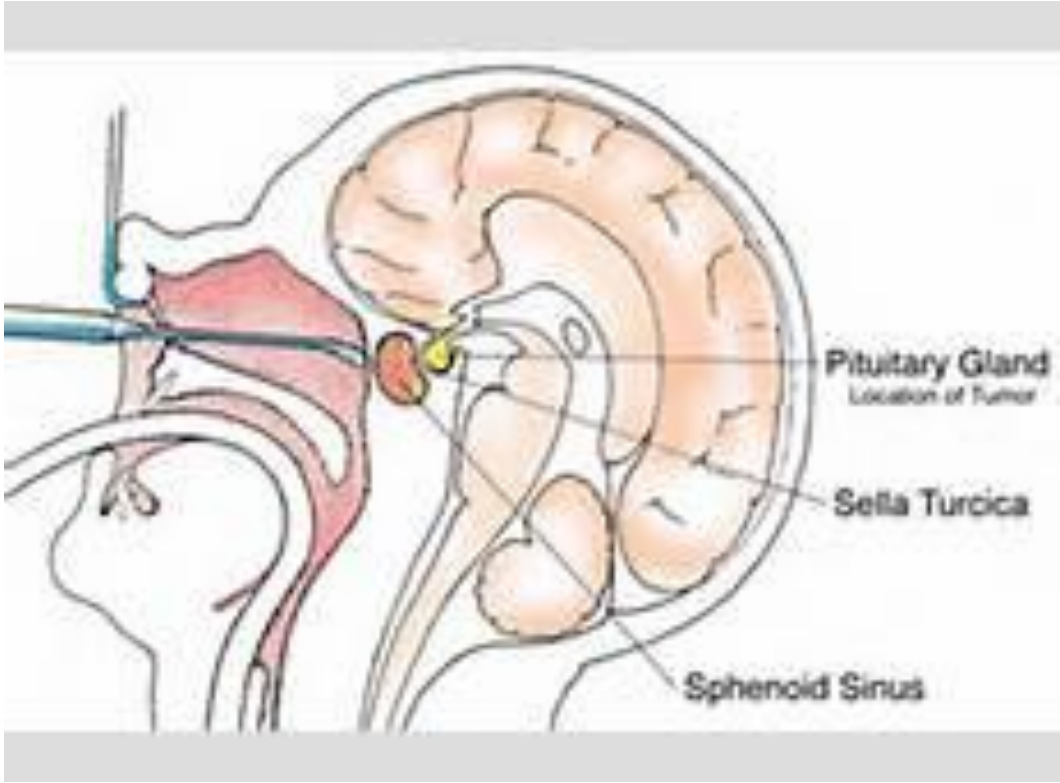

Pituitary Gland
Location of Tumor
Sella Turcica
Sphenoid Sinus

‘Fundamentals’

- Knowing accurate clinical information (eg fluid balance is crucial)
- It is a clinical area that uses a significant amount of high dose dexamethasone – ‘don’t forget the glucose’
- Be confident that the results your are basing clinical judgements on are correct – eg day 3 cortisol / urinary sodium results

