Challenges in Diabetes Management

Handouts

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Handout for Challenges in Managing Diabetes October 7, 2017

Resources for Clinicians:

1. ADA 2017 Standards of Care
    a. http://care.diabetesjournals.org/content/diacare/suppl/2016/12/15/40.Supplement_1.DC1/DC_40_S1_final.pdf
    b. Update annually and published as a supplement to Diabetes Care journal
    c. Free
    d. Nicely organized with executive summary of new developments, update for PCPs, etc.
    e. Conservative & authoritative recommendations
2. AMDA, The Society of Post Acute and Long Term Care Medicine
    a. CALTCM is the state Chapter of AMDA
    b. https://paltc.org/ (On Resources, Clinical on Clinical Products, then Product type, then CPGs, to locate the DM CPG
        i. Clinical Practice guideline for Diabetes Care in PA/LTC updated in 2016
        ii. Available hard copy and electronic version ($39 for members)
        iii. Targets the patients we see in our setting of care describing the problems we see with options for improving outcomes. Identifies QAPI Metrics.
3. Yale Monograph Newsletter list serve
    a. https://visitor.r20.constantcontact.com/manage/optin?v=001TYH5ba1NOYXtML0xfSflmrUFWVBwFA7-5fPWBSG8c91yDf2baDSH-MYoJ1v1QYH1urG7SAwC3bvNqQUr24vFLE9fCVfr6CyM0dJ7iO-y2bLDauNFwTzPVRZv8R9VpW-xhFVX1d0sS7msbfFnu7UpuRpsPVKebg6s
    b. Concise daily 5-6 page review of ADA (June) and EASD (September) annual meetings
    c. Free and is a quick way to keep up on current clinical developments in diabetes care
4. Apps for real time info on drugs (dosing, adverse effects, costs, drug interactions, indications)
    a. Epocrates
    b. Medscape
5. Diabetes Self-Management Education & Support (DSME & DSMS)
    a. Knowledge is power and power is what's needed for optimal management of a 24/7 disorder that's complex and can quickly change or slowly, but substantially decline.
    b. Diabetes Educator(s) in your community - an under-utilized treasure for your patients
    c. Internet based free patient education
        i. UpToDate for Patients: https://www.uptodate.com/contents/table-of-contents/patient-information
        ii. HealthinAging Tip Sheets: https://www.uptodate.com/contents/table-of-contents/patient-information
        iii. X-Plain Patient Education Library: https://www.uptodate.com/contents/table-of-contents/patient-information
        iv. ACP Patient Education Channel: https://www.uptodate.com/contents/table-of-contents/patient-information

Clinical Pearls:

1. Cardiovascular complications are common with risk increased even in the prediabetes condition
2. Insurers are willing to pay for care that lowers cardiovascular risk, since the complications of diabetes triple the cost of caring for persons with diabetes.
3. The greatest risk factor for diabetes is advancing age with age associated muscle loss contributing to the most common defect in seniors (Impaired post-prandial hyperglycemia). A senior may have near normal Fasting BG, but may have an A-1C of 7.5 or greater. At least some of FS BG should be measured the meal after the one with the most carbohydrates.
4. Because loss of muscle mass contributes to the development of diabetes in seniors, a balanced exercise program is fundamental to improving metabolism and glycemic control.
5. Self-Management Education for patients and families of post-acute patients is the foundation for changing future clinical outcomes. This is a complex disorder that requires real time self-management. Ignorance is a disaster and a huge opportunity for improving outcomes.
6. An educated patient should have a say about their glycemic goals, the care plan to achieve those goals. They should know how to count carbohydrates, adjust dose of insulin for meals and stressors of life, what do when sick, how to store insulin, hypoglycemia and hyperglycemia manifestations, hypoglycemic unawareness (if on insulin), Rule of 15, healthy diet, weight management, vaccinations, importance of cigarette cessation (passive exposure too), and potential complications and strategies to minimize the.
7. Cigarette cessation in persons with DM dramatically reduces the risk of CVDz, PVD, and mortality.
8. Sleep Disorders occur in ~1/4 of persons with diabetes and increase risk of CVDz
9. When the A1C result is much lower than the estimated A1C result on the basis of the majority of measured FS BG, consider the possibility that the A1C is falsely low and not a reliable estimate of glycemic control.
10. Metformin ER may be safer in stage 3B CKD, since it has less GI absorption, but similar efficacy.
11. The Meglitinides will likely be used more than sulfonylureas since they are now generic, covered by MediCal, and have a lower risk of hypoglycemia.
12. LA insulin although initially approved for h.s. dosing, is likely safer with less risk of nocturnal hypoglycemia, when given in the morning.
13. Insulin has become very expensive, so NPH as the cheapest insulin is being used more, but the risk of nocturnal hypoglycemia is substantially greater especially if give at dinner rather then h.s.
14. In Type II persons with insulin dependent diabetes who require prandial insulin, Liraglutide may be as effective for glycemic control as long acting insulin with lower risk of hypoglycemia, all-cause mortality, and cardiovascular disease.
15. Of the long acting insulins, Degludec appears to be as effective, but has a lower risk of hypoglycemia.
16. The SGL-2 inhibitors like Empaglifozin may have an increasing role in diabetes care due to reducing the risk for all-cause mortality (32%), cardiovascular mortality (38%), progression of

CKD, and Hospitalizations for Heart Failure (HHA)-35%. The new caution is Canaglifozin 2017 study showing increased risk of lower extremity amputation if PVD present.

17. SGL-2s have increased risk for near normal glycemic DKA likely due to their osmotic diuretic effect aggravating dehydration with under-profusion when a dehydrating illness occurs.
18. If LA insulin and RA insulin are needed for achieving glycemic goal, the usual balance is 40-50% LA insulin and 50-60% RA insulin with meals. Too often, we over insulinize with LA insulin and under-use RA insulin.
19. The new hybrid insulin pump with self-calibration for CGM results is likely to become common in persons with Type 1 diabetes. This means we will need to have staff training and policies prior to admission so we can safely manage these patients. Most acute hospitals have pump policies & training which can be accessed and used for developing facility training and policies.
20. Hypoglycemia is 3 times more common in persons with TypeI then Type II IDDM, which is why CGM and hybrid pumps may be have a significant role in their glycemic management.