Malignant Sacrococcygeal Teratoma with Yolk Sac Tumor – Rare Case Report

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Case Report

Abstract: Malignant sacrococcygeal Yolk sac tumor is an extremely rare extra-gonadal germ cell tumor. Hereby presenting a case of 1 year female child presenting with the history of swelling at lumbosacral region since birth. Case was evaluated clinically. FNAC of the swelling was done which shows malignant cells. Swelling excised and histopathological examination was carried out which shows malignant teratoma with yolk sac tumour.

Keywords: Sacrococcygeal teratoma, extra-gonadal germ cell tumour, yolk sac tumour, FNAC (fine needle aspiration cytology).

Introduction

Malignant sacrococcygeal Yolk sac (Endodermal Sinus) tumor is an extremely rare extra-gonadal germ cell tumor found in infants and children. Most of the yolk sac tumors present as infantile testicular tumors yolk sac tumors occurring as pure or mixed germ cell tumors. They also found in the ovaries of young girls and in several extra-gonadol sites including the sacro-coccygeal area, pelvis, mediastinum, stomach, retro-peritoneum, vagina and brain[1]. Sacro-coccygeal yolk sac tumors of infant and children reflect the transformation of primordial cells that have failed to migrate to their pre-destined location. Toti-potent germ cells normally arise from the Yolk sac of the 04 weeks old human embryo and migrate along the Gonadal ridge before their final decent in to the pelvis. During embryogenesis, some of these cells fail to complete migration and come to rest along the dorsal mid-line of the embryo. The primordial germ cells give rise to an un-differentiated germ cell line. The un-diff-germ cell undergoes differentiation into embryonic (somatic cells) or extra –embryonic cells of Yolk sac, chorion & allantoin cells.[2, 3]. Malignant transformation of these cells give rise to tumors that reflect their embryonic features.

Case Report

1 year female child braught by her parents with the history of swelling at lumbosacral region since birth. Patient was evaluated clinically and sent to the pathology OPD for FNAC. FNAC was positive for malignant cells. Then the swelling was excised and mass was sent to the pathology department for histopathological examination.

Gross : Globular tissue mass of 9 x 8 cm with smooth and rough areas, cystic areas seen with mucoid material.

Microscopic Examination: Sacrococcygeal teratoma with yolk sac tumour.

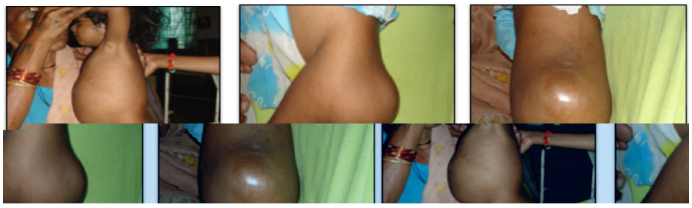

Figure 1 ***Figure 2*** ***Figure 3***

Figures 1, 2 and 3: Clinical photographs of patient shows swelling at lumbosacral region

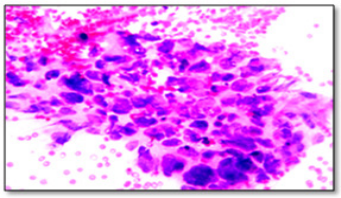

Figure 4: FNAC shows malignant cells

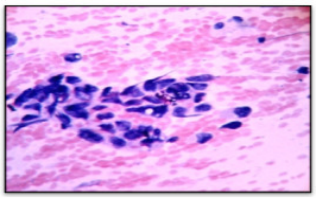

Figure 5: FNAC shows malignant cell

Figure 6: Gross photograph of mass

Figure 7: Gross photograph of mass

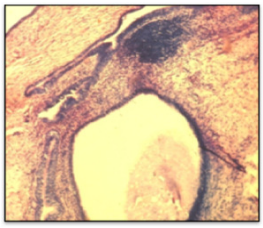

Figure 8

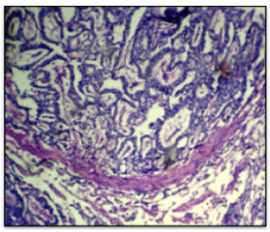

Figure 9

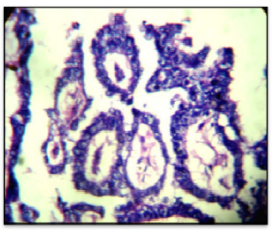

Figure 10: Yolk sac tumour (schiller-duval bodies)

Discussion

Malignant extra-gonadal germ cell tumors are uncommon neoplasm accounting for approximately 3% of childhood tumors. The incidence of malignant yolk sac carcinoma is less than 1 per million per year[4]. The Male to Female ratio is about 1:2.5[5] Sacro-coccygeal yolk sac tumors can be external or internal i.e presacral and intra-pelvic or intra-abdominal extension. Tumors that are predominantly external have a lower malignant potential than prescral that are always malignant[1]. In a reported series by Gross-field et al [6] 58 of 85 (68%) patients were girls and 27(30%) were boys.[6] The sites of origin benign and malignant in decreasing frequency were sacro-coccygeal in 55 (64.8%), mediastinal in 10 (11.7%), Gonadal in 10 (11.7%), Presacral in 4 (4.8%), retro-peritoneal in 3 (3.5%) and neck in 3(3.5%) of cases.[5] Of the total, 67 (78.8%) were benign and 18(21.2%) malignant. Site of malignant tumors were sacro-coccygeal 11 of 55 (20%), mediastinal 2 of 10(20%), ovarian 3 of 8 (37.5%), testicular 2 of 2 (100%).[5] Complete surgical excision should be attempted in malignant lesion.

Conclusion

Malignant sacrococcygeal Yolk sac (endodermal sinus) tumors are highly malignant and uncommon in presentation and found commonly in females as compared to males.

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