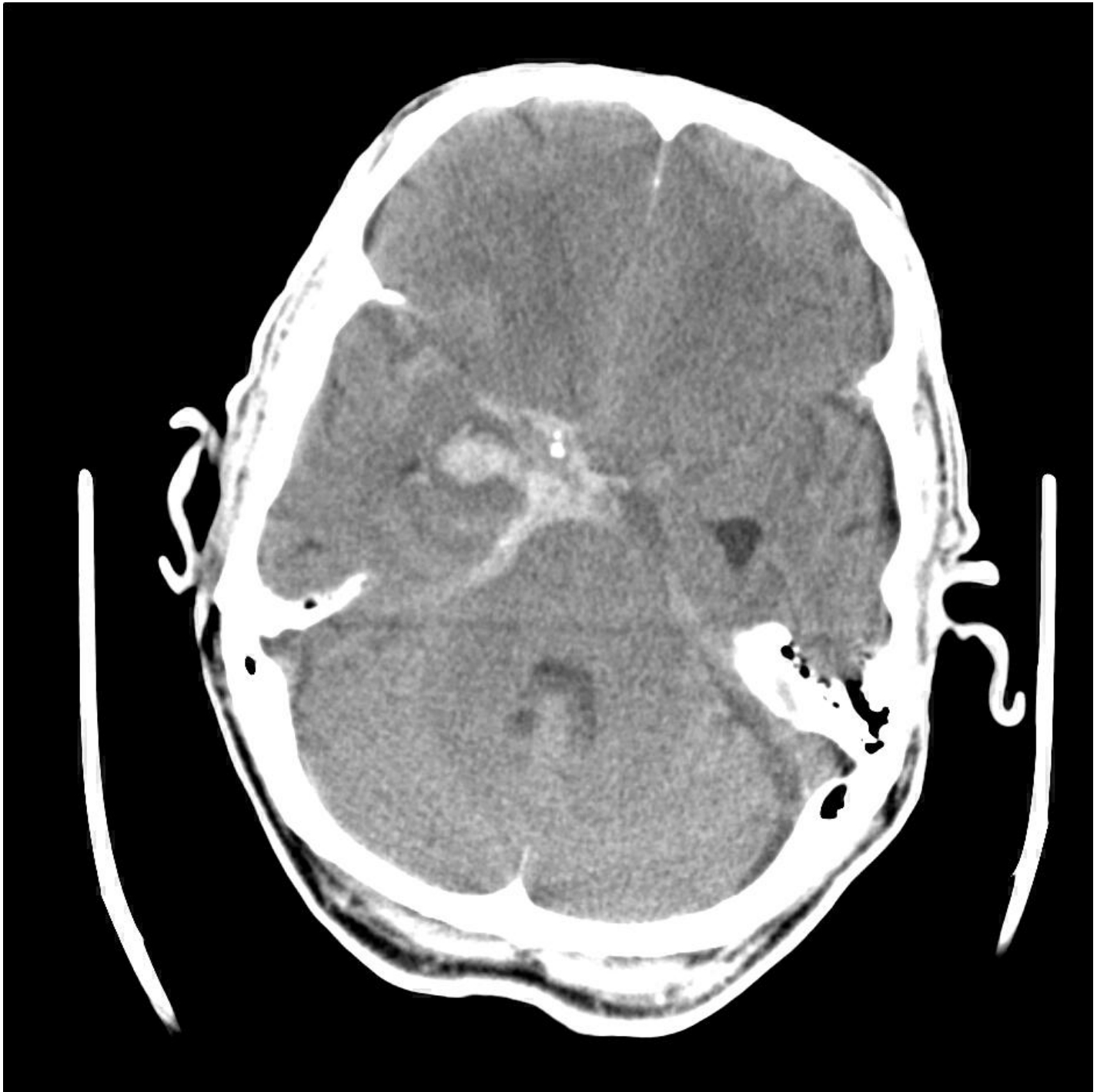
Water balance problems post pituitary surgery

- Transient DI
- Permanent DI -particularly suprasellar procedures
- ‘Triple phase’ response

‘Triple phase response’

- Initial cranial diabetes insipidus
- Followed after 4-8 days by a transient remission (or even SIADH) lasting 2-8 days
- Followed by a recurrence of permanent DI.

‘Adipsic’ patient



- DAY2 post SAH
- Na 123 (128, 132, 135)
- K 4.1
- Ur 2.4
- Cr 56

- Confused / vomiting (new)

SIADH following SAH

- 3 litres of 0.9% NaCl is given daily to maintain intracerebral perfusion pressures

- Often can result in symptomatic hyponatraemia

3.2. Guidelines for use of hypertonic sodium chloride 1.8%

1. A single aliquot of **300mls of sodium chloride 1.8% over 30 minutes** is recommended. The underlying cause of hyponatraemia must be investigated and treated.

3. Further infusions of hypertonic sodium chloride 1.8% may be required and the **aim should be a 5 mmol/L increase** in serum sodium **with no more than a 10 mmol/L rise in the first 24 hours, and then 8 mmol/L rise every 24 hours thereafter.** (Therefore a second infusion should only be given once the post-infusion serum sodium level is known and further specialist endocrine/renal advice has been obtained).

7. IF HYPONATRAEMIA IS CORRECTED TOO RAPIDLY

1. Prompt intervention for re-lowering the serum sodium concentration if it increases >10 mmol/L during the first 24 hours or >8 mmol/L any 24 hours thereafter, should be made.
2. Discontinue on-going active treatment for hyponatraemia.
3. Consult endocrine/renal team and consider a sodium-free intravenous infusion of 10mL/kg body weight of electrolyte-free fluid (such as glucose 5%) over 1 hour under strict monitoring of urine output and fluid balance.
4. Consult endocrine team to discuss if it is appropriate to add IV desmopressin (DDAVP™) 2 micrograms (not repeated more frequently than every 8 hours).

Diagnosis?

Results

- Prolactin <25 (<500)
- LH / FSH 2.4 / 1.5 (2-10)
- Cortisol 660 (post synacthen)
- T4 7 (9-21)
- TSH 1.2 (0.5-4.0)

Indications for empirical treatment

- Haemodynamic instability
- Altered conscious level
- Reduced visual acuity
- Severe visual field defect
- 9am cortisol <550nmol/L

Society for Endocrinology

CLINICAL GUIDELINES

UK Guidelines for the Management of Pituitary Apoplexy

Society for Endocrinology

Royal College of Physicians

Transarterial Chemoembolisation (TACE)

