Case Report
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Post partum mortality; WHY? Sheehan's Syndrome

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Introduction

Sheehan's syndrome, defined in 1937, develops partial or complete ischemia in the pituitary gland due to postpartum hemorrhage. It is seen as a hypopituacism that extends to the deficiency of all hormones from a single hormone deficiency [1]. It is usually seen in women who develop severe hypotension or shock due to bleeding or hypovolemia during or after delivery. According to the severity of necrosis in the pituitary gland, the clinical extends asymptomatic state to a symptom that manifests in the acute period [2]. SS is considered to be the most common cause of pituitary insufficiency in developing and underdeveloped countries. The disease may occur for many years without symtomps as well as lack of lactation, menstrual changes, decline in secondary sex characteristics, weakness and hypotension suggest this disease in postpartum period. However, adrenal insufficiency and myxedema coma have been triggered by an intervening trauma, after infection or surgery may result shock and death[3,4].

Case Presentation

A 30-year-old female patient was admitted to the emergency department with weakness, swelling in the body and bruising of the legs. It was learned that the patient had a difficult birth at home about 10 days ago, that she had a third birth, and that 3 of her children were born healthy. There was no problem in her previous births, but there was no improvement in her postpartum weakness and fatigue. Due to this condition, the patient could not breastfeed her child and her milk was very low. She presented to different health institutions several times because of increased fatigue, frequent urination, fever, swelling of the body and bruising. In fact, no pathology was found in the hemogram, biochemical parameters and urine analysis performed one night before. When the patient came to our emergency department, her general condition was bad and his consciousness was pure and his breathing was superficial. Physical examination revealed hypotensive, tachycardic, pretibial 3 positive bilateral edema, venous ulcers in the legs and ecchymotic linear lines in the left leg (Figure1-2). The patient was observed to be in shock and cardiopulmonary arrest occurred during this period. The patient was started on cardiopulmonary resuscitation (CPR). Fingertip blood glucose 30 was measured, and 25 g dextrose was loaded simultaneously. During resuscitation, transthoracic echocardiography was performed by cardiology. There was no evidence of pericardial tamponade, massive pulmonary embolism and aortic dissection. In e-FAST imaging, no intraabdominal free fluid was observed and liver, spleen and renal parenchymal tissue were normal. WBC 4,6 $10^{3}/\mu L$, Hgb 10,6 g/dL, PLT ise 52 $10^{3}/\mu L$ were measured before the patient's arrest. Glucose was 28 mg / dl, Sodium 122 mmol / L, Potassium 7.09 mmol / L, Calcium 6.6 mmol / L (Table 1). The lactate level was 8.8 mmol / L and metabolic acidosis in venous blood gas. The patient did not respond to fluid-electrolyte (10% calcium gluconate 2 ampoule i.v. infusion) and did not respond to CPR and was considered as exitus.

We didn't get permission because our patient died. However, there is no ethical violation in the materials we use.

Discussion

The necrosis of the anterior lobe of the pituitary gland develops slowly. It is expected to develop necrosis within about 2 weeks after postpartum hemorrhage. However, sudden death due to this emerging necrosis is not expected[5]. Most of the time the disease occurs over the years and the acute picture is rarely seen. Adrenal and thyroid insufficiency due to hypopituarism causes cardiac abnormalities. If hypoglycemia and electrolyte disturbances are added to the table, fatal

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Figure -1. Ecchymos

Figure -2. Venous ulcer

dysrhythmias such as ventricular tachycardia [6] or long QT [7] may develop. Peripheral effusion, mitral valve prolapse, septal hypertrophy, congestive heart failure, left ventricular hypertrophy and sinus bradycardia [8], dilated cardiomyopathy [1] due to hypothyroidism can be seen.

