INTERNATIONAL JOURNAL OF RESEARCH CULTURE SOCIETY ISSN: 2456-6683 Volume - 4, Issue - 7, July – 2020
Monthly, Peer-Reviewed, Refereed, Indexed Journal Scientific Journal Impact Factor: 5.743
Received on : 08/07/2020 Accepted on : 22/07/2020 Publication Date: 31/07/2020

Case Study on Stage llla Epithelial Ovarian Cancer

[1]Mula Harshitha Goud, [2]Erram Himabindu, [3]Basavaraju Sreevani
[1]Pharm.D, [2]Pharm.D, [3]Pharm.D
Pharm.D, Sri Indu Institute of Pharmacy, Ibrahimpatnam, Telangana, India
Email: [1] harshithagoud29@gmail.com, [2] himabindureddy818@gmail.com,
[3] basavarajusreevani@gmail.com

Abstract: *Ovarian cancer is initiated by the abnormal cells in female organ that produces eggs i.e, ovaries which multiply unruly and forms a tumor. Onset of symptoms is late and sudden so it is difficult to get diagnosed at early stages. Our case report supports the surgical intervention & use of standard therapy in our patient who was diagnosed with stage 3A high grade serous type of epithelial ovarian cancer and also consolidates the reasons of not prescribing other treatment regimens.*

Key Words: *Ovarian cancer, Late diagnosis, Stage, Standard therapy.*

1. INTRODUCTION:

Ovarian cancer is insidious in nature with late onset of abdominal signs and symptoms which make it difficult to diagnose at its rudimentary stage which is dangerous and fatal. Ovarian cancer is the third leading site of cancer among women , trailing behind cervix and breast cancer in India.[1] The Age Specific Incidence Rate (ASIR) for ovarian cancer shown at 35 years of age and a peak incidence at 55-64 years age groups.[2] Ovarian cancer is distinctly classified as Epithelial, stromal and germ–line based on the cells affected in the ovaries. Epithelial ovarian cancer (EOC) is most common one (of about 90%) and its subtype high grade serous carcinoma is mostly diagnosed in 9 out of 10 cases of EOC which is thought to originate from fallopian tubes [3]. EOC occurrence in women is mostly sporadic with obtuse predisposable factors and less for general population (2.5%) where as patients with genetic predisposition to ovarian cancer is about 5-10%[4] and 90% of these patients are BRCA1 and BRCA2 gene mutation carriers which are also implicated in hereditary breast cancer. Women with BRCA gene mutations are highly elected to undergo Bilateral Salpingo Oophorectomy and TAH for risk removal.

Staging of ovarian cancer ranges from I - IV based on Tumor, Node, Metastasis (TNM) scoring given by International Federation of Gynecology and Obstetrics (FIGO).[5] It can be briefly explained as:

- Stage I : Confined to one ovary or fallopian tube
- Stage II : Confined to both ovaries or fallopian tubes and spread to pelvis (uterus/bladder etc)
- Stage III : Involves pelvis and abdominal lymph nodes (mostly retroperitoneal lymph)
- Stage IV: Metastasis to distant organs such as lungs and bone etc.

Clinical presentation of ovarian cancer involves within the abdomen such as bloating, severe abdominal pain, constipation, urinary incontinence, abdominal swelling with weight loss. Other symptoms may appear such as fatigue (extreme tiredness), pain during sex, menstruation after attaining menopause etc. Diagnosis is aided by clinical data of patient which contains socio-demographic characteristics, past medical history, findings on physical examination, h/o current illness, family history of any cancers. Secondly by clinical impression of hematology, biochemistry, chest x-ray, IV urogram and Ultra sound scannings of abdomen and pelvis / trans vaginal region. Third vindictive tool for ovarian cancer shall be radio immune assays of CA125, Inhibin A&B, CEA. Finally primary laprotomy for staging and Histo pathological examination (HPE) of biopsy are done for confirmation.

Treatment of ovarian cancer with determined doses and route of administration clearly depends on the stage, grade and type of ovarian cancer. Standard therapy for epithelial ovarian cancer is maximal surgical cytoreduction with subsequent use of systemic taxel and platinum based chemotherapy. Treatment regimen for stromal type ovarian cancer is surgical intervention with PEB i.e, combination of cisplatin, etoposide and bleomycin. Therapy for germline cancer in ovary includes oopherectomy with chemotherapy drugs such as PARP inhibitors (eg:olaparib).

