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PHOTO QUIZ

Pituitary failure due to postpartum DIC: reversible diabetes insipidus and hypogonadism

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CASE REPORT

A 30-year-old female presented with vulvar haematoma, hypertension and pancytopenia which developed immediately after childbirth. She developed polyuria in the first week after delivery and did not have any lactation. On examination, she had a 4 x 5 cm vulvar haematoma and minimal vaginal bleeding, and no signs of adrenal insufficiency. Her laboratory results were as follows: creatinine 1.3 mg/dl, aspartate transaminase 97 U/l, alanine transaminase 52 U/l, lactate dehydrogenase 680 U/l, indirect bilirubin 35.2 µmol/l, haemoglobin 5.4 mmol/l, platelets 72 x 10^9/l, leucocytes 4.7 x 10^9/l, prothrombin time 23.7 sec (11 to 14.5), activated prothrombin time 53.8 sec (24 to 40), international normalised ratio 2.18, fibrinogen 4.7 µmol/l (5.88 to 11.76), D-dimer 37.45 µg/ml (0 to 0.5), and fibrin degradation products 20 µg/ml (0 to 5). Her blood sodium was 146 mmol/l, with a plasma glucose of 5.8 mmol/l, plasma osmolality of 305 mmol/kg, simultaneous urinary density of 1007 and urinary osmolality of 244 mmol/kg. Because of her critical state, a water deprivation test was not performed. Her anterior pituitary function was within the normal limits, except for low levels of gonadotropins, with low levels of oestradiol. T1-weighted sellar magnetic resonance images (MRI) showed an enlarged and hyperintense pituitary gland that was interpreted as a haematoma.

Her polyuria, which improved with nasal desmopressin, resolved in the following days and there was no further need for treatment (*table 1*).

Table 1. *Anterior pituitary functions at initial diagnosis and after one year*

	Initial	First year
Follicle-stimulating hormone (3-14 IU/l)	0.21	6.65
Luteinising hormone (2.4-12.6 IU/l)	0.01	4.1
Prolactin (165-1008 µg/l)	560	656
Oestradiol 2 (99-881 pmol/l)	73.4	73.4
Thyroid-stimulating hormone (0.35-4.94 mIU/l)	0.692	2.659
Free thyroid hormones 3 (27.7-73.9 pmol/l)	20.2	52.7
Free thyroid hormones 4 (9-24.5 pmol/l)	11.8	12.5
Adrenocorticotrophic hormone (0-26.4 pmol/l)	3.74	3.1
Cortisol (138-635 nmol/l)	422	469
Growth hormone (0.06-5 µg/l)	0.89	0.43
Insulin-like growth factor (15.7-65.5 nmol/l)	8.5	6.6

WHAT IS YOUR DIAGNOSIS?

See page 130 for the answer to this photo quiz.

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ANSWER TO PHOTO QUIZ (ON PAGE 128)

PITUITARY FAILURE DUE TO POSTPARTUM DIC: REVERSIBLE DIABETES INSIPIDUS AND PERMANENT HYPOGONADISM

DIAGNOSIS

Our patient seems to be a case of reversible diabetes insipidus and irreversible central hypogonadism, which may be a result of pituitary haematoma (*figure 1*) and/or ischaemia due to disseminated intravascular coagulation. Resolution of the diabetes insipidus correlated with regression of the haematoma (*figure 2*), which was caused by haemorrhage into the pituitary. This is rarely reported.[1] However, early volume replacement may be another factor that limited the pituitary ischaemia independent of a temporary compressive effect of the haematoma. Irreversibility of gonadotropin deficiency strongly supports ischaemic damage to the pituitary as in classical Sheehan's syndrome.[2,3]

NOTE

This photo quiz was accepted as a poster at the Congress of the Society of Endocrinology and Metabolism of Turkey and presented in September 2006.

REFERENCES

1. Nagai T, Hasegawa O, Tuji A, Kamiyama Y, Honda M, Ito H. Pituitary hemorrhage in hemolytic uremic syndrome. Pediatr Neurol 1992;8:75-6.
2. Molitch ME. Pituitary diseases in pregnancy. Semin Perinatol 1998;22:457-70.
3. Kovacs K. Sheehan syndrome. Lancet 2003;361:520-2.

Figure 1. *Coronal precontrast T1-weighted MR image showing an enlarged pituitary gland containing a hyperintense area*

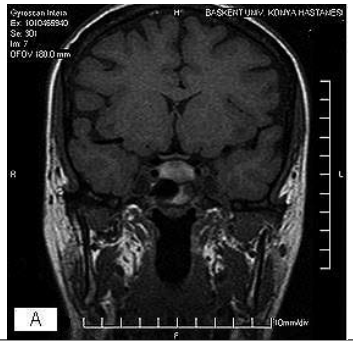
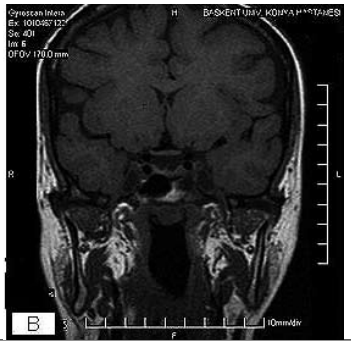


Figure 2. *Coronal T1-weighted image showing the decrease in pituitary size due to regression of haematoma*



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