



Headache and hypoglycemia

Clinical Case Presentation

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Personal data and medical history

- ◆ 51 years old Estonian male
- ◆ Works as a surgeon
- ◆ Healthy, occasionally Herpes infection in the lip
- ◆ No regular medication

Present history

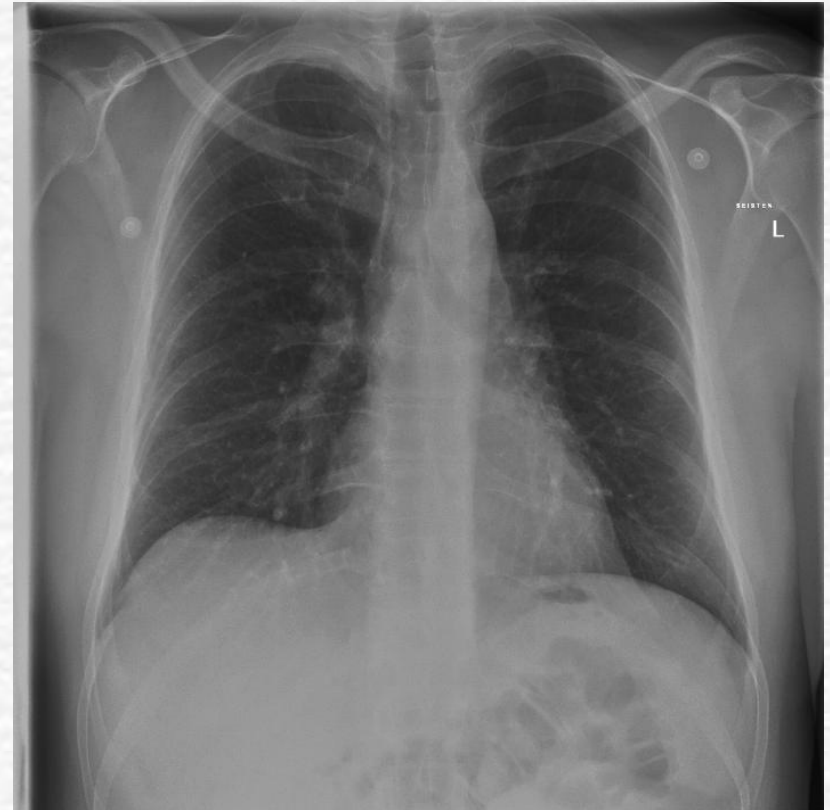
- ◆ Travelling recently only in Estonia
- ◆ Herpes vesicle in a lip one week earlier
- ◆ Headache, nausea and vomiting started 4 days earlier after dinner
- ◆ Fever ad 37.9 and double vision in the admission day
- ◆ Previously no head trauma, no diarrhea, no dyspnea or coughing, no urination problems
- ◆ Referred to hospital as suspected Meningitis/botulism infection

Physical examination

- ◆ BP 101/72 mmHg, HR 65/min, SaO₂: 99%, T° 35.9°
- ◆ Weak and fatigue, bitemporal headache
- ◆ Skin cold and sweaty, no rashes
- ◆ Cardio-respiratory auscultation normal
- ◆ Abdomen soft, normal sounds
- ◆ Glasgow Coma Score 15
- ◆ Double vision, ptosis on the left, no sign of stiff neck
- ◆ Nausea and vomiting during examination

Arterial blood gas (room air) and chest X ray

- ◆ pH **7.54** (7.35-7.45)
- ◆ Be **4.9** mmol/L (0 ± 2.5 mmol/l)
- ◆ PaO₂ **9.3** kPa (11-13)
- ◆ PaCO₂ **4.3** kPa (4.5-6)
- ◆ Na⁺ **127** mmol/L (137-145)
- ◆ K⁺ **3.2** mmol/L (3.3-4.9)
- ◆ Ca⁺⁺ **1.11** mmol/L (1.16-1.3)
- ◆ Gluk **2.0** mmol/L (4-6.1)
- ◆ Lact **0.2** mmol/L (0.5-2.2)
- ◆ Hb **124** g/L (134-167)
- ◆ Diagnosis suggestions?



