HEMODİYALİZ HASTASINDA GELİŞEN PİTUİTER APOPLEKSİ

THE PITUITARY APOPLEXY IN A HAEMODYALISIS PATIENT

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ÖZET: Pituiter apopleksi mevcut pituiter tümörün kanama veya enfarktüsüne bağlı spesifik klinik bulgularla karakterize bir klinik sendromdur. Bilinen pituiter hastalık hikayesi yokluğunda teşhisi zordur. Apopleksi ve kronik böbrek yetmezliği birlikteliği literatürde oldukça azdır.
Sunduğumuz olgu, 8 yıldır kronik böbrek yetmezliği sonucu diyaliz tedavisi görmekte olan hasta acil servise başağrısı, bulantı, kusma bilinçte kötüleşme şikayeti ile başvurarak pituiter apopleksi tanısı almıştır. Hasta konservatif olarak tedavi edilmiş ve 72 saat sonra exitus olmuştur.
Tedavinin cerrahi veya medikal olarak mı yapılacağı konusunda verilen kararda en önemli faktör görme keskinliğinin kaybıdır. Kronik böbrek yetmezliği multisistem bir hastalıktır ve zararlı etkileri santral ve periferik sinir sisteminde görülmektedir. Bize göre pituiter apopleksi ve kronik renal yetmezliğin bu nadir birlikteliği kötü pprognoza neden olmaktadır.

Anahtar Kelimeler: Kronik böbrek yetmezliği, hemodiyaliz, pituiter apopleksi

ABSTRACT: The pituitary apoplexy is a clinical syndrome characterized with specific clinical findings due to hemorrhage or infarction of a pre-existing pituitary tumor. It is difficult to diagnose the patient in the absence of a pre-established history of pituitary disease.
The association of apoplexy and chronic renal failure is extremely rare in the literature. In this report, we presented a heamodialysis patient who suffered from chronic renal failure for 8 years, applied to our emergency department with acute headache, nausea, vomiting and depression in consciousness and diagnosed as pituitary apoplexy. The patient was treated with conservatively and died in 72 hours after her admission. The most important factor whether the treatment will be surgical or conservative is decided due to patient's visual acuity alterations.
Chronic renal failure is a multisytem disease, and its detrimental effects are observed in central and peripheral nervous system. We thought that this unique association of the pituitary apoplexy and chronic renal failure causes dismal prognosis.

Key words: pituitary apoplexy, chronic renal failure, renal dialysis

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INTRODUCTION

Pituitary apoplexy is a clinical syndrome characterized with specific clinical findings due to hemorrhage or infarct of a pre-existing pituitary tumor. The term has also been used to describe spontaneous infarction and hemorrhage within a nontumorous pituitary gland.[1, 2] The incidence of the pituitary apoplexy in nontumourous pituitary gland is not known and most of the cases presented in the literature do not have any known pituitary adenoma before the onset of hemorrhage in 50% to 83% of the cases.[3, 4]

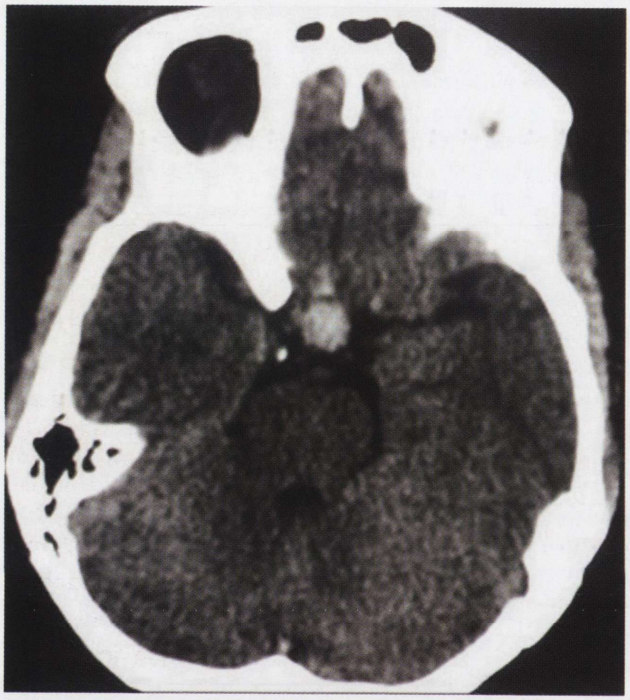

Figure 1: Direct cranial CT of the patient shows sellar and supra sellar blood acumulation around the suprasellar cisterns.

It is difficult to diagnose pituitary apoplexy in a patient who does not have pituitary adenoma before the event, and this causes dismal prognosis. There are many predisposing factors that facilitates the pituitary apoplexy, and these can be distinguished in 50% of the cases.[5] Chronic renal failure or hemodialysis are described as the predisposing factors in the literature.[4] In this report, we presented a hemodialysis patient suffering from chronic renal failure for 8 years who applied to our emergency department with acute headache, nausea, vomiting and depression in consciousness complaints and diagnosed as pituitary apoplexy.

