



Mid Atlantic Regional Chapter of the American College of Sports Medicine

Annual Scientific Meeting, November 2nd - 3rd, 2018
Conference Proceedings
International Journal of Exercise Science, Issue 9, Volume 7



Unusual Headaches After a Concussion in a Basketball Player

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HISTORY: A 20-year-old men's D1 basketball player presented four months after a concussion sustained in basketball. The athlete reported that three weeks after injury, he was asymptomatic and six weeks after injury he was cleared for full return to sport activities by a team physician. He reported that he began having mild headaches 2-3 weeks thereafter. These headaches became more frequent and severe. The headaches were described as a pressure sensation that encompassed the entire head. He was allowed to participate in sports since the team physicians felt that chronology suggested the headaches were not related to the concussion. After 3 weeks of headaches he experienced an episode of nausea and dizziness while playing pickup basketball at home that was so severe, he was taken to an outside emergency department. His workup there was unrevealing and, after receiving fluids, his symptoms abated and he was discharged. Upon return to college he continued to have headaches, malaise, and photophobia, for which he returned to see a team physician.

PHYSICAL EXAMINATION: A complete neurological exam including cranial nerves, strength of all extremities, sensation, reflexes and balance testing were normal. He had no visual field cuts by confrontation.

DIFFERENTIAL DIAGNOSIS: 1. Post-concussion syndrome 2. Headache syndrome 3. Dehydration 4. Intracranial lesion

TEST AND RESULTS: Initial non-contrast brain MRI revealed a pituitary mass.
Prolactin (69.6 ng/dl -normal <20 ng/dl). Growth hormone, cortisol, IGF and ACTH were normal.
Follow-up brain MRI, pituitary protocol, with contrast: - intrasellar mass of about 7.65 mm in primary dimension involving the right pituitary gland.
3rd MRI 6 weeks later – no growth.

FINAL/WORKING DIAGNOSIS: Prolactinoma without mass effect

TREATMENT AND OUTCOMES: 1. Neurosurgery referral. He was started on bromocriptine which normalized prolactin levels and relieved the athlete's headaches. 2. Ophthalmology for visual field testing due to the location of the mass. He had no visual symptoms and testing was normal. 3. Endocrinology consult for hormonal testing which was normal except for prolactin. 4. The athlete was able to begin sport activities and meet the demands of his sport. Repeat MRI's demonstrated stable mass size and no surgery was indicated. He continues to follow with neurosurgery.