Differential diagnosis and initial treatment

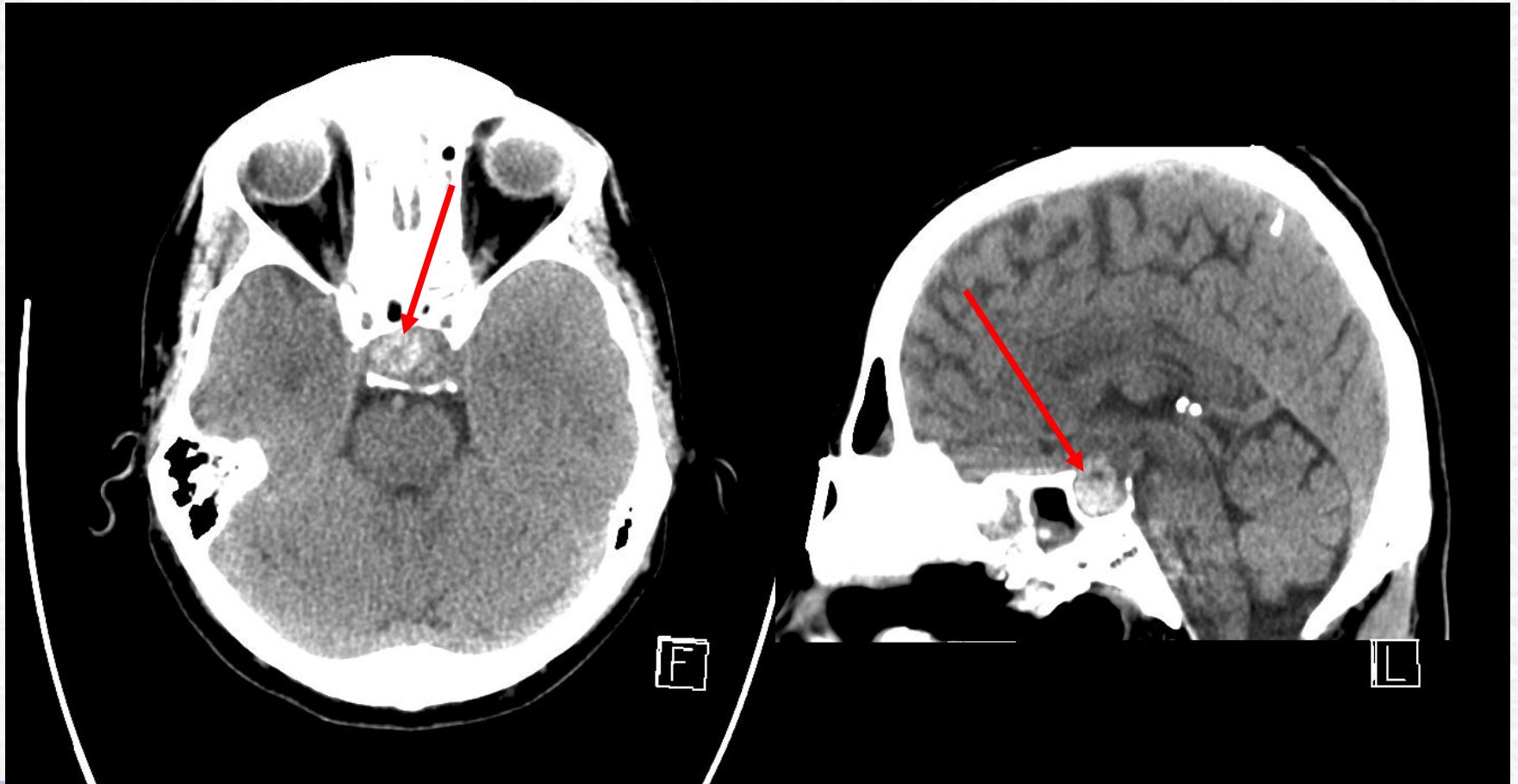
- ◆ Meningitis or some other neurological process
- ◆ Sepsis
- ◆ Gastroenteritis
- ◆ Medication started:
 - Ceftriaxone 2 gram x 1 i.v.
 - Metoclopramide 10 mg i.v.
 - Oxycodone 3 + 3 mg i.v.
- ◆ Intravenous fluid therapy including glucose

Laboratory findings in the emergency room

- ◆ Hb **111** g/L (134-167)
- ◆ Leuk 5.1 E9/L (3.3-8.2)
- ◆ Trom 131 E9/L (150-360)
- ◆ CRP **238** mg/L (<3)
- ◆ Cortisol **21** (150-650 nmol/L)
 - Hydrocortisone 50 mg x 4 i.v. started
- ◆ K⁺ 3.3 mmol/L (3.3-4.9)
- ◆ Na⁺ **130** mmol/L (137-145)
- ◆ Creatinine 75 umol/L (60-100)
- ◆ ALP (alkaline phosphatase) 83 U/L (35-105)
- ◆ ALT (alanine transaminase) **87** U/L (10-70)
- ◆ Bilirubin (total) **27** umol/L (4-20)