CASE REPORT

Thirtyfour year-old female patient had been brought from a dialysis center to our emergency department due to serious headache, nausea, vomiting and depressed consciousness during dialysis. She did not have any known accompanying disease. Computerized tomography (CT) had been performed and revealed intrasellar and partly suprasellar hiperdens lesion compatible with blood (Figure 1). We did not perform contrast enhanced CT because of renal insufficiency. Plain skull graphies showed enlargement of the sella turcica and erosion of the dorsum sella (Figure 2). Glasgow coma scale was 9 points, and had neck stiffness (+). Although, she did not cooperate exactly, her eye movement and direct/indirect light reflexes were normal. Hypophyseal hormone levels and electrolyte status were normal except potassium elevation. Adrenocorticotropin hormone level was normal and cortizol level was found as 50 microgramm/deciliter. The patient was consulted with endocrinology and nephrology department, and dialysis was performed due to high level of urea and potassium. Due to the high levels of cortizol, steroid treatment was not recommended. Prednisolone was ordered in stress dose. Contrast enhanced CT and three dimensional CT angiography were performed after dialysis did not show vascular pathology. CT disclosed homogeneous enhancement in the sellar region after contrast administration. We did not perform surgical operation due to the absence of any clue for optic nerve compression and poor condition. The patient died after 72 hours as a result of her chronic renal failure.

DISCUSSION

The clinical findings of pituitary apoplexy can be related to expansion of the tumor, extravasation of blood to the subarachnoid space, and endocrinopathy.[6] Expansion of the tumor causes obstruction of the trabecular artery at the edge of the diaphragma sella and bleeding.[7] We thought that extravasation of blood into the subarachnoid space was responsible partly from the clinical condition of the patient because of the level of hypophyseal hormones in normal range and the absence of any restriction in ocular eye movements.

When central nervous system tumors was considered causing intracranial hemorrhage, the hypoph-

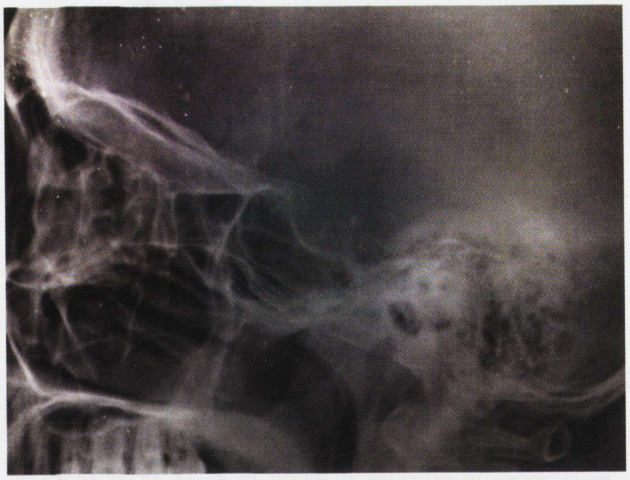

Figure 2: Plain skull graphies shows enlargement of the sella turcica and erosion of the dorsum sella

yseal tumors are responsible from 25% whereas the glial tumors are 50% of the event.[5] However, when pituitary tumors are evaluated together with incidence, it is determined that hypophyseal tumors bleed 4 or 5 times more than other glial tumors.[3] Intrinsic vasculopathy in hypophyseal tumor has been blamed for this situation.[6] Some charasteristics of blood flow of the anterior hypophysis gland can additionally be responsible for pituitary apolexy; hypothalamo-hypophyseal portal system receiving low pressure blood flow, and second degree the anterior inferior lobe receiving from the high pressure arterial system.[8] As a result of growing of the pituitary tumor, intrasellar pressure increases and blood coming from the low pressure portal system is ceased at the edge of the diaphragma sella, and resulting with ischemia while continuity of the arterial blood flow causes the transformation of infarct to hemorrhage.[8]

Some predisposing factors facilitate apoplexy in hypophysis tumors, and these factors can be arranged as factors possibly affecting vascular integrity, hemostasis, or intravascular pressure, and conditions affecting endocrine activity of the pituitary.[4] Predisposing factors are detected in 50% of the patients in pituitary apoplexy.[5] The patients who have predisposing factors are usually younger, depression of consciousness and hypothyroidism are more prominent, and history of the apoplectic event is short than a day. Sudden changes in blood pressure and heparinisation during hemodialysis are the most important predisposing factors in a dialysis patient.[9, 10] Additionally, the vessels of the pituitary tumor are not mature accurately, and there are ruptures in basement membrane.[6] They are depend on systemic pressure.[6]

Findings of nonenhanced CT are round or prominent edge, low or high density or soft tissue mass associated with acute hemorrhage.[6] After contrast injection, partly or no peripheral ring enhancement can be seen.[6] We detected blood located in sellar and in the some parts of the suprasellar region, in nonenhanced CT. There was homogeneous enhancement in the sellar region after contrast administration. The presence of blood in sellar and suprasellar region in non-enhanced CT helped to diagnose the pituitary apoplexy. Skull x-rays also help for diagnosis. Typical findings include enlargement of the pituitary fossa, thinning of dorsum sella, erosion at the base of the anterior clinoid process, and sellar invasion.[6] We detected sellar enlargement and thinning of dorsum sella in plain x-ray skull graphies. The presence of aneurysm with pituitary adenoma has been reported as 7%.[6] To exclude this possiblity we also performed three-dimensional CT angiograpy after the dialysis, and did not disclose any pathology like aneurysm causing subarachnoid hemorrhage.

Only in 10% of the patients the pituitary functions are maintained.[4] We did not dedected any abnormalities of hypophyseal hormones in our patient, and prednisolon was ordered in a maintenance dose.

The treatment of pituitary apoplexy is controversial. Each patient is not a candidate for surgical therapy and spontaneous improvement may occur. The most important factor whether the treatment will be surgical or conservative is decided due to patient's visual acuity alterations. The presence of isolated ocular nerve palsy is not a surgical indication.[4] It is reported that mortality rate in pituitary apoplexy is lower when the patients are treated with conservatily.[4] We did not perform any surgical operation due to the lack of findings related to the optic nerve compression, but we ordered prednisolone in stress dose. Our patient has died after 72 hour of her admition as a result of her comorbid disease.

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