Clinics in Surgery

Case Report
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Spindle Cell Carcinoma of the Lower Limbs: A Case Report

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Abstract

Spindle cell carcinoma of the leg is an unusual tumor. It is important to increase the recognition of the disease and improve the level of clinical diagnosis. The current study presents a case of spindle cell carcinoma with clinical, imaging and pathological examination. A 65-year-old female presented to the Xinyuan Hospital of Traditional Chinese Medicine suffering from a mass about 3.6×1.6×15.0cm on the back skin of her right leg for approximately one month. Imaging examination by leg computed tomography scan revealed a 9.2×4.0 cm solid mass infiltrated into the subcutaneous fat in the back skin of the right tibia. The patient underwent resection of the mass on March, 17, 2013. Patholocical examination showed the tumor was composed of small, elongated cords in a tightly packed arrangement. Tumor cells were smaller and cube-shaped or oval and low-grade nuclei. Occasionally, necrosis and foam cell infiltration were observed. The tumor reappeared after one year later, a 6.0×7.0×15.0 cm mass appeared on the incision with bleeding after slight impact. The patient underwent resection of the recurrence tumor and VSD covered the defect of the skin on July, 10, 2014. The tumor reappeared again after 10 days and bleeded combined necrosis and foul smell. Continuing bleeding cause the hypoproteinemia and emaciation for 3 months. The patient cannot endure the miserable experience and asked amputation of the knee on Oct, 16, 2014. However, a new mass about 1.6×1.6×1.0 cm was found in the skin of the popliteal fossa. Patholocical examination showed the new mass was spindle cell carcinoma. However, subsequent chemotherapy, radiation and immunohistochemical markers weren't underwent because of the patient's personal economic reason. The patient is still alive after 7 months without evidence of disease, we don't receive the recurrence report after the follow investigation until now.

Keywords: Spindle cell carcinoma; Lower limbs; Skin

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Introduction

Spindle cell carcinoma is a rare epithelial tumor, believed to be a type of low-grade malignant tumor. The precise origin is unclear certain researchers have, The present study analyzed the clinical results of a patient who presented to the Xinyuan Hospital of Traditional Chinese Medicine (Xinjiang, China) suffering from the spindle cell carcinoma of the back skin on the right tibia, and performed a review of the relevant literature, to increase understanding of the tumor. Additionally the purpose of this study was to raise awareness of this tumor type for clinicians and pathologists in order to decrease the rate of misdiagnosis.

Case Report

Clinical results

A 65-year-old female presented to the Xinyuan Hospital of Traditional Chinese Medicine suffering from the mass about size 3.6 cms×1.6 cms×15.0 cms on the back skin of her lower right leg for approximately one month. Imaging examination by the computed tomography scan and revealed a 9.2 cms×4.0 cms solid mass infiltrated into the subcutaneous fat in the back skin of the lower right leg. The tumor was well-circumscribed with the muscle and protruding outside the skin (Figure 1). Magnetic resonance imaging showed with signal intensity similar to the muscle on T1W1 (Figure 2) and slightly higher than that of muscle on T2W2 (Figure 3).

Surgical Procedures

The patient was underwent the first resection of the mass on the date of March, 17, 2013. The second resection of the recurrent mass was undergone on July, 10, 2014. The third operation was the

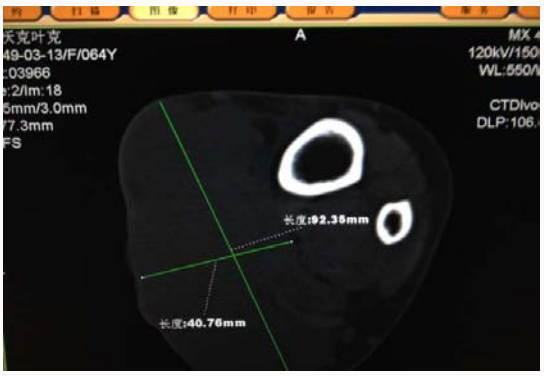

Figure 1: CT Solid mass infiltrated into the subcutaneous fat.

Figure 2: MRI Signal intensity similar to the muscle on T1W1.

Figure 3: MRI Signal intensity slightly higher than that of muscle on T2W2.

knee amputation of the right knee on the Oct, 16, 2014 under general anesthesia.

Macroscopy

Dissection of the two resection specimen revealed than the tumor was bad-circumscribed, fragile and off-white, measuring size 10.0 cms×6.5 cms×6.5 cms. No areas of hemorrhage or necrosis were identified in the tumor. In addition, no invasion of the muscle. The tumor reappeared after one year later, a 6.0 cms×7.0 cms×15.0 cms mass appeared on the incision with bleeding after slight impact (Figure 4). The patient was underwent resection of the recurrence

Figure 4: The tumor reappeared after one year later, a 6.0×7.0×15.0cm mass appeared on the incision.

Figure 5: The resection of the mass. Part suture.

Figure 6: VSD covered the defect of the skin.

tumor (Figure 5) and VSD covered the defect of the skin on July, 10, 2014 (Figure 6). The tumor reappeared again after 10 days (Figure 7) and bleeding combined necrosis and foul smell (Figure 8).

Figure 7: The tumor reappeared again after 10 days.

Figure 8: The tumor grew faster combined with necrosis, hemorrhage and foul smell in 3 months.

