Reviewer's report

**Title:** Pituitary apoplexy following shoulder arthroplasty - a case report

**Version:** 1  **Date:** 16 June 2010

**Reviewer:** B Twickler

Which of the following best describes what type of case report this is?: An unexpected event in the course of observing or treating a patient

Has the case been reported coherently?: Yes

Is the case report authentic?: Yes

Is the case report ethical?: Yes

Is there any missing information that you think must be added before publication?: Yes

Is this case worth reporting?: Yes

Is the case report persuasive?: Yes

Does the case report have explanatory value?: Yes

Does the case report have diagnostic value?: Yes

Will the case report make a difference to clinical practice?: Yes

Is the anonymity of the patient protected?: Yes

Comments to authors:

Interesting case report. However, the authors do no not profit from the opportunities that are in discussing this clinical case. Therefore, I recommend them to invest more in giving more clinical data and explaining its biological backgrounds.

Major remarks

1. No results of any blood tests are shown. Could they present blood levels in IS (haemoglobin in mmol/l instead of gr %)? Could the authors present all principal plasma levels of hormones and electrolytes in the follow up? Do they have results from urine collections (volume, sodium level, osmotic density)? Could they show pituitary imaging?

2. Could they describe more in detail their actions concerning thrombotic
prevention? For instance, was there presence of thrombophilia (strong positive family history)? The indication for acetylsalicylic acid in prevention of venous thrombosis sounds not straight for me (according to current guidelines). Do they have APTT levels or antiXa levels during LMWH therapy? Could they offer us the dosage used? Was there any co-morbidity conflicting with LMWH therapy (such as kidney function, other medication)? Could they estimate preoperative risk for a new venous thrombotic event in this case (using a score)? Did they restart any anticoagulation therapy after leaving the hospital?

3. Could the authors comment more on the third cranial nerve defect, but also on the visual defects? Do they consider this as a primary or a secondary effect of pituitary damage? No lateral extension of the pituitary tumour had been described and this makes local pressure induced damage less likely to me. Or should these ophthalmologic defects be understood as a consequence of absolute deficits in adrenal and thyroid hormones? Metabolic disturbances in the ocular muscles and/or retina layer? Mono-neuritis syndrome?

4. Could the authors comment more on the clinical approach of a pituitary insufficiency in the post-operative setting?

-+After their diagnosis they started hydrocortisone therapy orally. Why
+did they not give intravenous hydrocortisone in the early phase of
+treatment. Moreover, the dosage they propose is rather limited. Special
+reconsiderations for this restricted steroid stress dose? Do they have
+special recommendations with regard to daily dose steroid substitution
+in the background of a (strong) positive family history of venous
+thrombosis
- Could the authors explain that there is a preferred sequence in starting
corticosteroid hormone first with thyroid hormone afterwards? Could they discuss
more in detail physiology behind hyponatremia in the presence of both
hypothyroidism and hypocortisolism?
- Why do they start testosterone substitution in a 62 years old men and why they
choose the intramuscular route? What do they consider appropriate as the target
level for testosterone at this age?
- Was there, in retrospect, already some indication for the preoperative presence
of pituitary adenoma in this patient (signs of hypogonadism, reduction in physical
fitness, obstipation, depression, weight changes et cetera)?
- The description of the pituitary on MRI is not sound. Could they offer us some
more information on: volume pituitary, suprasellar extension, pituitary stalk,
infundibulum and its environment, ventricle space/indication for obstruction,
location and anatomy of the internal carotid artery (aneurysm indeed present?).
Did they consider retesting pituitary function six months after surgery? Should
they extend their endocrine evaluation with testing for (partial) diabetes insipidus
or a growth hormone deficiency?
Quality of written English: Acceptable

Declaration of competing interests:
I declare that I (MT) have no competing interests