

รายงานผู้ป่วย

A Case Report

## Spinal Extradural Leiomyoma in a Patient with Acquired Immunodeficiency Syndrome : A Case Report

### เนื้องอกกล้ามเนื้อเรียบบริเวณกระดูกสันหลังในผู้ป่วยเอดส์

สนธิเดช ว่องวุฒิกำจกร พ.บ., ว.ว.

ประสาทศัลยศาสตร์

กลุ่มงานศัลยกรรม

โรงพยาบาลประจวบคีรีขันธ์

Sontidej Wongwuttigumjorn M.D.,

Thai Board of Neurosurgery

Division of Surgery,

Prachuapkhirikhan Hospital,

Prachuapkhirikhan Province

#### ABSTRACT

This is report of a case of 2 separated extradural spinal leiomyomas caused spinal cord compression in the woman with acquired immunodeficiency syndrome (AIDS). The tumors arose in the epidural region at the T2-4 and T11 vertebral levels. Although primary spinal leiomyoma is rare, it should be considered in the differential diagnosis of an extradural spinal cord tumor in human immunodeficiency virus (HIV) infected patients.

**Keywords :** leiomyoma, extradural spinal tumor, HIV

#### บทคัดย่อ

รายงานผู้ป่วยหญิงไทย อายุ 35 ปี มีภาวะภูมิคุ้มกันบกพร่อง (เอดส์) ได้รับการรักษาด้วยยาต้านไวรัสเป็นเวลา 2 ปี มาด้วยอาการปวดหลัง ขา 2 ข้างอ่อนแรงลงเรื่อย ๆ จนเดินไม่ได้ ซ้ำตั้งแต่วางนอนลงไป ปัสสาวะเองไม่ได้ ตรวจเอกซเรย์คลื่นแม่เหล็กไฟฟ้าพบเนื้องอกชนิดเนื้อนุ่ม 2 ตำแหน่งคือ บริเวณกระดูกสันหลังระดับอกข้อที่ 2-4 และข้อที่ 11 และมีการกดเบียดไขสันหลัง ผู้ป่วยได้รับการผ่าตัด สามารถเอาเนื้องอกออกได้หมดทั้ง 2 ตำแหน่ง ผลตรวจทางพยาธิวิทยาเข้าได้กับเนื้องอกของกล้ามเนื้อเรียบ

**คำสำคัญ :** เนื้องอกกล้ามเนื้อเรียบ เนื้องอกกระดูกสันหลัง เอดส์

## Introduction

HIV infected patients predisposed to develop many malignancies such as Kaposi's sarcoma, CNS lymphomas, smooth muscle cells tumors. Primary central nervous system (CNS) leiomyomas are extremely rare, primary spinal extradural leiomyomas have been reported in the patients with HIV infection. This is report of a case of 2 separated extradural spinal leiomyomas caused spinal cord compression in the woman with AIDS.

## Case report

A 35-year-old Thai female with AIDS presented with history of back pain and progressive weakness of her legs. On physical examination, her motor power of upper extremities were grade 5/5 and lower extremities were 0/5. She also developed hypoesthesia below T4 level and urinary retention, hyperreflexia and clonus of the lower extremities.

The magnetic resonance imaging (MRI) shown 2 separated extradural spinal lesions occurring at T2-T4 levels (Fig. 1) and T11 level (Fig. 2). Both lesions were iso-signal intensity on T1-weighted image and hyposignal intensity on T2-weighted image and markedly enhancement after gadolinium injection.

The patient underwent total tumor resection via T2-T4 and T11 laminectomies. Both lesions were intraspinal and extradural in location, smooth surface, whitish and nodular in appearance. Tumor base was attached dura and easily to separated. The tumor not extended into neural foramen. Postoperatively, the patient was improved in strength of lower extremities, no post operative complications and

discharged home 10 days after surgery.

