Experience of using Bevacizumab in Epithelial Ovarian, Fallopian Tube and Primary Peritoneal Cancers in a Single Centre

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INTRODUCTION

Bevacizumab is a monoclonal antibody targeting vascular endothelial growth factor. It has demonstrated improved progression-free survival (PFS) and overall survival (OS) when used with chemotherapy in newly diagnosed ovarian cancer, in particular high-risk patients who has suboptimally debulked stage III or stage IV disease. Furthermore, the addition of bevacizumab to chemotherapy has also demonstrated prolonged PFS in patients with recurrent disease.

AIM

The aim of this study is to review the use of bevacizumab in epithelial ovarian, fallopian tube and primary peritoneal cancers in our centre.

MATERIAL & METHODS

Patients receiving bevacizumab for epithelial ovarian, fallopian tube and primary peritoneal cancer at the Division of Gynaecological Oncology, Queen Mary Hospital, The University of Hong Kong between January 2011 and December 2015 were included. A retrospective chart review was performed. Main outcome measures were adverse events and PFS.

RESULTS

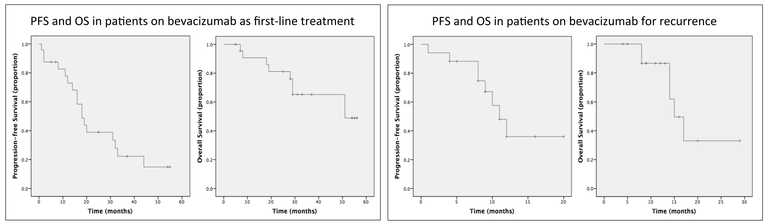
- 41 patients received bevacizumab for epithelial ovarian, fallopian tube or primary peritoneal cancer, of which 24 were for primary treatment and 17 for recurrent disease.
- Of 24 patients who received bevacizumab as primary treatment, the median age was 52 years, and 12.5% of the patients had early-stage high-risk disease, 87.5% had FIGO stage III or IV disease, 45.8% had a serous adenocarcinoma, and 54.2% had residual disease after debulking surgery.
- Of 17 patients who received bevacizumab for recurrent disease, the median age was 52 years, and 94.1% of the patients were having their first recurrence, 64.7% had platinum-sensitive disease and 41.2% had a serous adenocarcinoma.
- Grade 2 or higher hypertension and proteinuria occured in 24.4% and 12.2% of patients, respectively.
- Bevacizumab was discontinued in 7.3% of patients due to adverse events and 31.7% due to inadequate therapeutic response.

Table 1: Patients characteristics

Characteristics	Primary (N=24) No. of patients (%)
Median age (range) (years)	52 (38-78)
Histology	
Serous adenocarcinoma	11 (45.8)
Clear cell adenocarcinoma	6 (25.0)
Endometriod adenocarcinoma	1 (4.2)
Mucinous adenocarcinoma	1 (4.2)
Mixed adenocarcinoma	5 (20.8)
FIGO Stage	
I	2 (8.3)
II	1 (4.2)
III	18 (75.0)
IV	3 (12.5)
Neoadjuvant chemotherapy	
Yes	2 (8.3)
No	22 (91.7)
Optimal debulking	
No residual disease	11 (45.8)
Residual desease ≤1cm	2 (8.3)
Suboptimal debulking	11 (45.8)

Characteristics	Recurrence (N=17) No. of patients (%)
Median age (range) (years)	52 (36-66)
Histology at diagnosis	
Serous adenocarcinoma	7 (41.2)
Clear cell adenocarcinoma	3 (17.6)
Endometriod adenocarcinoma	2 (11.8)
Mixed adenocarcinoma	5 (29.4)
Duration from previous platinum-based treatment to recurrence	
< 6 months (Platinum-resistant)	5 (29.4)
≥ 6 months (Platinum-sensitive)	11 (64.7)
No previous chemotherapy	1 (5.9)
Debulking surgery for recurrence	
Yes	2 (11.8)
No	15 (88.2)
Chemotherapy agents used	
Carboplatin and gemcitabine	10 (58.8)
Carboplatin and paclitaxel	4 (23.5)
Liposomal doxorubicin	2 (11.8)
Weekly paclitaxel	1 (5.9)

Figure 1: Kaplan-Meier estimates of PFS and OS



PRIMARY TREATMENT

- Median PFS was 18.0 months (95% CI 13.6 to 22.4)
- Estimated mean OS was 42.7 months (95% CI 35.2 to 50.3)

RECURRENT DISEASE

- Median PFS was 11.0 months (95% CI 8.4 to 13.6)
- Estimated mean OS was 18.8 months (95% CI 13.7 to 23.9)

Table 2: Summary of bevacizumab related adverse events

Adverse events	All (N=41) No. of patients (%)	Primary (N=24) No. of patients (%)	Recurrence (N=17) No. of patients (%)
Hypertension			
Grade 2	1 (2.4)	0 (0)	1 (5.9)
Grade 3	9 (21.9)	7 (29.2)	2 (11.8)
Proteinuria			
Grade 2	2 (4.9)	2 (8.3)	0 (0)
Grade 3	3 (7.3)	2 (8.3)	1 (5.9)
Bleeding			
Grade 3 haematuria	1 (2.4)	0 (0)	1 (5.9)
Infusion related reaction			
Grade 2	1 (2.4)	1 (4.2)	0 (0)

CONCLUSION

With acceptable toxicity, combination of bevacizumab and chemotherapy may be considered as treatment modality in newly diagnosed suboptimally debulked stage III or stage IV ovarian cancer as well as in recurrent ovarian cancer.

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REFERENCE

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