Head CT scan

Radiologist: Round 1.9 cm hypophyseal tumor expansion with bleeding inside

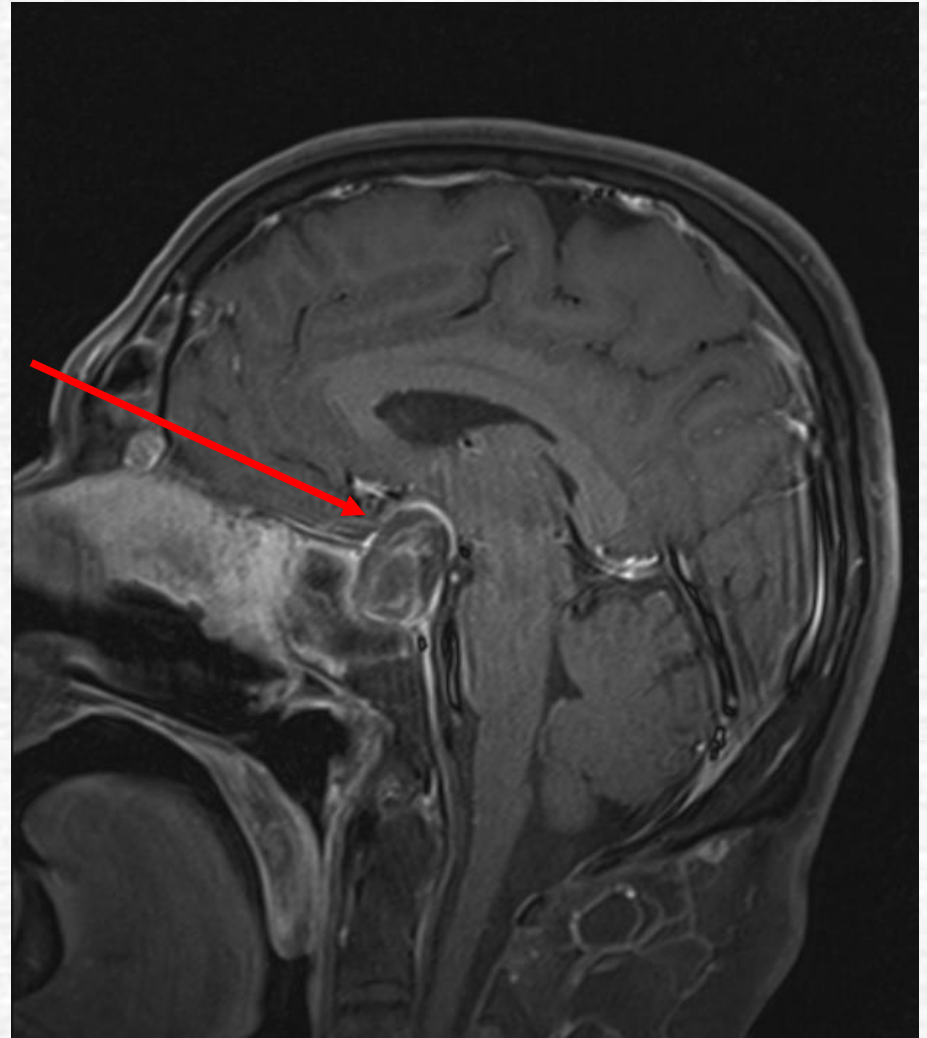


Sella MRI scan and abdomen ultrasound

Radiologist: Sella is filled with 2.9 x 2.6 x 2 cm tumor which is pressing chiasma and bulging to left sinus cavernosus

Radiologist: Abdomen ultrasound finding normal

◆ Does this explain all the symptoms of the patient?



Laboratory findings on the ward

- ◆ Hb **111-114** g/L (134-167)
- ◆ Leuk **6.3-11.8** E9/L (3.3-8.2)
- ◆ CRP **263-94-4** mg/L (<3)
- ◆ ALP **138-85** U/L (35-105)
- ◆ ALT **246-83** U/L (10-70)
 - Ceftriaxone replaced by Levofloxacin 750 x 1 mg p.o.
- ◆ Bilirubin (total) 7 umol/L (4-20)
- ◆ Testosterone **0.1** (10-38 nmol/L)
- ◆ Prolactin 77 mU/L (50-300)
- ◆ TSH **0.089** mU/L (0.5-3.6)
- ◆ T4-free 9.3 pmol/L (9-19)
- ◆ T3-free **1.9** pmol/L (2.6-6)
 - Levothyroxine 50 ug x 1 p.o.

