

# Case Report: Spontaneous Left Rectus Muscle Hematoma in a Young Patient.

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## Abstract:

Spontaneous extra-ocular muscle hematoma is a rare condition. Hematoma of extra-ocular muscles usually associated with recent history of trauma or surgeries. Hematoma can occur as a result of rupture of micro-capillaries, or aneurism.

14 year old female patient presented to emergency department with acute bulging, pain and deviation of left eye for one day. There was no history of recent trauma, surgery or fall down. There was no history of thyroid disease or coagulation disorders. The ocular examination showed that the patient has non-axial, non-pulsatile unilateral proptosis. Investigations were conducted to elect the underlying cause of the patient's proptosis. The diagnosis was established as spontaneous left rectus muscle hematoma.

**Keyword:** Proptosis, Extra-ocular, Hematoma, Young.

## INTRODUCTION:

Proptosis describes abnormal protrusion of an organ but it is generally applied to the eye (passive protrusion of the eye), in contrast to it, exophthalmos is an active process causing protrusion of the eyeball.

A case of proptosis is a riddle for an ophthalmologist and the patient, thus, careful and deep clinical examination, investigation and management should be done to solve the puzzle faced by any ophthalmologist.

Acute proptosis is an ophthalmic emergency which necessitates rapid management to save vision and life.

Unilateral proptosis is uncommon, but it can be the primary presentation of sinister pathology.

We report a case of spontaneous intramuscular hematoma in the left lateral rectus that resolve with time with good visual prognosis.

## CASE REPORT:

14 year old Saudi female patient came to emergency department complaining of left eye pain and deviation. The deviation was acute, out and down, for one day only. This deviation followed by pain which was dull and increases with movement. There is no history of trauma, fall down, or previous surgeries. There is no history of thyroid disease, diabetes, autoimmune diseases, or blood disorders.

Ocular examination reveals that her visual acuity was 1.0 in right eye, 1.0 in left eye (aided).

There was exotropia in the primary position and restricted lateral gaze movement.

There is non-axial, non-pulsatile proptosis in left eye. There is no afferent pupillary defect. There is no color defect. Intra-ocular pressure (IOP) was 12 mmHg in right eye, 14 mmHg in left eye.

There is no conjunctival congestion or chemosis. The cornea was clear. The anterior chamber was within average depth and contents.

Fundoscopy was within normal (no signs of compressive optic neuropathy).

First impression is unilateral proptosis for evaluation. Therefore, patient underwent several laboratory investigation to elect the cause of her proptosis.

Complete blood count (CBC) was within normal except of mild elevation in WBC ( $12.84 \times 10^3$ ). Sickle cell test was negative.

ESR was 22 mm / 1 hour.

Prothrombin time (PT) was 12.8 seconds.

Partial thromboplastin time (PTT) was 27.4 seconds.

INR was 0.96

Biochemistry was within normal except of elevated ALP (165 U/L).

Thyroid function test was within normal.

An urgent computer tomography (CT) scan was done for the patient and showed the following:

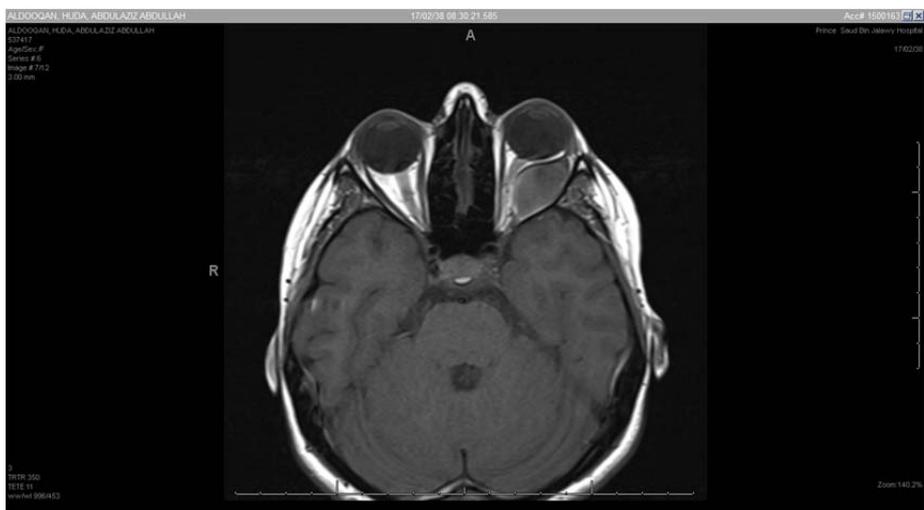
There is enlargement of the left lateral rectus muscle, with diffuse increase in density, causing medial displacement of the left optic nerve, and left eye globe proptosis.

The impressions of findings are suggestive of left lateral rectus muscle hematoma.



The initial report of CT scan was not definitive, so magnetic resonance imaging (MRI) was done. It showed the following:  
Fusiform mass causing enlargement of left lateral rectus muscle. It is exerting mass effect leading to proptosis and medially deviation of left optic nerve. There is no evidence

of bone destruction, and there is no intracranial expansion. The retrobulbar fat is clear. The impression of radiologist is left rectus muscle hematoma. The diagnosis was made as spontaneous left rectus muscle hematoma.



#### **DISCUSSION:**

Extra-ocular hematoma is a rare condition that causes proptosis. When the patient was presented by proptosis, the work-out was directed toward commonest causes of proptosis. Proptosis can be classified by different entities depending on age of the patient, acute vs chronic, or unilateral vs bilateral. At first stage of work-out, thinking of conditions like hemorrhage or emphysema without history of recent trauma or surgery made it unlikely. But due to acuteness of the presentation, the investigations were done to her as urgent as possible to exclude any sight threatening condition. After exclusion of possible causes of patient's proptosis, diagnosis of left rectus muscle hematoma was established. As the vision and intra-ocular pressure were both preserved within normal, surgical intervention was not indicated. The patient was managed conservatively by analgesics and oral steroid. Patient's proptosis was improved by time. MRI follow-up will be conducted after the complete resolution of the hematoma to make sure that there is no underlying cause behind this hematoma.

#### **CONCLUSION:**

Proptosis is an ocular sign needs good history taking, good ocular examination, and a lot of investigation. Physicians must think of the commonest causes and do their investigation toward their differential diagnosis. Acute proptosis needs rapid response to save life and vision at the same time.

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