The pituitary gland begins to give symptoms after losing 75% of its tissue. This period was between 1-33 years. In a series of 20 cases, Dökmetaş et al. found this period between 2-40 years. The most common postpartum period is the absence of lactation and changes in the menstrual cycle. Two clinical tables are the most important clinical manifestations of adrenal insufficiency and hypothyroidism. When adrenal insufficiency develops, hypoglycemic episodes, electrolyte disturbances, hypotension, weakness and hypopigmentation can be seen. Facial edema and periorbital swelling due to hypothyroidism is not expected [4]. What is interesting in our case is that the condition associated with these two clinics is very fast and even the day before the biochemical parameters are normal. In the postpartum period, the patient did not receive pituitary insufficiency treatment and caused the

Tablo 1. Biochemical and venous blood gas values of the patient

Biochemistry	*The value of the patient*	*Blood Gas and INR*	*The value of the patient*
Glucose	28 mg/dL	INR	1.39
Urea	111 mg/dL	PH	7,18
Creatinine	2,62 mg/dL	PCO_2	26,8
GFR	24	HCO_3	9,6 mmol/L
ALT	74 U/L	Lactate	8,8 mmol/L
AST	295 U/L	BE	-17,1 mmol/L
CK	6679 U/L	Ionized Ca	0,95 mmol/L
LDH	631 U/L	Potassium	6,8 mmol/L
Sodium	122 mmol/L	Sodium	118 mmol/L
Potassium	7,09 mmol/l		
Calcium	6,6 mg/dL		
Osmolality	264 mosml/kg		
Direct Bilirubin	3,12 mg/dL		

clinic to rapidly aggravate and go into shock due to cardiac collapse. Acute SS is not a common condition in the literature. Matsuzaki et al. described the case of acute SS in a postpartum 8th day seizure [9]. A similar picture in our case was reported in a 40-year-old patient who developed secondary adrenal insufficiency during appendectomy 19 years after postpartum in the literature [10].

In our case, there was thrombocytopenia associated with anemia. Normocytic anemia of normochrome is an expected condition in SS. However, pancytopenia was encountered in rare cases. As a result, the effect of anterior pituitary hormones on hematopoietic cells has been implicated [3]. Bisitopenia was observed in our case and the fact that the patient died in a short time may be the reason of not seeing leukopenia. But I have to say; pansitopenia and SS coexistence was a case of postpartum 13th year. HELLP syndrome is a condition that may occur in the last trimester of pregnancy characterized by hemolysis, elevated liver enzymes and thrombocytopenia [11]. In this case, we think that liver enzymes elevation, thrombocytopenia and high LDH levels may be due to HELLP syndrome and even the most important factor of the increase in the severity of SS. The fact that the blood pressure values during the pregnancy of the patient is normal and does not have a seizure strengthens this suspicion.

Hypoglycemia is a rare condition in SS. It occurs as a result of defect in Growth hormone, ACTH and contour regulatory hormones. In SS, coma may be seen due to adrenal insufficiency, hypoglycemia, hyponatremia or hypothyroidism [2,12]. The cause of hyponatremia may be caused by hypopituity and adrenal insufficiency. Fatigue, nausea and changes in consciousness are easily overlooked because of symptoms. Inadequacy of cortisol and ACTH is the cause of fluid-electrolyte impairment. In adrenal crisis, hyponatremia, hyperkalemia, hypocalcemia, hypoglycemia, fever, malaise, hypotension and shock may be seen [13,14]. In our patient, there were laboratory and clinical symptoms suggestive of an acute crisis. The hormone levels could not be studied due to time of arrival in the emergency room. Magnetic resonance imaging (MRI) could not be performed due to exitus. These are the shortcomings in this case presentation for reasons that we do not have. However, the anamnesis, laboratory findings and clinical outcome are sufficiently supported. Difficult birth at home, delayed lactation in postpartum period, fatigue, hypoglycemia, fluid electrolyte disturbance, bisitopenia and elevated liver enzyme values in the hypotensive shock of the patient to us in the case of acute SS is enough to think. In addition, we did not find any case of acute SS in the literature with postpartum 10th day.

Postpartum maternal deaths should be examined and the

underlying causes should be clarified. In this case, we wanted to discuss a patient whose clinical condition deteriorated within 10 days and lost. Based on the anamnesis information of the patient, the pituitary failure is thought to be in the first place but sudden death is not expected. In the last 24 hours, the patient's laboratory values deteriorated and he died of cardiovascular collapse.

In conclusion, if patients have such as difficult birth, hemorrhage and hypovolemia, such as the patients' complaints of fatigue, nausea and weakness should be considered in the postpartum period. Even if the patients routine parameters in emergency services is normal, pituitary, thyroid and adrenal hormone parameters should be investigated.

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