therapeutic options for pre-diabetes. AACE also recommends specific medications preferentially for dual and triple therapy while ADA allows for individualization according to patient specific factors. AACE continues to consider medication costs as a lesser issue compared to the overall cost of diabetes treatment.

Comparison of Selected Therapeutic Goals

	AACE		ADA
Glycemic			
A1c	< 6.5% - general population		< 7% - general population
Fasting and pre-meal BG (mg/dl)	< 110		< 130
Post-Prandial BG (mg/dl)	< 180		< 180
Blood Pressure			
Systolic/ Diastolic (mmHg)	~130/~80		< 140/80
Lipid	**Moderate Risk**	**High Risk**	
LDL-C (mg/dl)	< 100	< 70	< 100 < 70 (optional with overt CVD)

References

1. Garber AJ, et al. "AACE comprehensive diabetes management algorithm 2013". Endocrine Practice. 2013; 19: 327-336.
2. Garber AJ, et al. American Association of Clinical Endocrinologists' Comprehensive Diabetes Management Algorithm 2013 Consensus Statement Endocrine Practice. 2013;19 (Suppl 1):1-48.
3. Standards of medical care in diabetes – 2013: position statement of the American Diabetes Association (ADA). Diabetes Care. 2013;36:S11-S66.
4. Inzucchi SE, Bergenstal RM, Buse JB, et al. Management of hyperglycemia in type 2 diabetes: a patient-centered approach: position statement of the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD). Diabetes Care. 2012;35:1364-1379.

New Drug Update: Invokana (canaglifozin) for Type 2 Diabetes

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Education & Networking Committee Update

Great News! Mark your calendar!

The Education & Networking Committee is happy to share that our Fall CE, is planned for Saturday, Nov 9th from 9:30am-2pm at the Universities at Shady Grove in Rockville, MD.

Participants will be awarded up to three (3) hours of Continuing Education. We will be offering, as last year, a student/resident forum as well.

Go to our website to register!

Also, please contact Min Kwon (minsokwon@gmail.com) or Brad Burton (bburton57@gmail.com) if you are interested in joining the committee!

In today's society, we are seeing a vast increase in the incidence of diabetes. Even though there are many different classes of drugs to combat this chronic disease, there are still many people who cannot control their glucose levels, which can lead to micro and macrovascular complications for these patients. Canaglifozin, or the brand name Invokana™, is a new, innovative drug that was approved by the FDA in March 2013 to help improve glucose control in adults with type 2 diabetes mellitus.

There are few trials at the moment that compare Canaglifozin with other anti-hyperglycemic agents. One double blinded trial incorporated 451 type 2 diabetic patients who were randomly assigned to Canaglifozin, Sitagliptin 100mg, or a placebo for 12 weeks. The results show a reduction of A1C from baseline ranged from 0.7%- to 0.95% in the Canaglifozin group versus 0.74% and 0.22% for Sitagliptin 100mg and the placebo. In another trial, they incorporated 755 type 2 diabetic patients who were inadequately controlled with metformin plus a sulfonylurea and randomly assigned them to Canaglifozin 300mg or Sitagliptin 100mg. After this trial, the results showed a significant difference in the reduction of A1C between the two agents. Canaglifozin was significantly better than Sitagliptin (1.03% vs. 0.66%).The study also showed Canaglifozin reducing weight (2.5% vs. 0.3) and systolic blood pressure (5.1 vs. 0.99mmHg) as compared with Sitagliptin. However the frequency of genital fungal infections was approximately 6 folds higher as compared with Canaglifozin. There is no data on the microvascular and cardiovascular outcomes on this drug due to lack of long-term safety data studies.

Canaglifozin is only available in an oral solid formulation, as either a 100mg or 300mg dosage form. It should be taken once a day before the first meal of the day. The initial dose for Invokana is 100mg prior to the first meal of the day. You can increase this drug to the maximum dose of 300mg once daily. Also, this drug has the benefit of having a very low risk of hypoglycemia for the patient. It has been shown to have benefit in weight reduction and lowering blood pressure by a little margin which was founded in clinical trials of the drug. This drug may have some little benefits, but a lot of setbacks.

This drug is only recommended for adults with type 2 diabetes. The primary side effects are increased urinary tract infections and genital effects. This is usually managed with discontinuation of the medication if necessary by the judgment of the doctor and supportive care such as antibiotic therapy if a patient gets a UTI infection.

