Adult Sacrococcygeal Teratoma: A Case Report

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INTRODUCTION

Teratomas, being one of the most frequently observed tumors of the childhood, are benign tumors originating from two or three germ layers. Generally, they include all of the mesoderm, ectoderm and endoderm structures, and located most commonly in sacrococcygeal region (1). Teratomas may be malignant in the cases observed in adulthood and in the recurrent cases.

They are expansive tumors, which do not have an infiltrative character. They contain a heterogeneous structure with calcified, cystic and solid zones observed at the radiological examinations. In gross sections, they have a structure enclosed by a capsule including epithelial areas turning from white into gray and red, sero-mucoid fluid, hair, bone members. Among the treatment options are the radiotherapy and chemotherapy for the tumors that exhibit malignant character, but the primary approach is the total removal of the tumor (2). A sacrococcygeal teratoma detected in adult age is presented in this study.

CASE REPORT

A 17-year-old male patient was admitted to our hospital for swelling in sacrococcygeal region, pain and difficulty of defecation for about six months, stating that there was a small swelling at the same region since birth, which had grown recently.

On physical examination, there was a swelling with firm consistency and heterogeneous appearance beginning at the lower sacrum boundary in the sacrococcygeal region and extending to the rectal region (Figure 1). There was no neurological deficit.

Rectal examination revealed a mass with smooth contours causing pressure on the rectum, containing palpable bony structures in rectal floor. Rectal examination showed no pathology in the rectum mucosa.

Pelvic MRI showed a bulk formation with dimensions of approximately 12x10x8 cm, beginning at the presacral region, and proceeding mainly leftward, having lobule contours, with multicystic septa extending to the left half of the ischiorectal fossa, containing occasional
DISCUSSION

Teratoma is a Greek word with the meaning of “monstrous tumor”. The tumor is thought to take this name due to its macroscopic appearance. These are the most frequently seen sacrococcygeal solid tumors in the newborns and fetus (8).

The possibility of late occurrence of teratomas is very low in the adult age, and majority of the observed cases, as in our case, are the continuation of the neglected childhood teratomas with late diagnosis. Late occurrence of this tumor in adulthood requires careful clinical and radiological assessment, and as well as pathological

Surgical Intervention

The patient was operated on in the prone position. The sacrococcygeal region was opened by vertical paramedian skin incision. After partial resection of the coccyx, the tumor tissue and the surrounding tissues to which it adhered were dissected from the rectum. The tumor was removed totally using microtechnique (Figure 4, 5). The patient was followed for 6 months in postoperative.

Figure 1: The view of the bulk lesion in the sacrococcygeal region.

Figure 2: MRI T2 sagittal image from the bulk in the sacrococcygeal region.

Figure 3: CT image of the sacral region.
assessment to reveal histological behavior of the tumor in this age group (7,8).

In most adult cases, diagnosis may be delayed due to the internal growth pattern, and the patient refers with constipation, bladder problems and lower extremity motor power losses, which are the pressure symptoms that form due to the bulk. The rectum or bladder fistulas may be seen in some cases (4). For the patients presenting with these symptoms, physical examination of the sacrococcygeal region, rectal examination and a careful examination of the lower extremity motor power and sensory examination prior to the radiological examination will guide the diagnosis (6). Rectal assessment in our cases confirmed the presence of a calcified mass with no mucosal involvement.

Pathologically, teratomas are generally considered in three categories; mature (cystic and solid, benign), immature and monodermal (highly specific) (5,10). Almost all of the teratomas detected during the neonatal period are mature teratomas, whereas the rate of immature teratoma detection increases in cases of the adult age (6). The adult age teratomas show a malign character by a ratio of 1-2%. The possibility of becoming malignant increases in cases with calcification. The malignant tumor that most frequently develops on the basis of teratoma is squamous cell carcinoma (12,13,16).

Histology report in our cases showed cystic mature teratoma (Figure 6).

TREATMENT

Sacrococcygeal teratomas should be removed surgically under elective conditions, as there would be a risk for malignant transformation in the advancing ages. Total tumor resection should be aimed in both pediatric and adult cases. In a multicenter study, nine recurrences were reported in a case series of 80 patients who were operated for mature teratoma (9,15). Radiotherapy and chemotherapy should be considered because of the risk of malignant transformation, in malignant cases and in subtotally resected tumors (14,15).

Three main types of surgical approach may be employed for sacrococcygeal teratomas. The posterior or transcoccygeal approach is preferred especially for the tumors that are not too large, and is preferred by neurosurgeons. The anterior or transabdominal approach is suitable for the huge tumors that have grown towards the abdomen and that extend over the sacral quadrant. The third type is the combined approach (11). Regardless of the type of approach, the use of a microscope increases the safety of the procedure.
An applied in our case, the resection of the coccyx during the surgical intervention will facilitate the resection of the entire tumor and it is also important for the prevention of recurrence. Nevertheless, the necessity for coccyx resection should be tailored based on the relationship between the tumor and coccyx detected on sagittal MRI and CT images.

CONCLUSION
SCT's are among the tumors that are rarely encountered in the adult age. Since these tumors have the potential to become malignant, they should be removed when detected in the later periods. Radiotherapy and chemotherapy should be considered in cases with a malignant profile, and in subtotally resected cases.

REFERENCES
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