Title: A Unique case of Rathke's cleft cyst causing a partial CN VI Palsy

Abstract: Rathke's cleft cysts are typically asymptomatic. In those cases that are, cranial nerve involvement is rare. Our case is an unusual presentation that resulted in a partial CN VI palsy.

I. Case History
   a. Patient demographics: 83 YO WM
   b. Chief complaint: binocular diplopia x 6 months
   c. Ocular, medical history
      i. Ocular Hx: Pseudophakia O.U., Refractive error O.U.
      ii. Medical Hx: BPH, ataxic gait, allergic rhinitis, GERD, anxiety, s/p basal cell carcinoma removal left cheek
   d. Medications
      i. 81mg Aspirin
      ii. Pantoprazole 40mg

II. Pertinent Findings
   a. Clinical
      i. Refraction/BCVA
         OD +1.50 -2.25 x090 20/20 slow
         OS: +1.00 -1.00 x070 20/20 slow
      ii. Cover test:
         30° LET in primary gaze; non-comitant, increasing in left gaze to 35 PD
      iii. Extraocular muscles:
         OD Full
         OS small Abduction deficit (-1.5)
      iv. Worth four dot: facultative suppression
      v. Humphrey Visual Field 24-2:
         OD: full field, poor reliability
         OS: temporal edge defects, poor reliability
   b. Physical
      i. Ataxic gait
   c. Laboratory Studies
      i. CRP: 0.02
      ii. SED rate: 10
      iii. Anti-acetylcholine receptor antibody: normal <30
   d. Radiology Studies
      i. MRI 7/26/2016: cystic lesion originating in midline of sella turcica and extending leftward beyond sellar margin near left orbital apex

III. Differential Diagnosis
   a. of 6th nerve palsy
      i. Thyroid-related ophthalmopathy
      ii. Myasthenia Gravis
iii. Ischemic
iv. Idiopathic Orbital Inflammatory Disease
v. Orbital Trauma
vi. Primary Divergence Insufficiency
vii. Duane Syndrome Type 1
viii. Orbital Myositis
ix. Spasm of Near Reflex
x. Orbital Compressive Lesion
xi. Giant Cell Arteritis

b. of Rathke’s cleft cyst
   i. Pituitary adenoma
   ii. Craniopharyngioma

IV. Diagnosis and Discussion
   a. Features of Rathke’s Cleft Cyst
      i. Histologic
      ii. Radiologic (MRI features)
      iii. Clinical
   b. Potential complications of Rathke’s cleft cyst
      i. visual field defect
      ii. pituitary dysfunction
      iii. headaches

V. Treatment, management
   a. Surgical removal
   b. EOM resection
   c. Prism correction – treatment plan for this case, due to patient’s age and comorbidities surgery is not indicated
   d. Monocular occlusion
   e. Botulinum Toxin
   f. Bibliography
      i. Bowling, B. Kanski’s clinical ophthalmology: a systematic approach. Elsevier: 2016; 82-95
VI. Conclusion: Rathke’s cleft cysts are typically undiagnosed due to the fact that they rarely often cause visual or systemic complications. In fact, these benign lesions are often an incidental finding on magnetic resonance imaging (MRI).

In a non-resolving CN palsy, however, it is imperative to further investigate the cause of the diplopia by obtaining neuro-imaging and laboratory testing. Systemic conditions such as giant cell arteritis (GCA) and ocular myasthenia must be ruled out in these cases since the treatment protocol will vary depending on the diagnosis. Neuro imaging is indicated as well, since both benign and malignant neoplasms may be the causative factor.