Extra Dural Lumbar Mature Teratoma With Colon Differentiation Mimics Lipomyelo-Meningocell

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Citation

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Abstract

We report a 14-years-old girl with a large slow enlarging lumbosacral mass since birth. There was no history of decreased movements of lower limbs and urinary or fecal incontinence. Examination revealed an 12*12 midline soft, cystic, non-tender swelling over the lower lumbar region. The overlying skin was normal. The patient was alert and able to move both the lower limbs. Sensory and motor examination was normal. Hematologic examination and serum chemistry showed no abnormality. Magnetic resonance imaging (MRI) of the spine revealed fibro fatty mass beyond spinal cord and vertebrae. And abnormal soft tissue mass was seen at lumbosacral area which was hyper intense on T1WI and slightly hyper intense on T2WI that mimiced a lipomyelo-meningocell.

INTRODUCTION

A lumbar mature teratoma is a rare, benign, slow-growing that arises from ectopic embryonic remains of the ectoderm and mesoderm in the lumbar region. It contains many differentiated tissues derived from embryonal germ cell layers. There is usually poor organization in the tumor with a random mixture of these tissues; however, well-organized tissues constituting organ-like structures are very occasionally encountered within teratoma(1).however sacral teratomas were common(2). We describe a case of extra dural lumbar teratoma with colon differentiation and related terminology, as well as its clinical features, in relation to the available literature.

CASE REPORT

A 14-years-old girl was referred to our hospital for treatment of a large slow enlarging lumbosacral mass since birth. There was no history of decreased movements of lower limbs and urinary or fecal incontinence. Examination revealed a 12*12 midline soft, cystic, non-tender swelling over the lower lumbar region. The overlying skin was normal. The patient was alert and able to move both the lower limbs. Sensory and motor examination was normal. Hematologic examination and serum chemistry showed no abnormality. Magnetic resonance imaging (MRI) of the spine revealed fibro fatty tissue posterior to the spinal cord and vertebrae. And abnormal soft tissue mass was seen at lumbosacral area which was hyper intense on T1WI and slightly hyper intense on T2WI that mimiced lipomyelo-meningocell.(fig.1) Non-contrast computerized tomography of the lumbar spine showed bony component in a cystic mass, with no spine anomaly such as spina bifida. The patient underwent surgery: A transverse elliptical incision was made across the tumor, after skin incision, the teratoma mass was dissected from the skin and surrounding tissue. During dissection a sac containing colon and bony spur was found. The sac did not communicate with peritoneal cavity and dural sac and contained a normal looking colon segment 20cm long and 7*5 cm bony spur (fig. 2). The tumor was completely removed in an en bloc manner.(fig.3). Histopathological examination showed a benign, mature teratoma whit colon differentiation.