## Pathological findings

At histological examination, both lesions contained bundles of smooth muscle cells with moderated nuclear atypia and no mitosis (Fig. 3). No other malignant features were found. Immunostains for epithelial membrane antigen (EMA) and S-100 were negative. (Fig. 4)

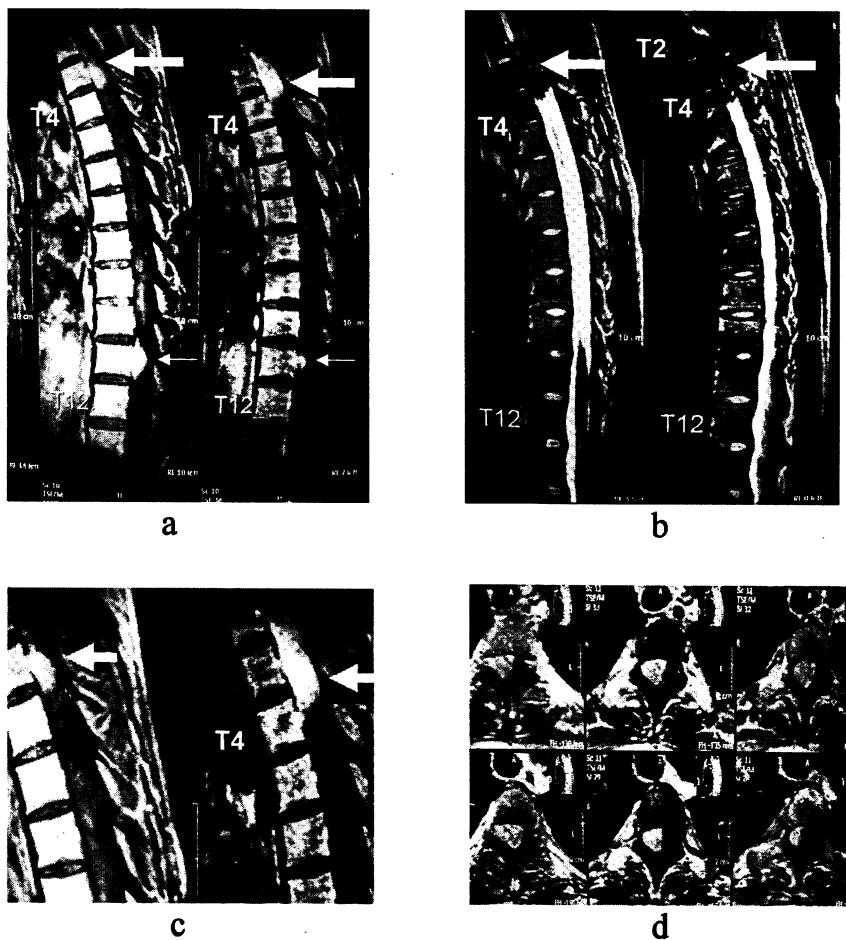
The final diagnosis was a leiomyoma without signs of malignant degeneration.

## Discussion

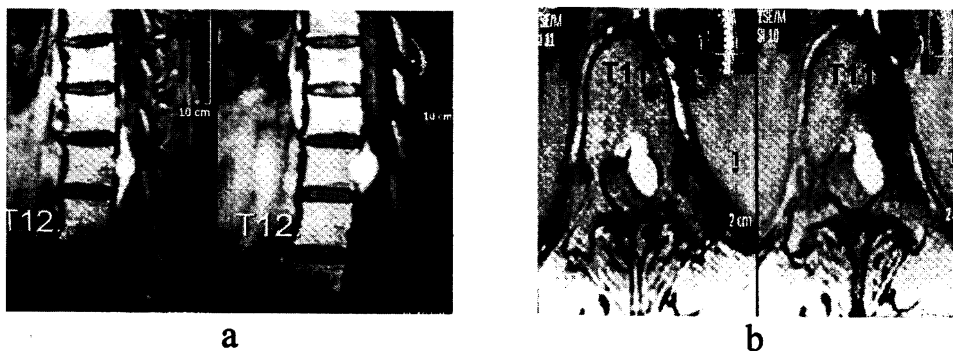
Leiomyomas are benign tumors of smooth muscle origin. Most common found in the genitourinary system. An uncommon location of leiomyomas has been reported such as thyroid gland, trachea, lung, hard palate, esophagus, liver and adrenal gland.<sup>1-7</sup> Primary central nervous system (CNS) leiomyomas are extremely rare and usually associated with human immunodeficiency syndrome (HIV) infection.<sup>8-10</sup>