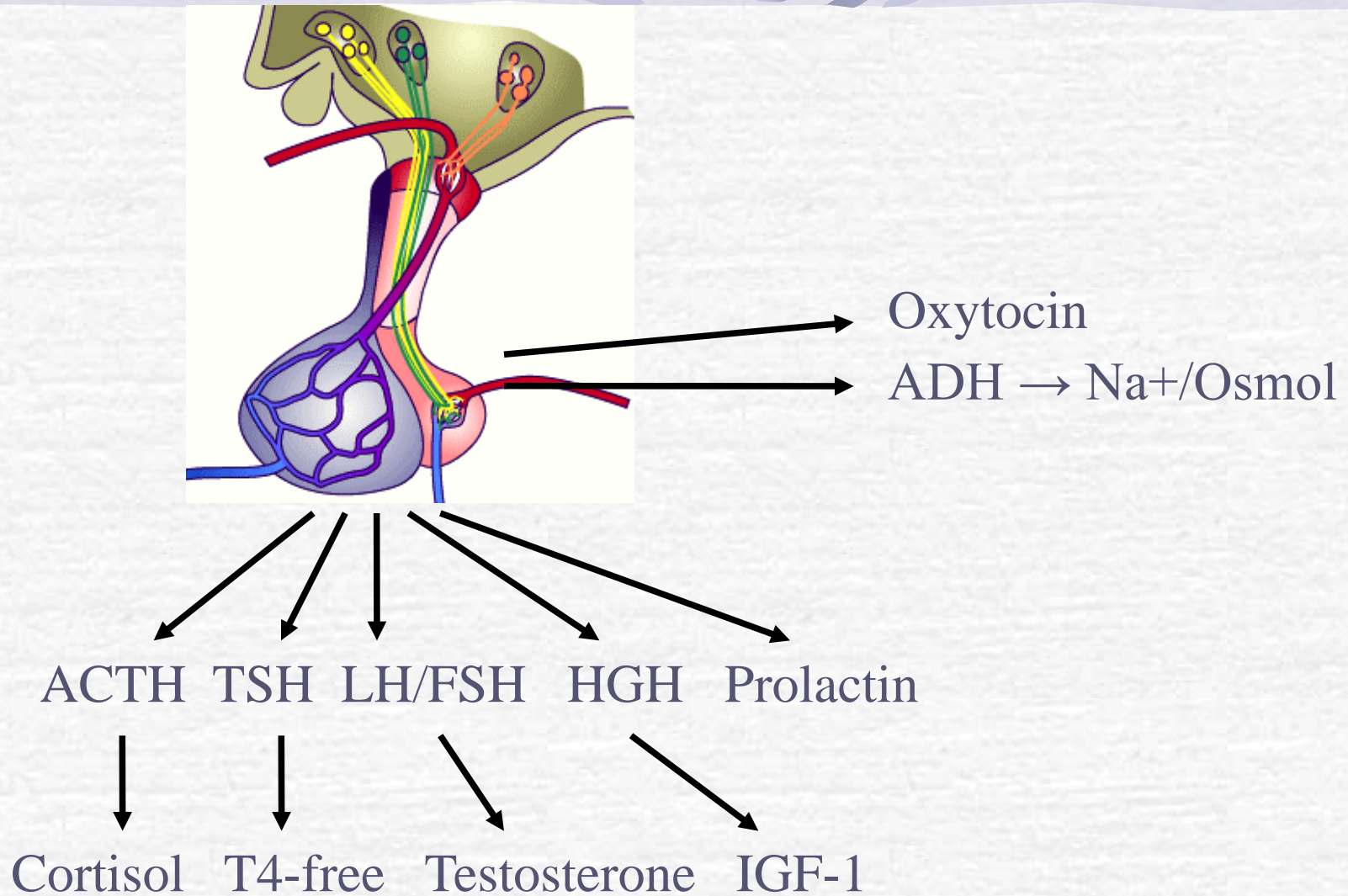
Recovery and consultations on the ward

- ◆ Overall condition improved quickly after cortisone therapy
 - Dexametasone 1.5 mg x 3 i.v./p.o. replaced hydrocortisone
- ◆ Double vision, ptosis and headache disappeared in 2 days
- ◆ Diuresis up to 5 liters a day in a early recovery phase
 - Desmopressin 60 ug p.o. was given twice
- ◆ No infection was detected in blood, stool or urine cultures and serological tests were negative except a trace of the Hepatitis A vaccination or a healed disease
- ◆ Neuro-oftalmological examination was normal
- ◆ Neurosurgeon suggested the operation

Operation in 1 month, diagnosis and follow up

- ◆ Transphenoidal pituitary decompression was done without problems
- ◆ Medication after operation Hydrocortisone 10 + 5 mg p.o. and Levothyroxine 50 ug x 1 p.o.
- ◆ Patho-anatomical diagnosis was Hypophysis: Adenoma necroticans
- ◆ Final diagnosis was **Pituitaric apoplexia**
- ◆ Open questions in coming 3 months follow up:
 - Testosterone replacement
 - Anemia (basic laboratory tests were normal)

Pituitary hormonal axis



Take home message

- ◆ Predominant features of pituitary apoplexy are acute onset of severe headache, a pre-existing pituitary adenoma and permanent hypopituitarism
- ◆ Pituitary disorders? → Check peripheral hormone levels

Thank You!