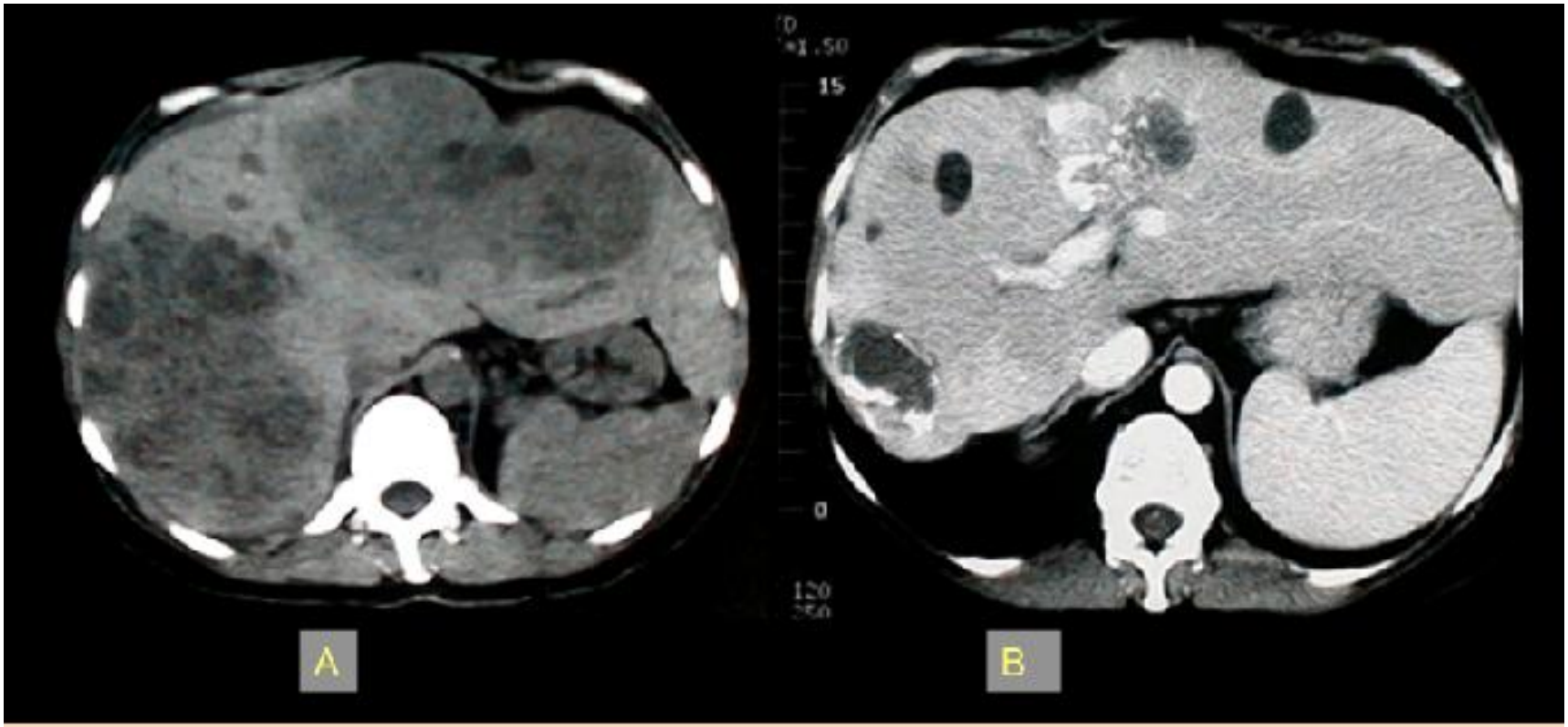


Figure 1. A 56-year-old female patient with symptomatic gastrinoma liver metastasis that progressed despite systemic chemotherapy. She received 4 sessions of conventional transarterial chemoembolization (TACE) that led to complete symptomatic remission and disease control. Computed tomography scan before TACE shows large tumor burden in both lobes (A). Computed tomography scan performed 5 years later shows excellent oncologic result (B).

Transarterial Chemoembolisation (TACE)

- A destructive therapy and so poses a significant risk of carcinoid crisis.
- All patients should have a 24hr urine collection for metanephrines done pre-operatively and this should be normal; this should be performed before discussion in the HPB MDT. If not discuss with an endocrinologist.
- All patients with carcinoid syndrome should be established on a depot somatostatin analogue.

Day of procedure

- Intravenous octreotide 50µg/hour commenced at least one hour before the procedure and (continued for 24 hours).
- Patients require cardiac monitoring because of a rare association between intravenous octreotide and cardiac conduction abnormalities.
- Parenteral ranitidine (50mg x 8hrly) and chlorpheniramine (10mg x 6 hrly) block H1 and H2 receptors and should be administered one hour before the procedure and continued throughout the day.
- A 24 hour urine collection for metanephrines and 5HIAA should be started on the morning of the procedure (need a urine container with acid).

Day 1 post-procedure

- If there has been no cardiovascular instability, then wean off the intravenous octreotide by 25ug/hr every hour.
- Prescribe oral Rantidine (150 mg b.d) and chlorpheniramine (4mg x 6 hourly) for the next two days.


KEEP
CALM
AND
ASK
QUESTIONS