Reviewer's report

Title: A case with transient refractive change after removal of pituitary tumor

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Reviewer: Majid Moshirfar

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While the case report is novel, the discussion is incomplete (see below). I recommend that the discussion be reworked to include a better explanation for why this patient had a hyperopic shift, and include more reference to papers about myopic and hyperopic shifts due to systemic electrolyte imbalance.

Overview:
A case of a patient who became hyponatremic following resection of a pituitary tumor, and developed increased lens thickness and a hyperopic shift.

Major points:

The presented theory about increased lens thickness as the cause of the patient’s hyperopic shift is inadequate. Increased lens thickness alone should result in a myopic shift. However, if the hyponatremia and resultant aqueous influx into the lens caused a decrease in the refractive index of the lens, this could counteract the increased lens thickness and result in a net hyperopic shift. This is most likely the reason behind the patient’s hyperopic shift, and should be addressed.

Both hyperopic and myopic shifts have been thoroughly described in hyperglycemic patients, and the following article by Wiemer et al. provides a nice explanation and summary:


Minor Point:
The first line of the case presentation should read “thyroid dysfunction” rather than “thyroidal”

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:
none