



## SILENT HEMORRHAGE IN PITUITARY ADENOMA - A CASE REPORT

## Neurosurgery

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## ABSTRACT

Incidence of asymptomatic intratumoral hemorrhage or subclinical apoplexy in pituitary adenoma is 14-22% in non-secreting adenomas and 2-3% in prolactinomas [1]. Pituitary apoplexy in prolactinomas often seen in female children [2]. Asymptomatic intra-tumoral hemorrhage often present as non-specific headache and panhypopituitarism. However it is rare in prolactinomas. With the advent of CT and MRI, silent large intratumoral hemorrhages without any symptoms or signs of acute hemorrhage (apoplexy) can be easily detected. Surgical decompression of hemorrhage and tumor resulted in normalization of hyperprolactinemia.

## KEYWORDS

Pituitary adenoma, Prolactinoma, Tumor hemorrhage, Pituitary apoplexy

## INTRODUCTION

A 30 year old female, (IP-141203037) presented with mild headache off and on since last four years. The headache was non specific with only nauseating sensation. Patients had various kind of treatment from allopathy to unani, but no relief of headache. Since last 6 months, she had diminution of visual acuity of right eye and she had amenorrhoea since last 2 years. She was normotensive and not on oral contraceptives.

On examination her vital signs were within normal limit. Her visual acuity was 6/36 with counting of fingers in the right eye and left side temporal hemianopia. Fundoscopy was done on 12/12/2014, which revealed Disc pallor. Other cranial nerves were normal. She had no other neurological deficit. Her hormonal levels prolactin 49.20, FSH 4.74, T3 88.90, fasting blood sugar level was -114 mg/dl, post prandial blood sugar level was -152 mg/dl MRI report showed pituitary macro-adenoma with T1W2 hyperintense non enhancing content i.e. hemorrhage [Figure 1]. Patient was operated on 5/12/2014 through right frontal craniotomy and sub frontal approach. Well encapsulated tumor medial to optic nerve was visualized. About 5 ml of hemorrhagic fluid and soft black material was evacuated. The tumor tissue and capsule was taken for biopsy. Optic nerve was well decompressed.

Cytopathology and histopathology shows round monomorphic cells showing inconspicuous nucleoli and moderate eosinophilic cytoplasm arranged in sinusoidal and papilloid pattern separated by hyalinised stroma and hemorrhage [Figure 2], reported as pituitary adenoma with hemorrhage. Post operative period was uneventful. After operation prolactin level came down to 13.56ng/dl. There was marked improvement in visual acuity and field. MRI revealed tumor cavity empty with normal gland which was placed eccentrically.

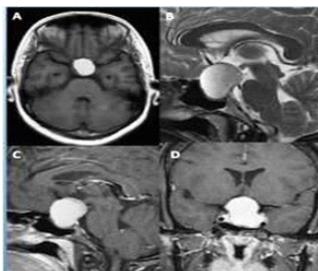


Figure 1: MRI: T1W2 showing pituitary micro-adenoma with hyperintense not enhancing content

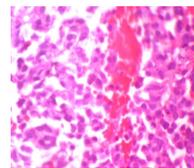


FIGURE 2: Round monomorphic cells with inconspicuous nucleoli with eosinophilic cytoplasm arranged in sinusoidal and papilloid pattern separated by hyalinised stroma and hemorrhage, s/o Pituitary adenoma with hemorrhage.

## DISCUSSION

Untreated pituitary macroadenoma may undergo minor hemorrhages which resolves leaving cyst containing xanthochromic fluid or empty sella. Silent hemorrhage detected on CT, MRI or at surgery in secreting pituitary adenoma is rare. Whenever large hemorrhage occurs within an existing neoplasm, clinical presentation becomes acute. In case of pituitary adenoma such acute presentation is termed pituitary apoplexy [3]. Not only pituitary functions disturbed, consciousness affected but expansion of adenoma may compress adjacent structure i.e. hypothalamus and optic nerve [4]. There is no comprehensive definition for any case of pituitary adenoma that shows evidence of hemorrhage or bloody fluid during surgery or neuro imaging with mild symptom or asymptomatic. These asymptomatic or mild symptomatic hemorrhages or infarction have been termed as subclinical pituitary hypertension and was (contraceptive may predispose silent hemorrhage apoplexy [5]. In these cases diagnosis is often delayed or neglected. In the present case patient presented with mild non specific headache. Though male are commonly affected than women in this case our patient is female. [6]. Numerous studies have discerned predisposing factor of pituitary hemorrhage [7]. Reported changes in intracranial pressure associated with coughing, sneezing, closed head trauma and lumbar puncture may provoke pituitary bleeding [8]. Hypertension and oral contraceptive may predispose silent hemorrhage in pituitary adenoma [4]. The actual patho-physiological mechanism of pituitary apoplexy is not definitely know. Suggested possibility include ischaemia of tumor as a result of outgrowing its blood supply, kinking of the superior hypophyseal artery against diaphragma sellae, the presence of vasculopathy or abnormal tumor blood vessels with tendency to hemorrhage [8]. Surgical decompression results relief of clinical deficits and reversal of endocrine disturbances and pituitary function.

## CONCLUSION

Silent pituitary hemorrhage often presents with mild symptoms similar to non specific headache. With modern radiological technique such cases are detected early and treated surgically.

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