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Editorial

Translating diabetes research from multiple directions – microvascular to psychosocial



This edition of JCTE presents a variety of diabetes research including the prevalence of retinopathy and its correlation with signs of nephropathy in Spain, a method for engaging youths to divulge symptoms of neuropathy, and documenting how medication adherence and self-care correlates with less distress.

Lopez, et al. [1] use a cross-sectional design to document the apparent prevalence of diabetic retinopathy in existing databases. Consistent with the rest of the world [2], this is in the setting of increasing prevalence of diabetes in Spain. They find about 1 in 7 adults with diabetes in Spain appear to have retinopathy when using a relatively low sensitivity screening test of direct ophthalmoscopy. The low sensitivity of the available screening method may account for the lower than expected prevalence of retinopathy, but it may also reflect that diabetes is diagnosed at earlier stages and may be better cared for to reduce the progression to microvascular complications [3]. Other expected findings include the relationships between increased cross-sectional prevalence of diabetic retinopathy with high blood pressure, age, duration of diabetes, higher hemoglobin A1C, hyperlipidemia, and other “microvascular” complications – in this case using eGFR as a marker for renal disease. They recommend further population-based screening of retinopathy to confirm their results, which could also be accompanied by a call for translating more sensitive screening tests into the standard of care, such as digital retinography [4]. Higher sensitivity screening would help find out if current interventions are beneficial, or if options should be explored to find more specific markers to help find or prevent diabetic retinopathy earlier in patients, or perhaps just as importantly to avoid unnecessary testing in the remaining majority who do not have retinopathy and may not be at future risk.

It is timely to see that medication adherence and self-care are associated with less “diabetes distress” in the paper by Jannoo, et al. [5], when there is a new position statement on psychosocial effects from the ADA and AADE [6] describing diabetes distress as result of managing a complex, lifelong disease. One recommendation from the data would be to encourage adherence and self-care amongst patients with diabetes expecting them to have less risk of diabetes distress. At face value, it makes sense to improve adherence and reduce problems in diabetes [7], and the recommendation should also be helpful, even if it just boosts a “placebo effect” which has been identified for decades with adherence [8]. Although another recommendation from the data could be to better define the direction of the correlation, since it could also be that those with greater distress are not able to adhere to medications or

participate in helpful self-management behavior, meaning that the diabetes distress, per se, would have to first be overcome.

Moser, et al. [9] combine both psychosocial aspects of interviewing patients with early identification of a “microvascular” complication. In this case, they model responses to multiple questions, and develop a set of 25 items to better identify the hallmark symptoms of paresthesia, pain and anesthesia in diabetic neuropathy in young patients, mostly young Caucasian boys in this study. It is encouraging that questions on these 25 items should be adaptable to different populations, and could be incorporated into a clinical visit to better screen for symptomatic diabetic neuropathy. It would seem time to test an approach using a questionnaire based on these 25 items to see not only if the symptoms can be identified, but whether early identification benefits long-term outcomes such as future foot ulcers, amputation, pain medication needs, and blood glucose control. Especially, if it performs better than standard, yet non-ideal, screening in clinic such as microfilament testing [10,11], other physical exams or standard history taking [12,13].

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Darin E. Olson
*Division of Endocrinology, Metabolism and Diabetes,
Department of Medicine, Emory University School of Medicine,
Endocrine Section, 1670 Clairmont Road, Med-111 Atlanta VAMC,
Decatur, GA 30033, United States
E-mail address: delson@emory.edu*