2. CASE PRESENTATION:

A 46 year old female patient P2L2 (tubectomised) post menopausal non smoker Indian female with no past medical history but family history of neck cancer in father sought medical attention in July 2018 with severe abdominal pain and sudden onset of periods after two years of menopause. She was admitted for conducting surgery staging laprotomy + TAH +BSO + Omentectomy + Peritoneal biopsies. Post operative condition of the patient was normal. Investigations advised include USG abdomen which gave an impression of A large pelvic cystic lesion measuring 16.4*12.2*10 cm in the left adnexa, CECT Abdomen & pelvis shown well defined cystic mass of

137mm*123mm*144mm on right side with minimal ascites, PET CT scan showed a large complex cystic mass lesion in bilateral adnexae. CA 125 was found to be 1218.00u/ml. On conducting Histopathology examination the impression was High grade papillary serous adenole capsular deposits /capsular breach, papillary neoplasm, STAGE IIIA, Omentum with metastatic deposits.

3. FINAL DIAGNOSIS:

Based on the above investigations the patient was diagnosed as High grade papillary serous adenocarcinoma – Stage ⅢA Epithelial ovarian cancer.

Treatment plan: Patient has undergone 6 cycles of chemotherapy with inj.paclitaxel 295mg and inj.Carboplatin 600mg with an interval of 3 weeks between each cycle. Prior to each chemotherapy, premedications such as Tab. Decmax 4mg BD, Tab.Rantac 150 mg BD are given. Post chemo medications given for every cycle include Tab.Zicovit OD, Tab Emset 8mg BD,Tab pan 40mg OD, Inj.Peg Grafeel 6mg s/c on every second day from the date of discharge for all the cycles.

4. PRECHEMO WORKUP:

Cycle	Haemabglobin (gm%)	TLC(cells/ cumm)	Platelets(lakhs/cumm)	Sr.creatinine(mg/dl)	Complaints during the cycle
Cycle I	11.8	8,800	2.42	0.7	-
Cycle II	10.2	10,200	2.16	0.8	-
Cycle III	9.7	17,500	1.8	0.7	Itching all over body (R_X: Tab. Citrizine 5mg OD)
Cycle IV	9.4	6,700	1.5	0.6	Mild pain in abdomen(R_X: Tab. Pregalin M 75 mg OD)
Cycle V	10	7,300	1.3	0.7	Generalised weakness(R_X: monitored with Iv fluids)
Cycle VI	9.5	6,000	1.4	0.6	Generalized weakness & incontinence of urine (R_X: Iv fluids and Tab. Ato Z

CA125:5.14U/ml - normal report after 3 months (post chemotherapy)

RECURRENCE: After one year (Aug2019) patient came with the complaints of severe leg pain and was advised with Pet scan:1.1x0.7cm size nodule on left side along with serosal surface on sigmoid colon and_enlarged left inguinal lymph node 1.7x1.3cm.

Fnac: Left inguinal lymphnode suggestive of metastatic adeno carcinoma(in a k/c/o carcinoma ovary).

In view of above findings patient was admissioned for surgery: Laprotomy+Cytoreduction+leftinguinal lymph node reduction was done .

6. Histopathology reports:

- One out of 4 lymph nodes show viable metastatic serous papillary adenocarcinoma.
- Appendices of sigmoid colon shows mainly adipose tissue
- Left round ligament shows foreign body cell reaction,No tumour deposit seen.
- BRCA1'heterogenous (+ ve) –inherited mutation

  Further treatment plan: Patient was advised oral chemo treatment after one month of surgery . The oral drugs include Tab. Endoxan 50 mg , Tab. Tamoxifen, Cap.Zycel 200mg, Tab. Pan 40 mg.

  Same oral chemo drugs are being continued till date (Aug 2019-Jun 2020). The recent test report of March 2020 showed good response to the treatment without any detrimental effect on health. March 2020:USG: Normal study, Pet scan: normal, X-ray chest: border line cardiomegaly,CA125-8.66u/ml

7. DISCUSSION:

Chemotherapy is defined as the drugs used for treating the cancer, implicating that the drugs are delivered into the blood stream and reach all the body parts[6]. Surgical laprotomy is the initial choice for tumor removal and for suppresing its aggrevation and metastasis. Chemo is useful for treating the remnants of cancer cells after the surgery or for metastasized tumours. Combinational therapy is found to be more effective in case of ovarian cancer [6] and the chemotherapy given in our case was combination of paclitaxel 295 mg and carboplatin 600 mg through intravenous route (IV), as intraperitoneal (IP) route despite being more effective, results in severe ADRS and a lot of scar tissue formation which undermines the chemotherapy[6]. Compared to IV carboplatin, IP regimen did not show any significant increase in the efficacy even when combined with bevacizumab and worsened with IP cisplatin. Ovarian cancer is known