Because the patients with HIV infection are prone to viral infection, several viruses have been reported in tumorigenesis. The Epstein-Barr virus is though to play an important role in the pathogenesis of smooth muscle cell tumor in the patients with AIDS.<sup>11,12</sup>

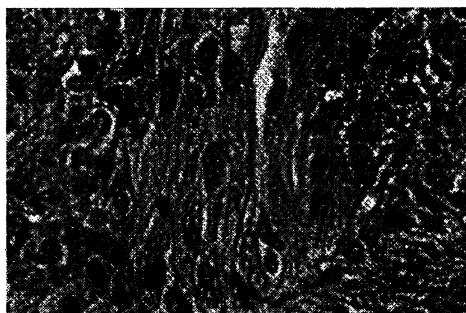
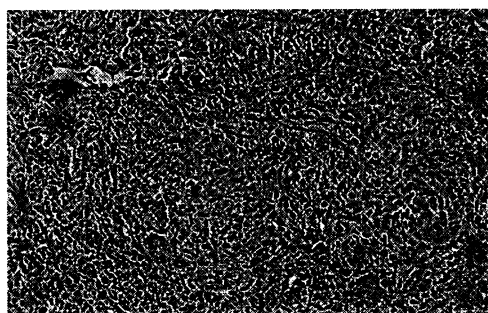
Although extradural lesions of spinal cord can be caused by primary tumors such as neurilemmomas, meningiomas, metastatic tumors, infection or hematologic malignancies, leiomyoma should be considered in the differential diagnosis of spinal extradural lesion in a patient with AIDS.<sup>8,9</sup> Several



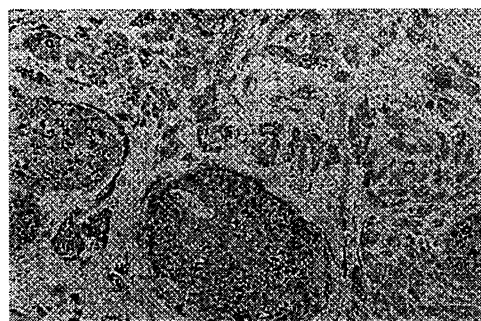
**Fig. 1** Sagittal view of MRI T1WI with gadolinium (a, c), T2WI image (b) and axial view of T2-4 spine (d) revealed an extradural, slightly hypersignal intensity mass 1.5 x 1.3 x 5.1 cm. at right side of T2-T4 levels (large arrow) compressed and displaced spinal cord to the left and at T11 level (small arrow).



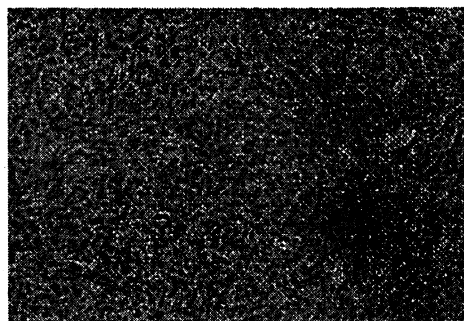
**Fig. 2** Sagittal (a) and axial (b) MRI T1WI with gadolinium of lower thoracic level, the lesion at left side of T11, 1.0 x 1.3 x 2.1 cm. in size also extradural compression and displaced spinal cord to the right.



**Fig. 3** Hematoxylin and eosin stain of the tumor, presenting smooth muscle cells with some nuclear atypia separated by cellular fibrous connective tissue.



a



b

**Fig. 4** Immunostain of leiomyoma, negative for both EMA (a) and S-100 (b)

reports described the decreased size of the tumors after treatment with gonadotropin-releasing hormone agonist.<sup>13,14</sup> It is unclear about effect of hormonal therapy in the treatment of smooth muscle tumors in the patients with AIDS.

Surgical treatment is the treatment of choice in symptomatic patients, laminectomies and complete tumor resection can be done in most patients with good postoperative neurological outcome.<sup>8,9</sup>

## Conclusion

With increasing frequency of HIV infection and longer survival times of the patients, more patients

with HIV infection are likely to develop these tumors.

Leiomyomas should be considered in the differential diagnosis of the extradural spinal lesions. Surgical treatment is the treatment of choice for these tumors with good neurological outcome.

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