Oculomotor Nerve Palsy in Diabetes

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Case Study: 60-year-old Chinese male, poorly controlled diabetic with a HbA1c of 10.3%, complicated by diabetic retinopathy and nephropathy. Other comorbidities include hypertension, hyperlipidemia, ex-smoker, previous old cerebrovascular accident, hepatitis B carrier and alpha thalassemia trait. He presented with a two-day history of sudden onset of right sided ptosis and a squint - the right eye was noted by family members to be “down and out”.

The third nerve provides a crucial nervous supply to the numerous structures in the orbit and eye. It has a relatively long intracranial and intraorbital course that is susceptible to damage at any point. Injury to the nerve commonly occurs in the setting of diabetes as a result of ischaemia to the nerve. However, there are several other life and sight threatening causes which we should exclude before attributing the palsy to diabetes alone.

Notice the right ptosis (lid droop) and the eyeball in a “down and out” position as a result of an oculomotor nerve palsy.

Spontaneous recovery of the nerve palsy occurred two months later.

Photographs courtesy of SNEC. We also thank this patient for consenting to these educational photographs.
Other possible causes of ED include smoking, which affects blood flow in veins and arteries, and hormonal abnormalities, such as low levels of testosterone.

In short, making the diagnosis of a third nerve palsy and identifying the life threatening causes in our daily practice can potentially save lives. Appropriate referrals can be made to help our patients recover as much of their premorbid function as possible.