

## MORNING REPORT

## A Sudanese Woman with Headache

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**A** 57-year-old woman with type 2 diabetes presents with headache and witnessed grand mal seizures. These spells start with the patient staring into space followed by rhythmic whole body jerking that lasts for two minutes and concludes in a post-ictal state. She presents with her son to the emergency department for further evaluation. She was born in Sudan and immigrated to the United States three months prior to presentation.

*Seizures are defined as uncontrolled electrical activity in the brain, which may produce a physical convulsion, minor physical signs, thought disturbances, or a combination of symptoms.<sup>1</sup> Causes of seizures include stroke; space occupying lesions in the brain; metabolic encephalopathy (e.g. hyponatremia, hypocalcemia, uremia); drug intoxication from narcotic analgesics, tramadol, and antibiotics (e.g. imipenem, cephalosporines); anesthetics (e.g. enflurane, ketamine, methohexital, local anesthetics); sympathomimetics; and drug withdrawal (e.g. alcohol, benzodiazepines).<sup>2</sup> The evaluation of seizures centers on the history and physical.*

The patient has no head trauma, fever, chills, change in vision, chest pain, shortness of breath, neck stiffness, or altered mental status. She does have bladder incontinence.

Laboratory studies are normal other than a blood sugar of 330. A head CT reveals a right frontal parafalcine meningioma. Neurosurgical consultation recommends prompt admission for management of seizures and resection of meningioma. However, the patient lacks medical insurance and declines admission. The patient is discharged on carbamazepine and instructed to follow up in two weeks.

The patient continues to have seizures. She visits local free clinics for insulin for her diabetes. They usually provide her with regular insulin, but she also requires basal insulin and only receives this if there are samples available. She does not check her blood sugars and has not followed up with neurosurgery or neurology.

*Ensuring adequate hospital follow-up and attention to transitions of care are critical to maintaining health. Assurance that the discharge plan has been followed can be especially difficult for many immigrant patients who have limited funds for medications, office visits, and transportation to clinics. Important health literacy, cultural, or language barriers may also lead to further misunderstanding of discharge instructions.*

Two years later, the patient presents with a series of three grand mal seizures within 12 hours and left-sided weakness. Head CT shows an interval increase in size of the meningioma with vasogenic edema. She is placed on continuous EEG monitoring. The inpatient team starts dexamethasone for cerebral edema and adds additional antiepileptic medications. The patient's HbA1c is 12.3%, and her blood sugars on the dexamethasone are in the 350 to 400 range.

Using a telephone interpreter, as in-person Arabic interpreters are not always available, it is discovered that the patient is no longer taking antiepileptics, having been lost to follow-up. She does not know how to contact physicians for refills. She is only able to obtain basal insulin about 50% of the time but is faithful with her use of regular insulin at mealtimes.

*Language barriers can be frustrating for both the patient and medical staff. However, as history plays*

*a critical role in diagnosis and treatment, this barrier must be surmounted. Professional interpreters, whether in person or by telephone or video-conference, should be used whenever possible. In this case, the correct history will ensure that the patient's seizures not be classified as a "treatment failure" with escalation of antiepileptics. In addition, by recognizing that her poorly controlled diabetes may reflect lack of access rather than an inadequate insulin dose, she can be restarted on weight-based insulin dosing to avoid hypoglycemia.*

On resumption of carbamazepine, the patient no longer has seizures. She wears EEG leads under her traditional Hijab (i.e. head scarf). She also has difficult-to-control blood sugars with the dexamethasone, especially in the evenings, and low blood sugars in the late mornings. On further investigation, the patient disclosed that she was fasting for Ramadan.

