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Psoas Hematoma in a Child: Experience in a Tertiary Care Hospital

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Abstract
Psoas hematoma presents with nonspecific symptoms. It is rare and usually occurs as a result of trauma, hematologic disease, during lumbar surgery often iatrogenic, rupture of aortic aneurysm etc. The incidence of spontaneous Psoas muscle hematoma has slowly increased as a result of anticoagulation use and use of antiplatelet agents. Is can present with non specific symptoms such as pain in abdomen, back and groin, or swelling, anemia, hemo dynamical instability and even leg paresis.
CT Scan is the most important diagnostic test for rapid diagnosis of hematoma. CT Scan immediately diagnose the disease and thus helps in initiating early treatment. MRI is more sensitive than any other diagnostic modes but not easily available, expensive and with other restrictions for imaging.
Psoas hematoma is easily overlooked disease especially in elderly patients. It often present atypically in elderly due to unusual presentation, comorbidity and cognitive impairment. Most hematomas resolve spontaneously without clinical complications if the hematoma is small and not compressing the surrounding important structures.

Keywords: Pediatric Patient, Psoas Hematoma, Hematologic Diseases, CT Scan

Introduction
Psoas hematoma can be spontaneous [1, 3].
Psoas hematoma (Psoas muscle hematoma) occurs secondary to trauma, hematologic disease, use of anticoagulants or coagulation disorders such as dissaminated intravascular coagulation and hemophilia, and iatrogenic during lumbar surgery including endoscopic disectomy [9, 10].
Incidence of Psoas hematoma is 0.1% to 0.6%. Risk factors being elderly and patients undergoing hemodialysis. Bilateral Psoas muscle hematomas are rare than unilateral hematomas. It can present as non-specific symptoms such as pain in abdomen, back, groin or thigh, anemia, weakness of legs, occasionally with nerve palsy (femoral nerve most commonly affected) [6]. These symptoms could be well explained by concurrent diseases. Motor weakness may occur in chronic and large hematomas.
Ecchymosis in the periumbelical area (Cullen's Sign) or in the flanks (Grey-Turner's Sign) may occur.
Our case is a child of 6 year old, male child in whom diagnosis was made by performing an CT Scan of abdomen on the day of admission to hospital for pain abdomen. Patient is having known hemophilia A. MRI is more sensitive but not easily available and expensive and cannot be done in patients with medical devices and prosthesis.
Most hematomas resolve spontaneously without clinical complications if it is not large or if it is not compressing the surrounding important structures. But some hematomas gradually grow for months or years.

Case Report
Our patient is a 6 year old boy with known case of hemophilia A who has abdominal pain for 6 days, fever on and off for two days and vomiting1-2 episodes.
The patient when admitted to our hospital, he was afebrile, playful, general condition-fair, alert, hemo dynamically stable with soft abdomen, no distension of abdomen with no tenderness, guarding and rigidity.
In our patient there was no local tenderness, range of movement of lower extremities intact though patient complained of pain abdomen. No motor weakness of lower extremity.

This patient with factor VIII deficiency or known as classic hemophilia (caused by factor VIII deficiency).

On the day of admission of the patient, CT Scan was performed, which confirmed Right Psoas hematoma. The lesion was heterogeneous and slightly hypodense and of size 87X29mm. There was minimal pocket of fluid in Right iliae fossa. The bulky Right Psoas muscle hematoma was immediately diagnosed on the very first day of admission.

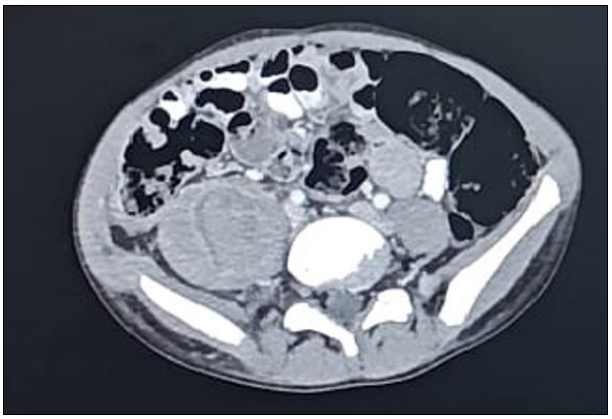

Fig 1:

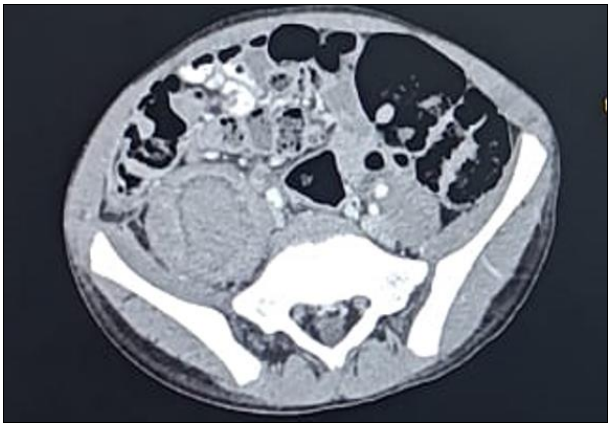

Fig 2:

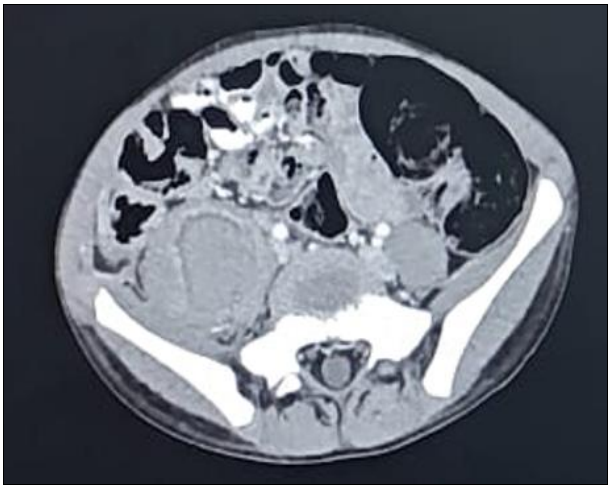

Fig 3:

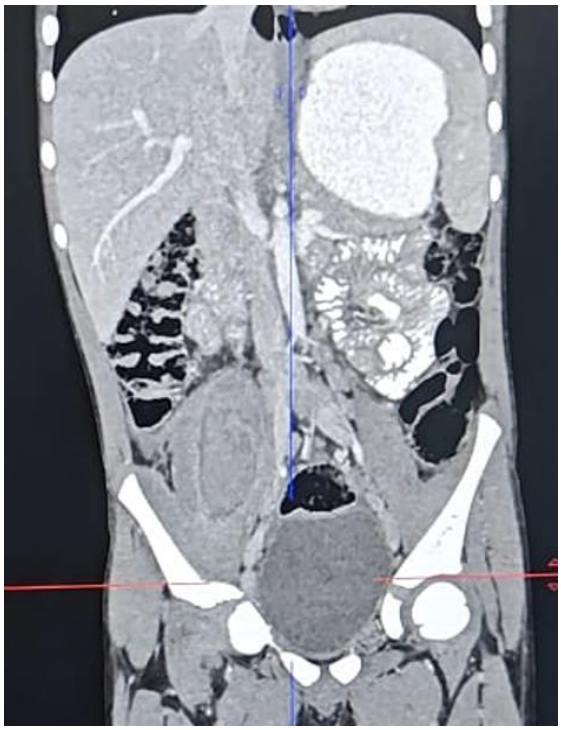

Fig 4:

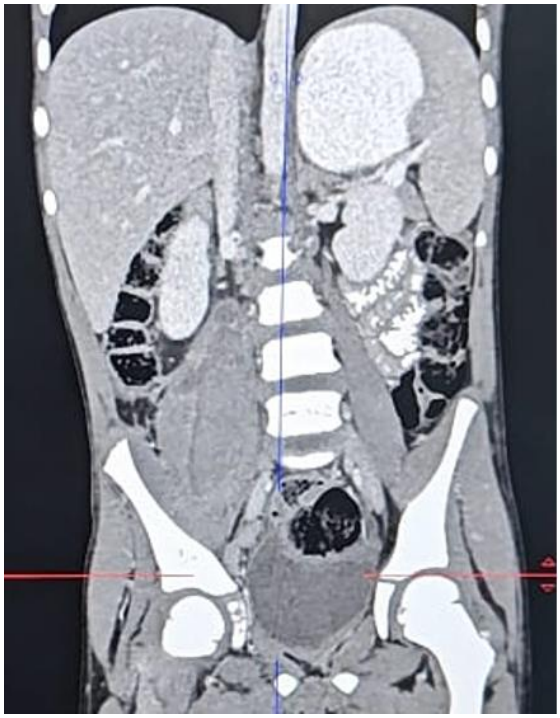

Fig 5:

Figure 1 to 5: Axial and Coronal sections of abdomen showing Right Psoas hematoma.

The Psoas muscles are placed posterior to transversal is fascia, so technically sits outside peritoneum. Large degree of hemorrhage is clinically difficult to detect due to retrofacial site of hemorrhage.

In our case conservative management was started immediately. Factor VIII was started in consultation with pediatric hematology and oncology doctor. No surgical intervention was required. Patient's hematoma was partially absorbed. Patient discharged after 4 days and advised follow up.

Discussion

Lesions of the Psoas muscle may present as nonspecific and slowly progressing symptoms as it is located retrofacially [2]. The differentiations of psoas lesions are difficult to assess radiologically and it is more difficult to find out other lesions in chronic hematomas than acute hematomas. The hematomas of Psoas muscle may gradually develop into large hematomas as there is presence of thin Psoas fascia.

CT Scan can diagnose hematoma better than a Psoas neoplasm or abscess. The hematoma diffusely involves the Psoas muscle compared to neoplasm or abscess [4].

MRI imaging is more sensitive in diagnosing a hematoma. Coronal T2 weighted images are more useful [5, 8].

Ultrasonography is also useful, lesser than CT and MRI.

CT Scan helps in evaluating the extent of hematoma by establishing the hematoma diagnosis and its relation to adjacent structures and in identifying the regression of hematoma [2]. CT Scan can show the calcification or air bubble within hematoma.

Psoas hematomas usually occurs as a result of trauma, underlying hematologic disease. Coagulation disorder may cause acute bleeding effected by fibrinolysis [7]. Iatrogenically occurring hematomas can occur because of compression of nerve roots after lumbar surgery [12, 13].

Classic hemophilia or hemophilia A is caused by factor VIII deficiency. It is caused by mutations in F8 and F9 genes on the X chromosome, which is one of the sex chromosome. Hemophilia A which is very common (almost 80%) occurs in males, present often as hemarthrosis and also bleeding into muscles. It occurs most commonly in patients with severe hemophilia (Balken *et al* Hemophilia 2005). It is even a serious, life threatening bleeding event [14].

Regarding the management, it depends on the speed of onset, timing of hematoma diagnosis, volume of hematoma, cause of hematoma and degree of neurological impairment [5, 6, 11].

The diagnosis of Psoas hematoma is difficult especially in elderly patients as the symptoms are non- specific and associated with other comorbidity [1, 11].

Most of the hematoma and resolve spontaneously without clinical complications. Drainage of hematoma during CT guided imaging is also very much useful [13]. Sometimes surgical resection of hematoma is required.

In Patients with hemophilia, Rehabilitation treatment with factor replacement is safe and effective therapy for patients with hematoma, with little or no neurological symptoms. An early diagnosis allows early factor replacement therapy and decreases the risk of recurrence and morbidity [14].

Conclusion

Presentation of Psoas hematoma is often nonspecific with abdominal, Pelvic, back or groin pain or swelling. If large can present with abdominal pain, fever, urinary frequency etc.

CT is an important diagnostic tool in diagnosing Psoas hematoma and thus helps in prompt initiation of the treatment. MRI is sensitive and may be required in some patients. Hematomas resolve spontaneously without clinical complications if it is not large. Rehabilitation treatment with factor replacement is safe and effective therapy for patients with not large hematomas and little or no neurological symptoms in hemophilia patients. An early diagnosis allows early factor replacement therapy and decreases the risk of recurrence and morbidity in hemophilic patients.