Figure 9: The amputation of the knee.

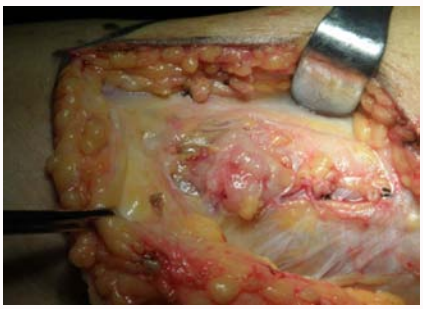

Figure 10: The new found tumor about 1.6.×1.6×1.0cm on the back of the knee.

Continuing bleeding caused the hypoproteinemia and emaciation for 3 months, the tumor was about size7.0 cms×9.0 cms×16.0 cms. The patient asked for the amputation of the knee on Oct, 16, 2014 (Figure 9). However, a new mass about size 1.6 cms×1.6 cms×1.0cms which was similar with the original tumor was found in the subcutaneous fat of the popliteal fossa (Figure 10).

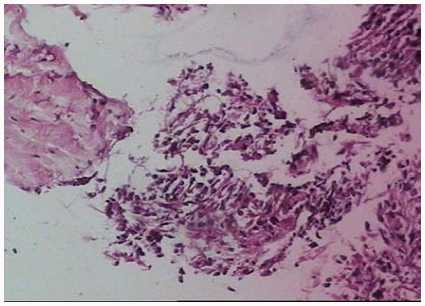

Figure 11: Tumor was composed of small, elongated cords or tubules, in a tightly packed arrangement (hematoxylin and eosin; magnification, ×10).

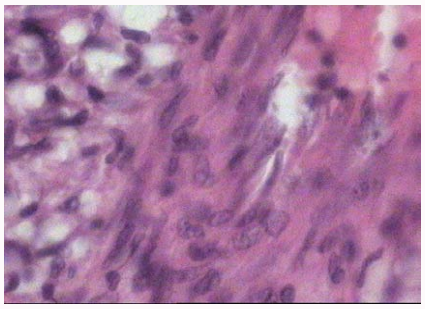

Figure 12: Tumor cells were smaller and cube-shaped or oval and low-grade nuclei. (hematoxylin and eosin; magnification, ×40).

Microscopy

The tumor was composed of small, elongated cords in a tightly packed arrangement (Figure 11). Tumor cells were smaller and cube-shaped or oval and low-grade nuclei. Occasionally, necrosis and foam cell infiltration were observed (Figure 12).

Pathological results

The tumor was bad-circumscribed, measuring 3.6×1.6×15.0 cm. Invasion of the subcutaneous fat of the back skin of the tibia. Under the microscope (BX53, Olympus, Tokyo, Japan), the tumor observed to be composed of small, elongated cords or tubules.

Discussion

Spindle cell carcinoma is an atypical tumor with a particular clinical behavior characterized by frequent local recurrence and uncommon distant metastases. Spindle cell carcinoma is mainly composed of spindle cells, by mature fat cells within the tumor and the consistency of spindle cells, found in mucus sex matrix and coarse collagen fiber bundle. Small spindle cells, with a single core, nuclear extension for bipolar, CD34 positive staining. Often arranged along the collagen bundles, or a flower umbrella distribution in fat cells. Usually, these two kinds of cells are roughly same, mixed together or all in one place. Contains a lot of mast cells in the tumor tissue is the unique point of the tumor, tumor blood vessels in general. Lipoma spindle cells with pleomorphic lipoma have shown nuclear aberration of chromosome 16 q. Performance can occur in any organ or tissue, morphology can be cancer or tumor. Such as occurred in the epithelial tissue (flown by cell carcinoma, squamous cell carcinomas) spindle cells, can also occur in mesenchymal tissue (cell sarcoma is like a boat form, spindle cells stromal sarcoma), complex shape performance, more similar to sarcoma, or shaped like a sarcoma with interstitial ingredients, immune phenotype can be characterized by cancer, also

can show the sarcoma, or show the carcinosarcoma structure type of tumor. The lesions are difficult to directly check, need to various detection such as immunohistochemical markers. Tumor by capsular bag or without capsular invasion the surrounding muscles. To date, only several cases about spindle cell carcinoma have been reported. Podetta et al. [1] reported two cases of low-grade fibromatosis-like spindle cell metaplastic carcinoma of the breast, Nao Sun et al. [2] reported a cases of Mucinous tubular and spindle cell carcinoma of the kidney, Velazquez et al. [3] reported 6 cases of Desmoplastic/spindle cell squamous cell carcinoma of the skin. Because of the lack of specific clinical and radiological characteristics, the criteria for the differential diagnosis from other benign and malignant tumors are based only on histological findings and immunostaining. The cases are rare, the lack of treatment experience, preferred in extensive local mass resection, should try to avoid excessive treatment, can be used for resectable or removal of incomplete local radiotherapy. The knee amputation of the right knee had to be undergone after the two recurrent. Radiation can cause cancer progression and metastasis, therefore should be careful [4]. Supplemented by postoperative immune treatment is necessary [5], commonly used drugs such as interferon and prednisone. With malignant tendency and broader extension can adopt COP (cyclophosphamide, vincristine, prednisone) chemotherapy regimens. This example lesions circumscribed neoplasm resection, supplemented by the immune therapy.

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