*Before making adjustments to insulin, it is critical to discuss the patient's current dietary pattern. Ramadan is a month-long period in which practicing Muslims refrain from eating, drinking, and smoking from dawn until sunset. Food and drink are served daily before dawn and after sunset for one month. The month of Ramadan follows the lunar calendar and therefore starts at a different date each year. Sliding scale insulin will only provide correction for current glycemic states, while basal insulin provides consistent levels of blood glucose during periods of fasting. It is the mealtime or nutritional insulin that is variable in this patient. As her breakfast, lunch, and dinner intake was nil, she required no mealtime insulin at these times; however, she ate a*

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large late evening meal and required a more substantial preprandial dose of insulin at this time.<sup>3</sup>

If the patient had medical insurance and could ensure close follow-up, she would have been discharged for meningioma resection in the next one to two weeks. Given concerns for adequate follow-up, the patient is hospitalized until the next available surgery date three days later.

*The Affordable Care Act (ACA) has improved access to health care. Residents who live in the United States and are US citizens or US nationals and are not incarcerated are required to have health insurance.<sup>4</sup> According to healthcare.gov, most immigrants who are “lawfully present” qualify for health insurance. Immigrants who are eligible for coverage through the Health Insurance Marketplace include those immigrants who have qualified for non-citizen immigration status without a waiting period as well as immigrants with humanitarian status or circumstances, valid non-immigrant visas, and legal status conferred by other laws.<sup>4</sup>*

*Immigrants also gain health care coverage under the ACA with Medicaid expansion. Expanding Medicaid eligibility to nearly all low-income adults with incomes at or below 138% of the federal poverty level (FPL)—\$16,242 per year for an individual in 2015—allows many lawfully present immigrants to gain coverage.<sup>5</sup> In addition, the Supreme Court ruling on the ACA’s constitutionality effectively made the expansion a state option. As of February 2015, 29 states and the District of Columbia are implementing the expansion.<sup>4</sup> Iowa is one of five states that has received approval of a Section 1115 waiver to implement the Medicaid expansion; Arkansas, Michigan, Pennsylvania, and Indiana*

*have as well. These waivers allow the states to implement the Medicaid expansion in ways that do not meet federal rules and still access enhanced federal matching funds for newly eligible adults.<sup>4</sup>*

This patient obtains green card status—ironically, her son works at the hospital—but she does not know how to apply for health insurance and has missed the enrollment period. Social service providers work with the family but have little to offer her until the next enrollment period starts on November 1, 2015, for coverage in 2016.

*Many immigrant families are of “mixed status,” with members having different immigration and citizenship statuses. For example, some families may have taxpaying members who cannot buy health insurance through the Marketplace while other family members are eligible to use the Marketplace as citizens or lawfully present immigrants. The ACA states that family members who are not applying for health coverage for themselves will not be asked if they have eligible immigration status.<sup>4</sup>*

The patient does well after surgery and has no recurrence of her seizures. She is discharged on basal/bolus insulin. Follow-up in two weeks is recommended at the local free clinic for management of blood sugars while dexamethasone is tapered. Unfortunately, the free clinic does not take “appointments” but is rather a first-come, first-served clinic. The patient stands in line for two hours prior to the clinic opening to try to ensure that she is seen that day. Glargine insulin in the hospital repository from patients donating unused medications is given to the patient for use upon discharge. Further supplies of insulin are ordered via the glargine insulin patient

assistance program after arrangements are made for the free clinic physician to serve as her primary care physician. The patient follows up with neurosurgery after six weeks as recommended. She has a follow-up head CT and office visit, which she pays for out of pocket. The patient will enroll for insurance (likely Medicaid) with her son’s help via the ACA on November 1, 2015. At that point, basic health maintenance such as mammograms, screening lipids, colonoscopy, cervical cancer screening, and diabetic eye exams will need to be initiated. With medical coverage for prescription medications and diabetes testing supplies, the patient will have access to medication to prevent further seizures and improve her blood sugar control. She will also receive preventive therapy, including an ACE inhibitor for prevention of renal complications.

**References**

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5. <http://kff.org/medicaid/issue-brief/the-aca-and-medicaid-expansion-waivers/> (accessed on July 27, 2015)

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