Figure 1

Figure 1

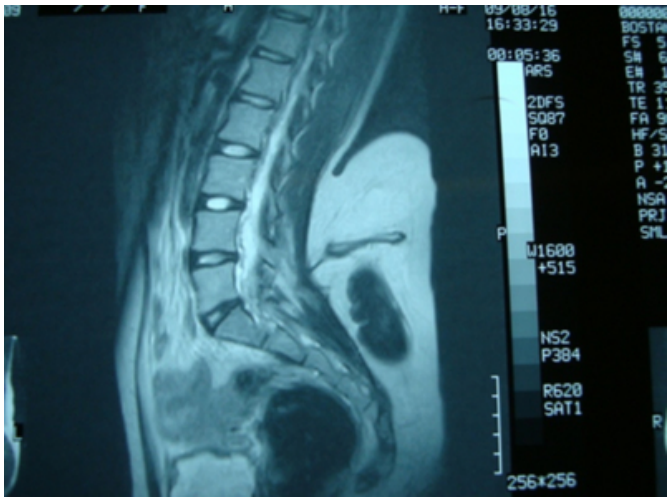


Figure 2

Figure 2

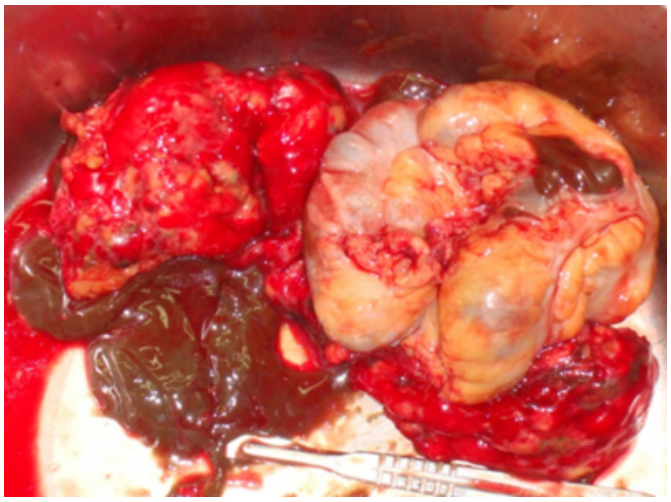
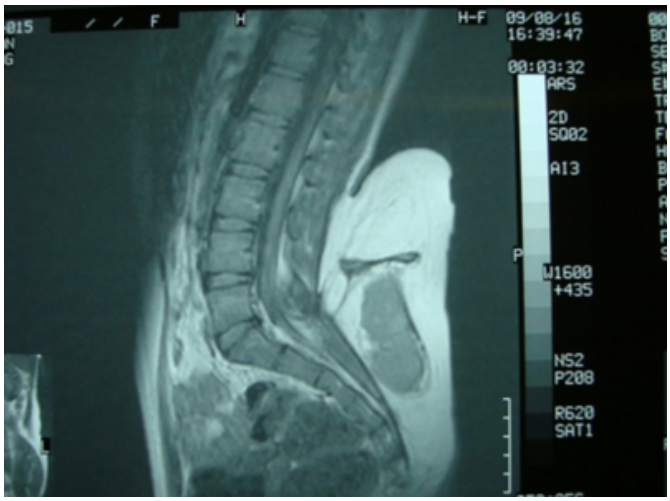


Figure 3

Figure 3



DISCUSSION

Teratomas in infants and children most commonly appear in the sacrococcygeal region. Less common sites are the mediastinum (3), testes, retro peritoneum, neck and stomach, lumbar as reported in the literature. Most of the infants are female. CT scan and MRI imaging are both reliable and helpful diagnostic modalities, which can add to the initial preoperative assessment in determining the anatomic relation of the tumor and the degree of trans-spinal tumor extension(4). The surgical approach to teratoma consists of complete removal of the tumor in enblock fashion. operated by inverted Chevron incision with its apex directed superiorly. Skin flaps at the superior margin of the tumor were elevated first and the tumor mass drop caudal. The mass was mobilized close to its capsule, widely displaced retrorectally. Muscles were carefully identified and preserved. All excised tissues were histologically examined. Multiple sections were routinely cut. This was done at the time of the original resection.(5,6).

Every recurrence of lumbar teratoma should be regarded as being potentially malignant. CT scan and MRI imaging are both reliable and helpful diagnostic modalities, which can add to the initial preoperative assessment in determining the anatomic relation of the tumor and the degree of trans-spinal tumor extension. We recommend that a preoperative CT is unnecessary in the neonate, but it is recommended in the recurrent tumor and to rule out the presence of distant metastases. We believe that every 3 to 6 months for at least the first 3 postoperative years, routine physical examination is essential and indeed the best means of detecting early recurrences. Prognosis of lumbar teratoma is improving due

to prenatal detection, planned intra-partum management, prompt surgical resection, histological examination, routine physical examination and regularly serum -fetoprotein levels measurement with multimodal chemotherapy. Overall survival for germ cell malignancies has improved from 84% to 94% (10-11). Factors reportedly associated with a worse prognosis in malignant germ cell tumors include: 1. An extragonadal location; 2. Age greater than 11 years; 3. Extent of disease; 4. Inability to perform a complete resection; and 5. Germinoma or mixed germ cell histology (9). Radiation therapy has been used in some situations when complete resection was prevented by involvement of vital structures.(12).

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