

3. Discussion

Bilateral ovarian tumors are not an uncommon entity and its incidence is approximately 25% of all ovarian malignancies. The bilateral involvement can be as a result of contralateral spread, presence of simultaneous independent primary tumors or distant metastasis [3]. Papillary serous cystadenocarcinoma of the ovary is the most common ovarian carcinoma comprising nearly 50% of all malignant tumors of ovary and is also well known for its bilaterality. They usually affect older woman and is rare in children and adolescents. In children and adolescents, germ cell tumors are most frequently found. Moreover, only <5 cases of advanced stage ovarian cancer in adolescent age group have been till reported as per our knowledge[2]. Our case is noteworthy as the patient is a 19 years old young teenage and presented with stage III disease.

Most common presenting symptoms of ovarian cancers are usually pain abdomen, heaviness of lower abdomen, lump abdomen, huge ascites, loss of appetite, easy fatigue, menstrual abnormalities or asymptomatic. Whereas uncommon symptoms like low back pain, fever, breathlessness are also on record in a minority of cases. and[4]-[7]. Our teenage patient was also presented atypically with low back pain. Studies have attempted to systematically record symptoms that are experienced prior to diagnosis, but the data collection checklists have been derived using the existing literature on ovarian cancer symptomatology which may miss previously unrecorded events and may be the key to under represent certain symptoms like low back pain.

The most common sites of involvement of ovarian serous carcinoma are the contra-lateral ovary, peritoneal cavity, para-aortic lymph nodes, pelvic lymph nodes and liver. With intra-abdominal spread there is often ascites and involvement of omentum.[8] In contrast, our patient had involvement of omentum but without any ascites. Malignant serous tumors are further divided into borderline, low grade and high grade. The low grade serous tumors are associated with their precursor borderline tumors and harbor BRAF/K-ras mutations while genetic abnormalities of high grade tumors include p53 mutation, p16 expression and loss of BRCA1 expression [9]-[10].

Serum CA 125 levels and ultrasonography are useful tools for screening, preoperative diagnosis and monitoring therapy [11]-[12]. This case also had markedly elevated CA 125 levels at the time of presentation. Treatment modality for high grade papillary serous cystadenocarcinoma is cytoreductive surgery with adjuvant platinum based chemotherapy as in our case. These tumors have a poor prognosis with a low survival and high recurrence rates [10].

4. Conclusion

To conclude, bilateral advanced stage ovarian serous cystadenocarcinoma presenting only with low back pain in a teenage patient is extremely rare and pose a diagnostic and therapeutic challenge, making careful clinical, radiological and pathological examination imperative.

References

- [1] Dhillon PK, Yeole BB, Dikshit R, Kurkure AP, Bray F. Trends in breast, ovarian and cervical cancer incidence in Mumbai, India over a 30-year period, 1976-2005 : a n age-period-cohort analysis. *Br J Cancer* 2011;105:723-30.
- [2] MOEN MD, CLIBY WA, TO WILSON. STAGE III PAPILLARY SEROUS CYSTADENOCARCINOMA OF THE OVARY IN A 15-YEAR-OLD FEMALE. *GYNECOL ONCOL*; 1994 MAY;53(2):274-6.
- [3] Micci F, Haugom L, Ahlquist T, Abeler VM, Trope CG, Lothe RA, Heim S. Tumor spreading to the Contralateral ovary in bilateral ovarian carcinoma is a late event in clonal evolution. *J Oncol* 2010; 2010: 646340.
- [4] Goff BA, Mandel L, Muntz HG, Melancon CH. Ovarian carcinoma diagnosis: results of a national ovarian cancer survey. *Cancer* 2000;89(10):2068-2075.
- [5] Flam F, Einhorn N, Sjøvall K. Symptomatology of ovarian cancer. *Eur J Obstet Gynecol Reprod Biol* 1988;27(1):53-57.
- [6] Igoe BA. Symptoms attributed to ovarian cancer by women with the disease. *Nurse Pract* 1997; 22(7): 122, 127-128, 130.
- [7] Portenoy RK, Kornblith AB, Wong G, et al. Pain in ovarian cancer patients. Prevalence, characteristics, and associated symptoms. *Cancer* 1994;74(3):907-915.
- [8] Rosai J. Rosai and Ackerman's Surgical Pathology. 9th ed.(vol 2). New Delhi: Elsevier;2004. p.1661-2.
- [9] Soslow RA. Histologic subtypes of ovarian carcinoma: an overview. *Int J Gynecol Pathol*. 2008; 27(2): 161-174.
- [10] Vang R, Shih IeM, Kurman RJ. Ovarian low-grade and high-grade serous carcinoma: pathogenesis, clinicopathologic and molecular biologic features, and diagnostic problems. *Adv Anat Pathol* 2009;16(5): 267-282.
- [11] Scholler N, Urban N. CA 125 in ovarian cancer. *Biomark Med* 2007; 1(4): 513-23.
- [12] Twickler DM, Moschos E. Ultrasound and assessment of ovarian cancer risk. *AJR* 2010; 194: 322-329.