Giant lower back lipoma in pediatric: a case report

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ABSTRACT

Backgrounds: Lipoma is the most common soft-tissue mesenchymal neoplasm in adults. Lipoma that sized over 10 cm and weighed over 1000 grams is considered giant lipoma. Giant lipoma, especially in children are rare, so it represents a real diagnostic and therapeutic challenge. In this case report, we report a further case.

Case: A three-year-old girl with a history of progressive growing mass on the lower back since born resulting in pain. CT scan with contrast shows a soft tissue mass with fat content sized 6,1 x 12,1 x 12,7 cm without contrast enhancement. Surgical excision was performed to remove the tumor completely. Histopathology examination confirmed the diagnosis of lipoma.

Discussion: Tumor location, size, and clinical symptoms decide the treatment of intramuscular lipoma. The ultimate treatment of a giant lipoma is wide surgical excision, because this large tumor may undergo malignant transformation.

Conclusion: Pediatric giant lipomas are rare, and when they present, an appropriate workup must be done. This should be followed by adequate open surgical excision and repeat examination over time to monitor for recurrence.

Keywords: Giant Lipoma, Children, Surgical Excision


INTRODUCTION

Lipomas are soft tissue tumors deriving from the proliferation of mature adipocytes. They have benign characteristics and a mesenchymal origin representing the most common soft-tissue tumors of adulthood. Lipoma usually occurs at the age of 40 to 60 years old; it rarely occurs in children. WHO reported only 6% of lipoma occurred in children with 94% being benign. A lipoma can be found in almost all the organs of the body where fat normally exist. The most frequent locations of lipoma are the following: extremities, retroperitoneal, the groin, scrotum, and the abdominal wall, but they rarely occur on face, scalp, or sternal region. Lipoma are typically slow-growing tumor, only a few grow to an exceptionally large size. This lesion is often asymptomatic in cases of enormous masses compressing nervous-vascular structures. Sanchez et al defined a giant lipoma. as a lesion that measures at least 10 cm in one dimension or weighs a minimum of 1000 g. We reported a case of giant lower back lipoma in a 3 years old child which is a rare case.

CASE

A 3-year-old female patient was referred to our division with a complaint of lump on the lower back since born. The mass grew in size and resulted in pain on the lower back that occurred sometimes.

Figure 1 Physical examination of the patient reveals a solid mass a) tumor from posterior view; b) tumor from lateral view
Physical examination revealed a large mass beginning from lower back to upper buttock which was tender, soft in consistency, non-compressible with well-defined margins (Fig 1a, 1b).

On computed tomography (CT) scan with contrast, a soft tissue mass with a clear border, regular edge, have septa with fat content with the size of 6.1 x 12.1 x 12.7 cm, without contrast enhancement (Fig 2a, 2b). The patient was positioned in a prone position under general anesthesia with orotracheal intubation.

Thoracolumbosacral midline skin incision was performed from T11 until S4, extending from the upper to lower extent of the tumor. The tumor was found in the Lumbar Paraspinal muscle.

Careful dissection was carried out to identify surrounding vascular structures and preserve them. The tumor was dissected out and excised. The tumor measured 14.1 x 12.7 x 6.8 cm and weighed 1400 grams (Fig 3a, 3b). The wound was closed in layers after suturing subcutaneous tissue and subcuticular tissue. Histopathology examination of the surgical specimen revealed features consistent with a lipoma without evidence of any malignancy. Postoperatively, the patient is still being followed up in our department.

**DISCUSSION**

Lipoma is the most common soft-tissue mesenchymal neoplasm in adults, composed of mature fat cells. It usually observed in the elderly and very rare in children. Lipoma accounts for only 6% of soft tissue tumor in children with 94% being benign. Since 1990 in our province only 8 cases giant lipoma have been reported in children. Rhomdoni et al. (2015) also reported 1 cases of retropharyngeal lipoma in children, which is supported the prevalence of giant lipoma in children.

Solitary lipoma lesions are more common in females, whereas multiple lipomas are mostly observed in men. Lipomas are soft viscous, slow-growing, mobile masses which show no sensitivity during the physical examination, create no differences above the skin, may be seen with various sizes depending on their localization and time, and exist for a long time.

For a lipoma to be referred to as ‘giant’ lipoma, it should be at least 10 cm in diameter or weigh a minimum of 1000 grams, as was the case in our patient. These tumors due to their large size may exert pressure effects on the neighboring structures and patient may present because of the pressure symptoms like functional limitations and pain.

For the last decade, some of the English-language literature noted that giant lipoma were reported found on the back and posterior cervical area, however, they all occur in adult ages. The largest lipoma was reported weighed 22.7 kg and was located on left scapula of a young man. The present case is quite rare because it weighed over 1000 grams and occurred in 3 years old child, weighing 1400 grams and measuring 14.1 x 12.7 x 6.8 cm.
Radiography, ultrasound, computed tomography (CT), and MRI are examination methods used in lipoma diagnosis. Ultrasound is easily accessible and the first preferred method because of that it is noninvasive. In CT examination, the lipoma is observed as an encapsulated, low-density homogenous mass. A low density is the definitive diagnostic for the lipoma. MRI imaging is the most frequently used method because of the fact that it has high soft tissue resolution and can show the distribution and depth. Histopathology examination of large lipomas must be performed carefully to rule out malignancy.

Tumor location, size, and clinical symptoms decide the treatment of intramuscular lipomas. There is the limited role of conservative treatment of symptomatic intramuscular lipomas. Observation and reassurance are all that is necessary if the lipoma is small and does not cause functional limitations.

The ultimate treatment of a giant lipoma is wide surgical excision, because these large tumors may undergo malignant transformation. Careful wide excision is done successfully in our case. Despite radical excision of the tumor, there is a risk of recurrence after a variable period. Hence a long-term follow-up is recommended in such patients.

CONCLUSION

Giant lipoma, especially that occurs in children are rare. Careful clinical examination, imaging, histopathology examination can determine the diagnostic of lipoma. We consider that patient’s daily living and quality of life is affected by giant lipoma as a surgical indication, besides the anatomic location, size, and quality of life is affected by giant lipoma as a surgical indication. We consider that patient’s daily living and quality of life is affected by giant lipoma as a surgical indication.

REFERENCES