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AUTHORS: Ozden GOKDEMIR,Ülkü BULUT BATUR,Anil GÜRKAN

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EDİTÖRE MEKTUP / LETTER TO THE EDITOR

Type 2 diabetes and atrial fibrillation could cause transient ischemic attack

Tip 2 diyabet ve atriyal fibrilasyon geçici iskemik atağa neden olabilir

Özden Gökdemir¹, Ülku Bulut Batur², Anıl Gürkan³

¹Izmir University of Economics, Faculty of Medicine, Department of Family Medicine, İzmir, Turkey

²Aksaray University Faculty of Medicine, Department of Family Medicine, Aksaray, Turkey

³Independent researcher, İzmir, Turkey

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To the Editor,

Diabetes mellitus is still one of the common chronic problems of not only rural areas, but also urban cities^{1,2}. While the regulation of blood sugar metabolism is one of the most important tasks, the demands of patients living with DM can trammel primary care physicians. Primary care physicians (PCPs) are faced with a number of challenges when treating patients with type 2 diabetes (T2DM), including managing patients who are primarily asymptomatic in the early stages of the disease, and a complex range of complications as the condition worsens³.

In primary care, where patients can receive care closer to home, routine diabetes management is increasingly provided. Understanding the variables that affect the effectiveness of diabetes management in primary care may help developing strategies for enhancing adherence to evidence-based care and adjusting quality improvement (QI) interventions to the situation at hand⁴. As the number of DM patients increases, so do the complications. These include blood clotting, diabetic retinopathy, hypertension, chronic kidney disease, and foot ulcers, all of which sharply decreases patients' productivity and life expectancy⁵.

Transient ischemic attack (TIA) is a significant risk factor for stroke. The risk of having an ischemic stroke within 90 days of having a TIA is as high as

17%, with approximately half of these strokes occurring within 7 days⁶.

In this case, 64-year-old female patient diagnosed with DM and hypertension for at least 5 years was attending the surgery for nuisance and dysuria. Bacteriuria was detected and blood sugar was 550 mg/dl WBC= 12.48 CRP: 7 HbA1C: 10.4 % Her neurologic examination was normal, except for her urinary incontinence. She was hospitalized with a diagnosis of DM, HT, and cystitis and prescribed Metformin 2x1gr, 1x 40 mg, ceftriaxone 2x1gr, insulin glargine. She was given Diabetic patient education. During follow-up, her blood sugar regulation had settled but she complained of palpitation, ECG was performed, and she was diagnosed with AF (atrial fibrillation). Her blood pressure was 120/80 and metoprolol infusion was made. INR: 1,44 sec PT=17sn creatine=0,9 mg/dl. Control ECG was at sinus rhythm. During recovery, she underwent an internal medicine consultation, and was due to be discharged. However, she complained about "not being able to talk". In her neurologic examination, her left arm was found to have lost of strength (3/5) and although she could hear and understand, she could not speak. She was transferred to another health center for detection and treatment as pre-diagnose of Transient Ischemic Attack (TIA).

Diabetes-related complications have traditionally included macrovascular conditions such as coronary

Yazışma Adresi/Address for Correspondence: Dr. Özden Gökdemir, İzmir University of Economics, Faculty of Medicine, Department of Family Medicine, İzmir, Turkey Email: gokdemirozden@gmail.com
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heart disease, stroke, and peripheral arterial disease, as well as microvascular conditions such as diabetic kidney disease, retinopathy, and peripheral neuropathy.⁷ The dramatic rise in the prevalence of type 2 diabetes is almost certainly due to the rise in the prevalence of obesity. The metabolic syndrome is thought to affect at least one in every five adults and is associated with an increased risk of type 2 diabetes and CVD. Diabetes, if not treated properly, can lead to a variety of serious complications.⁸ As vascular disease mortality has decreased, cancer and dementia have become the leading causes of death among people with diabetes mellitus⁷.

Harris et al reported that the most highly regarded strategy for achieving glycemic target levels was to reinforce lifestyle choices (79%)³. According to the guidelines, lifestyle medicine approach and social prescribing could be useful tools to overcome the onset of DM and its increasing range of complications⁹. It takes time to implement a maintainable lifestyle change that could straightforwardly address the underlying causes of the most challenging chronic health issues (rather than simply treating their obvious signs). Despite the great potential and demonstrated efficacy of lifestyle modification for prevention, management, and even reversal of the disease, some studies estimate very high non-adherence rates to lifestyle counselling. There are definitely various factors that both affect patients and healthcare practitioners that result in these unsatisfactory consequences (e.g., inadequate training in the field of lifestyle medicine, insufficient time for effective lifestyle interventions during primary care visits, and inadequate reimbursement) (for example, insufficient knowledge and low level of health literacy, low socioeconomic status)¹⁰.

Basic neurologic physical examination is needed, not only in neurology clinics, but also in primary care. Although tools such as EMG, EEG may not be available in every clinic, it should be possible to carry out inspection, palpitation, percussion” and the “reflex hammer” in all circumstances.

To achieve appropriate follow-up conditions, it is essential to document “the findings”. In this way, changes could be made, and the necessary approaches adopted¹¹. For example, in this case, the patient was from a rural area, and in the first physical examination record, for the neurologic findings no positive reports were made except for incontinence.

The FAST algorithm (Face, Arm, Speech, Time) aids

in the detection of individuals experiencing an acute stroke. According to Aroor et al “In a sensitivity analysis, the percentage of stroke patients who would be missed decreased from 14.1% to 9.9% if face weakness, arm weakness, or speech impairment on the evaluation period were taken into account in addition to a documented history of FAST symptoms”. Therefore, it is possible that over 95% of ischemic strokes could be detected by BE-FAST (Balance, Eyes, Face, Arm, Speech, Time), and with the implementation of revised “learning tools” for practitioners and public, with well-structured education programs designed according to evidence-based studies¹². According to the guidelines, lifestyle medicine approach and social prescribing could be useful tools to overcome the onset and the increasing complications of DM.

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