to be platinum sensitive disease and Carboplatin and paclitaxel combination stood up as standard first line therapy for ovarian cancer . Paclitaxel is known to cause Sensory Neuropathy. Studies have shown that compared to Cisplatin, Carboplatin was found to suppress the sensory neuropathy of paclitaxel and thus reversing the neuropathy symptoms to a greater extent[7]. Usage of Carboplatin results in thrombocytopenia and hence platelet count is widely used for deciding the initial dose in patients who have not received chemotherapy earlier[8][9]. With the use of the carboplatin there is an obvious event called platinum-induced marrow suppression. Paclitaxel minimizes the outcome of carboplatin on thrombocytopenia and enhances the recovery from the consequences of platinum-induced marrow suppression[10]. Hair loss an ADR of paclitaxel is reported in this case but the effect is reversed on cessation of the drug. Other chemo drugs include Altretamine, Capecitabine, Etoposide, Ifosfamide, Cyclophosphamide, Gemicitabine, Irinotecan, Topotecan, Liposomal doxorubicin, Melphalan, Vinorelbine, Premetrexed, Altaxone/Naltrexone, Bevacizumab[6]. Altretamine is usually given to ease symptoms or as longterm palliative therapy after other cancer drugs have failed to treat. Topotecan is second line therapy after paclitaxel+carboplatin. Altrexone/Naltrexone alone or combined with paclitaxel or cisplatin had an enhanced anticancer action but their use in combination with cisplatin has increased risk of weight loss. Trials are being carried out on combination of Cediranib + Olaparib and Cediranib monotherapy in patients with recurrent ovarian cancer[11]. Similar trials for recurrent and metastatic ovarian or fallopian tube cancer in patients are carried out by adminstering Carboplatin, Gemcitabine hydrochloride and ATR kinase inhibitor V X -970. Treating the ovarian cancer with ATR kinase inhibitor V X- 970 and other chemotherapy may be more effective than treating with chemotherapy alone[12]. Usage of cyclophosphamide is widely accepted in case of recurrent ovarian cancer[13]. Tab.Endoxan 50 (cyclophosphamide) belonging to the category of anti neoplastic agents was prescribed in this case. Our patient is tested positive for BRCA gene mutations and Tab.Tamoxiphen is used as chemoprevention to reduce the risk of Breast cancer. The oral chemo drugs Endoxan and Tamoxifen are well tolerated with no or minimal adverse effects and are still being used by the patient and no recurrence is seen as far.[14]

8. CONCLUSION:

Our case report on epithelial ovarian cancer shown subsistence for the use of standard therapy and its efficacy is proven by decreased CA125 levels after 6 cycles of chemotherapy. Surgical cytoreduction and oral administration of cyclophosphamide also aided in improvement of patient health with no or minimal adverse effects.

REFERENCES:

Journal Papers:

1. Nandagudi Srinivasa Murthy, S Shalini, G.Suman et.al. *Changing Trends in Incidence of ovarian cancer- The Indian scenario.* Asian Pac J cancer Prev.2009-10(6): 1025-30 PMID: 20192577
2. Jennifer AA Gubbels, Nick Claussen et al. *The detection, treatment,and biology of epithelial ovarian cancer*. Published on 29 March 2010. Journal of ovarian Research.BMa
3. Shannon- M Grabosch, Yukio sonoda et al. *TNM and FIGO classifications for ovarian cancer. Ovarian cancer staging* Updated on sep 03 2019.Medscape.
4. Cancernetwork.com/view/carboplatinpaclitaxel-induction-ovarian-cancer-finer-points
5. RozencweigM,vonHoffDD, slavik M, Mugggia FM.Cis-diamminedichloplatinumII(DDPP): a new anti cancer drug.Ann Intern Med.1997;86:803-12
6. CalvertAH, Newell DR, Gumbrell LA, et al.Carboplatin dosage : prospective evaluation of a simple formula based on renal function.Jclin oncol.1989;7:1748-56
7. Nc Gure WP, Hoskins WJ, Brady MF, et al. Cyclophosphamide and Cisplatin compared with Paclitaxel and Cisplatin in patients with Stage III and Stage IV ovarian cancer. N Engl J Med.1996;334:1-6.
8. Cancer.gov/about-cancer/treatment/clinical-trials/disease/ovarian-cancer. Clinical Trials.gov ID NCT02502266
9. Cancer.gov/about-cancer/treatment/clinical-trials/disease/ovarian-cancer. Clinical Trials.gov ID NCT02627443.
10. Pubmed.ncbi.nlm.nih.gov/23718870/ Oral Cyclophosphamide in Recurrent Ovarian Cancer. PMID:23718870. DOI:10.1111/ajco.12074

Web References:

- www.indian; cancer.com
- www.cancer.org
- Targetovariancancer.org.uk
- https://doi.org/10.1046/j.1525-1438.1997.00463.x Tamoxifen in the Treatment of Recurrent Ovarian Carcinoma. First published :11 June 2003.