Case study

A CASE REPORT ON MALIGNANT OVARIAN GERM CELL TUMOR

ABSTRACT:

Introduction: A germ cell is a type of Tumor that arises from germ cell (GCT). Germ cell tumors are both cancerous and benign. The gonads contains majority of germ cell (ovary and testis). GCT that arise outside the gonads could be the result of embryo devlopment errors.

Clinical Findings: Abdominal mass without pain, backache, and weight loss.

Diagnostic Evaluation: HCG and alphafetoprotein level in the blood identifying women with malignant ovarian germ cell tumor is beneficial. Serum alphafetoprotein and HCG is elevated as condition progress

Therapeutic Intervention: Patient treated with inj. Bleomycin, inj. Cisplatin, inj.Etoposide, tab Pan40 miligram and inj. Emset.

Conclusion: A 3year old female was admitted in AVBRH Sawangi Meghe wardha with the major complaint of right abdominal swelling for 6 month, both when they observed abdominal mass without pain and swelling was small in size and backache and weight loss.

Keywords: Cancerous and benign germ-cell tumour , neoplasm, gonads, Malignant

Comment [AK1]: delete

Comment [AK2]: arrange alphabetically

Introduction:

In terms of biology and clinical presentation and Juvenile GCTs are very similar to adult testicular GCT however there are few critical changes of aware of GCT incidents has two peak one in young children (0-4 aged) and other in puberty according to epidemiologic data.[1]

While While GCTs in adolescents and adults appear to have the same histology and molecular biology, germ cell tumours in very young children have substantial difference suggesting that maybe unique disease.[2] GCT roughly accounts for 3% malignacies in children aged 0–18 and their prevalence increses as they approach pubertyGCTs account for 15% of all malignancies in children under the age of 18.Pediatric GCTs are treated with cisplatin based multiagent regimens, which have proven to be highly efficacious even in the setting of advanced disease, similar to adult GCTs.[3]

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Patient Identification:

A 3 years old female with known case of malignant ovarian germ cell tumour come to the AVBRH Sawangi (Meghe),Wardha with Chief complaint of swelling on right abdominal region for 6 months both when they noticed abdominal mass without pain as well as swelling was small in size and backache, weight loss.

Present medical history:

A 3 years old female was admitted in AVBRH in paediatric ward on date 19/05/2021 with complaint of chief complaint of swelling on right abdominal region for 6 months both when they noticed abdominal mass without pain as well as swelling was small in size and backache, weight loss.

Past medical history:

Previously, the patient was treated in a Yavatmal civil hospital. There is no other medical history of hypertension, diabetes, asthma, Tuberculosis
, or seizures in the patient.

Family history:

My patient has 3 family members including father, mother and herself. Her parents are healthy and has no relevant history of genetic abnormalities contributing to patient's condition.

Past interventions and outcome:

The patient was admitted in civil hospital Yavatmal. Patient's general conditions was poor; hence, she was referred to AVBRH Sawangi (Meghe), Wardha for further management.

Clinical findings:

Abdominal mass without pain, backache, and weight loss.

Aetiology:

This slow-growing malignancy starts in female germ cells and leads to a disruption in the hormone beta-human chorionic gonadotropin (beta-hCG), which the body generates in greater amounts during pregnancy. The most prevalent kind of ovarian germ cell tumour is dysgerminoma.[4]

Physical examination:

A 3 years old female look malnourished and had abdominal masswithout pain along with backache and weight loss.

Diagnostic assessment:

Physical review on the basis of patient history, physical examination and other all blood investigation and biopsy done.**Blood test:** Hb= 11.1gm%,RBC= 4.5,WBC= 7000, PLT= 2.74l lakhs/cu mm, CRP=0.50, Bilirubin= 0.4, Total protein=6.6,INR = 1.07,HCG= 10mIU/ml.**Tumour markers:** AFP= 400 ng/ml. **Urine:**Albumin and sugar normal.**Ultrasonography:** Right ovarian mass.

Comment [AK4]: incorporate biopsy findings and describe histological lesions with photograh

Management:

Medical management: Inj. Bleomycin (10 to 20unit/m^2), Inj. Cisplatin (20 miligram/m^2), inj. Etoposide (50 miligram/m^2), Emset (2mililiter) , tab Pan40mg.

Surgical management:

Nursing management: Observed for side effect.Monitored WBC and platelet count prior to each dose.Observed for signs of allergic reaction.Taught patient's parents about signs of bleeding.

Follow-up care:

Because around 75% of MOGCT recurrences happen during the first year, vigorous early follow-up every 4-8 weeks is reasonable and should be audited 229 The peritoneal cavity and, less commonly, the retroperitoneal lymph nodes or lungs are common recurrence locations.5 The goals of follow-up should be to assess therapy response, manage treatment-related problems, and discover persistent or recurring disease early. [6] Tumor markers should be assessed at each appointment, and chest X-rays should be done every 2 months for the first 2 years, then every 3-6 months for the next 3 years. Women should be evaluated for unfavourable physical and cardiovascular effects, as well as psychosocial and psychosexual repercussions of treatment, in addition to disease-related follow-up. [7]

Comment [AK5]: superscript

Discussion:

A 3 years old female was admitted in AVBRH Sawangi (Meghe), Wardha with chief complaint of swelling on right gluteal region, fever, weakness, irritability, constipation, chest pain, unusual shape and size for further management.8 After all investigation the Doctor diagnosed case as malignant ovarian Germ cell tumour .after treatment patient condition was stable.9 Malignant ovarian Germ cell tumour is a clinical disorder, which is commonly seen in patients. Germ cell cancers are caused by molecular abnormalities in primordial germ cells, which are early germline progenitors.[10]

These cells go from the yolk sac to the gonadal ridge's midline in the developing embryo. Extragonadal GCTs have a preference towards the midline since the migration mechanism has been disrupted.[11] The pluripotent nature of these cells explains the differences in histology reported.[12] Immature teratomas have less differentiated tissue, such as neuroectoderm, and are categorised (I-3) according to their dedifferentiation. Despite the fact that both mature and immature teratomas are benign tumours, immature teratomas, particularly those with high grade characteristics, require a careful histologic examination due to their documented relationship with microscopic foci of malignancy.[13]

Conclusion:

In postmenopausal women, malignant ovarian germ cell tumours are an extremely rare occurrence.14 Malignant mixed germ cell tumours of the ovary are a highly aggressive neoplasm, and any adolescent female presenting with a rapidly increasing pelvic mass requires early care and fertility sparing surgery.[15] This series demonstrates the excellent prognosis for females with ovarian germ cell tumours, with a recurrence rate of 4.5 percent and a mortality rate of 3%. We stress the necessity of immunohistochemical investigation and serum AFP measurement in determining the accurate diagnosis, and we emphasise the

likelihood of endometriosis or malignancies resulting from endometriosis as precursor causes.. These people have a poor prognosis, regardless of whether they present with early-stage illness or whether an epithelial component is discovered. Adjuvant therapy with platinum-based medicines is recommended, but more research is needed to understand why this disease has such a poor prognosis in this age group.16

Ethical Clearance: NA.

COMPETING INTERESTS DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors

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