References

1. Sunga KL, Bellolio MF, Gilmore RM, Cabrera D. Spontaneous retroperitoneal hematoma: Etiology, characteristics, management, and outcome. J.Emerg. Med. 2012; 43(2):e157-61.
2. Cronin CG, Lohan DG, Meehan CP, Delappe E, MCLoughlin R, O'Sullivan GJ, *et al*. Anatomy, pathology, imaging and intervention of the iliopsoas muscle revisited. Emerg Radiol. 2008; 15:295-310. Doi: 10.1007/s10140-008-0703-8. [DOI] [Pub Med] [Google Scholar]
3. Kawano H, Ikeda T, Kawahara Y, Fujisawa H. Unilateral iliopsoas hematoma in elderly patients with sudden back pain and severe anemia: Report of two cases. Geriatr. Gerontol. Int. 2012; 12(2):355-356.
4. Lenchik L, Dovgan DJ, Kier R. CT of the iliopsoas compartment: Value in differentiating tumor, abscess, and hematoma. AJR Am J Roentgenol. 1994; 162:83-86. Doi: 10.2214/ajr.162.1.8273696. [DOI] [Pub Med] [Google Scholar]
5. Marquardt G, Barduzal Angles S, Leheta F, Seifert V. Spontaneous haematoma of the iliac psoas muscle: A case report and review of the literature. Arch Orthop Trauma Surg. 2002; 122:109-111. Doi: 10.1007/s004020100310. [DOI] [Pub Med] [Google Scholar]
6. Basheer A, Jain R, Anton T, Rock J. Bilateral iliopsoas hematoma: Case report and literature review. Surg Neurol Int. 2013; 4:121. Doi: 10.4103/2152-7806.118561. [DOI] [PMC free article][Pub Med] [Google Scholar]
7. Almushayti Z. Hematoma of the psoas muscle, in prostatic cancer patient: A case report. Pan Afr Med J. 2015; 20:138. Doi: 10.11604/pamj.2015.20.138.5152. [DOI] [PMC free article][Pub Med] [Google Scholar]
8. Lee JK, Glazer HS. Psoas muscle disorders: MR imaging. Radiology. 1986; 160:683-687. Doi: 10.1148/radiology.160.3.3737906. [DOI] [Pub Med] [Google Scholar]
9. Lakkol S, Sarda P, Karpe P, Krishna M. Conservative management of psoas haematoma following complex lumbar surgery. Indian J Orthop. 2014; 48:107-110. Doi: 10.4103/0019-5413.125534. [DOI] [PMC free article] [Pub Med] [Google Scholar]
10. Kim HS, Ju CI, Kim SW, Kim JG. Huge psoas muscle hematoma due to lumbar segmental vessel injury following Percutaneous endoscopic lumbar discectomy. J Korean Neurosurg Soc. 2009; 45:192-195. Doi: 10.3340/jkns.2009.45.3.192. [DOI] [PMC free article] [Pub Med] [Google Scholar]
11. Fillit Rockwood. Young Brocklehurst's Textbook of Geriatric Medicine and Gerontology (8th edition), Elsevier, 2016.
12. Robinson DE, Ball KE, Webb PJ. Iliopsoas hematoma with femoral neuropathy presenting a diagnostic dilemma after spinal decompression Spine. 2001;

26:E135-E138. Doi: 10.1097/00007632-200103150-00006. [DOI] [Pub Med] [Google Scholar]
13. Sarwat AM, Sutcliffe JC. Haematoma of the psoas muscle after posterior spinal instrumentation and enoxaparin prophylaxis. Grand Round. 2003; 3:35-37. [Google Scholar]
14. Emine Turkkan, Didem Yalcin Atay, Suheyla Ocak, Gul Nihal OZ demir at al- blood. 2015; 126(23):4571. Doi: https://doi.org/10.1182/blood.V126.23.4571.4571.