Title
Focused Clinical Multi-Disciplinary ISP Summary Diabetes Mellitus Type 2

Permalink
https://escholarship.org/uc/item/48t047zw

Author
Scott, R.

Publication Date
2016
Focused Clinical Multi-Disciplinary ISP Summary
Diabetes Mellitus Type 2

The primary topic of learning during this FCM-ISP has been the medical management of both new-onset and established Type 2 Diabetics in the clinical setting. As the pharmacological therapies available to the physician for management continue to expand, working with a trained endocrinologist was vital for success in this pursuit. Whenever a patient presents, it is first vital to assess the information at your disposal before beginning the patient interview, especially reviewing the glucometer logs for both frequency of testing and the values themselves. Ascertainment when patients are testing (is it always upon wakening, or do they wait an hour?) as well as identifying trends (high during the day only if high in the morning) to help elucidate the specific source of their extra glucose load. For patients with both long-acting and short-acting insulin in their regimen, this can be especially important to balance the two to prevent episodes of hypoglycemia (acutely dangerous to the point of potentially being lethal) while minimizing hyperglycemia (chronically harmful to multiple organs). The goal is to have the lowest average blood sugar without any hypoglycemic episodes, and adjusting A1c goals from the baseline 7.0% according to specific patient profiles. I.e. having less restrictive A1c goals in the elderly or terminally ill who would not benefit from preventing long-term damage, or in those who have low health literacy to avoid overcorrection and dangerous hypoglycemic episodes possibly requiring hospitalization.

Although diet and exercise are vitally important, and covered below, the physician is often the only member of the patient care team who can adjust pharmacotherapy. Beyond solidifying my understanding of the distinct established classes of medications for DM2 originally obtained from Free Clinic work, I was also exposed to the more recently developed and niche medications previously unknown to me. Medications like the SGLT2 inhibitors, which are growing in popularity due to their side effect profile of weight loss and reduction in blood pressure (accomplished via inhibition of glucose reuptake in the nephron). Although I feel that an in-depth review of each medication type, indications and concerns is beyond the scope of this synthesis, I can now confidently state that I am comfortable developing an oral medication regimen including any of the biguanides, sulfonylureas, meglitinides, TZD’s, DPP-4i, aforementioned SGLT2i, and α-glucosidase inhibitors based on specific patient profile, previously tried medications, and likely side effect tolerance/preference.

Once a patient moves beyond the need for exclusively oral medications, the wonderful world of insulin and injectable medications is introduced to them along with its own sphere of rules and potential complications. The importance of distinguishing basal from bolus insulin, how to optimize 70/30 or other mixed insulin preparations, troubleshooting insulin injection problems including lipohypertrophy were all repeatedly addressed with patients to ensure that they were able to care. In one particular Samoan gentlemen’s case, repeated visits established that his combination of genetic factors and comorbid conditions made his insulin resistance exceptionally high, and required large doses of U-500 concentrated insulin to overcome.

A secondary goal has been identifying the standard of care testing methods to assess end-organ damage in diabetes, especially in chronic cases. Beyond the basics of knowing to assess renal, nervous, and visual function, I was able to directly participate and observe the individual tests for each. In Ophtho clinic, observing the diabetic retinopathy pathology helped me get a new appreciation for my own sight – seeing a young man with 10 years of barely-controlled diabetes now status post sclerotherapy and desperately trying to retain the vision in his one good
eye was an emotional experience I’m not going to forget – and one that will do all the more to
fuel my care for my future diabetic patients. In nephrology, seeing patients that initially
screened out with high microalbumin/creatinine ratios progress from silent nephropathy to
dialysis and transplant lists underlined how important frequent screening for every patient is.

My tertiary but no less important goal in all of this was also learning about the various
educational methods that the patient care team uses to empower the patient to address the disease
in their everyday life. By working with the N.P. and R.D. on the team on a biweekly basis, I was
able to begin appreciating the wide information gap that can often separate patients into the so-called “compliant” and “non-compliant” groups, and the amount of time and effort it can take to
enable patients to take control of their medical destiny. By developing a “meal plan” instead of a
diet, and working with patients to give them food they could enjoy eating, the R.D. was able to
show me a better way to modify patient behaviors related to food intake. And as part of my
repeated observation and leading of diabetic education classes in both the individual and group
settings, I was able to take many patients from not knowing the relationship between their diet
and their symptoms, to independently developing plans to cook healthier meals for their families.
As part of these education classes, over two 2-hour sessions, I was able to cover: the
pathophysiology of Diabetes, what the lab tests signify for the patient, how food relates to sugar
and how to plan healthy meals, the potential harmful effects of diabetes both short- and long-
term, and how to test your own blood sugar. Feedback from these sessions was universally
positive, and beyond being personally gratifying to make a difference to these patients, it was
also extremely educational to interact with so many perspectives in a relaxed setting; hearing
about their own misconceptions and difficulties with adherence highlighted the areas that were
most important to address in my future career.

Overall, this FCM-ISP has made a large and positive effect on my ability as a future
clinician. There is no substitute for hands-on clinical experience in learning how best to manage
all the cases that might present to you, and my role as a future family medicine provider will be
full of people with diabetes. The education focus that I crafted for myself was actually more
enlightening than originally anticipated – beyond learning what patients need more education on
for this disease, my many hours with them also gave me a more intuitive grasp of how patients
misunderstand. Because of this, I feel that my ability to communicate with patients about all of
their issues, medical or otherwise, has been greatly improved.