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Canaglifozin can also increase LDL-C levels by a mechanism unknown at the time. It can increase by 4.2mg/dL while on the 100mg and 8.2 on the 300mg as compared by the placebo. It is also considered a minor substrate for the CYP 3A4 enzyme. At this moment, there is lacking evidence in which drugs that Canaglifozin needs to be avoided due to it being newly released in the market and lack of post marketing surveillance. The dose must be adjusted for patients with renal impairment. If the creatinine clearance (CrCl) is between 45-60mL/minute, the maximum dose is 100mg once daily. It is not recommended with a CrCl of 30-45mL/minute and contraindicated in patients with a CrCl less than 45 mL/min. As a recently approved drug, post-marketing surveillance will be vital in providing information regarding the role of this drug for diabetes management.

I feel that this drug will have little impact in the treatment of type 2 diabetes. This is due absence of long-term efficacy and safety data. I feel that this drug may be a possible third line treatment in patients with inadequate control of their blood sugars who failed dual therapy and need triple therapy instead.

References

Clinical Pharmacology [database online]. Tampa, FL: Gold Standard, Inc.; 2013. URL: http://cp.gsm.com. Updated May 2013

Rosenstock J, Aggarwal N, Polidori D, et al. Dose-ranging effects of canagliflozin, a sodium-glucose cotransporter 2 inhibitor, as add-on to metformin in subjects with type 2 diabetes. Diabetes Care 2012; 35:1232.

Schernthaner G, Gross JL, Rosenstock J, et al. Canagliflozin Compared With Sitagliptin for Patients With Type 2 Diabetes Who Do Not Have Adequate Glycemic Control With Metformin Plus Sulfonylurea: A 52-week randomized trial. Diabetes Care 2013; 36:2508.

Foote C, Perkovic V, Neal B. Effects of SGLT2 inhibitors on cardiovascular outcomes. Diab Vasc Dis Res 2012; 9:117.

Student, Resident, and Fellow Committee Update

The committee hosted its first Back-To-School Night event on Thursday, September 19th, from 6-8pm at Virginia Commonwealth University School of Pharmacy Inova Campus!

Participating Schools of Pharmacy included the University of Maryland, Notre Dame of Maryland University, University of Maryland Eastern Shore, Shenandoah University, Virginia Commonwealth University

We would love to have you on our committee! Please contact Katy Pincus, committee chair at kpincus@rx.umaryland.edu!

DC-CCP Members at Family Night with the Washington Nationals on July 26,2013.

DC-CCP Summer Business Meeting (June 21, 2013).

Join DC-CCP's Social Media Groups!

Like us on Facebook

Click to like us on Facebook!

Click to join us on LinkedIn!

Upcoming Events

DC-CCP Fall Forum
Saturday November 9, 2013
The Universities at Shady Grove, Shady Grove, MD
Time: 9:30am—2pm

2014 ACCP Updates in Therapeutics® 2014
April 11– April 15, 2014
Hyatt Regency O'Hare in Rosemont, IL

All You Need to Know About DC-CCP

DC-CCP is a non-profit professional association and an independent chapter of the American College of Clinical Pharmacy (ACCP) dedicated to improvements in pharmacotherapy practice, education, and research in the Washington DC Capital Region, including the District of Columbia, State of Maryland, and Commonwealth of Virginia. Membership will be open to any licensed or registered health care professional or health care professional student in the Capital Region. Membership in the American College of Clinical Pharmacy is not required to become a member of our organization.

Purpose and Goals of DC-CCP

A. To promote the rational use of drugs in society
B. To advance the principles and practice of clinical pharmacy
C. To promote the full-time, advanced practice of clinical pharmacy
D. To provide an advanced level of continuing education programs in the area of clinical pharmacy and therapeutics
E. To provide a forum for the expression of opinion on pharmacy practice, education, and research from the perspective of clinical pharmacists
F. To support, promote, and advance the goals and objectives of ACCP as outlined in its constitution and bylaws
G. To provide a local recruiting base for ACCP

Special thanks to…

Communication Committee Chair: *Deanna Tran, PharmD*
Committee Members: *Chelsea McSwain, PharmD; Andrew Haines, PharmD; Andrew Phan, PharmD*
Peer Reviewer: *Thomas S. Sisca, B.Sc., PharmD, FCCP, BCPS, CACP*