



Case Report

Invasive epithelial ovarian carcinoma (EOC) at a young age: role of fertility-sparing

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ABSTRACT

Tujuan: Meningkatkan pengetahuan dalam penanganan kasus kanker ovarium invasive tipe epitelial pada usia muda yang ingin mempertahankan fungsi reproduksinya

Metode: Laporan kasus

Hasil: Seorang perempuan Indonesia berusia 26 tahun nullipara dengan keluhan utama perut membesar disertai dispnoe. Pemeriksaan fisik ditemukan abdomen membuncit dengan shifting dullness positif. Pemeriksaan ginekologi menunjukkan uterus normal, teraba massa kistik berasal dari adnexa hingga setinggi pusat, mudah digerakkan. Pada CT scan abdomen didapatkan massa kistik dengan bagian padat dari pelvis hingga pertengahan abdomen berukuran 17,8x10,7x18,8 cm disertai limfadenopati paraaorta dan inguinal bilateral. Pemeriksaan sitologi cairan asites dan pleura positif sel maligna (metastasis dari adenokarsinoma). Pasien didiagnosis dengan kanker ovarium stadium lanjut dan dilakukan pembedahan sitoreduktif setelah 3 siklus kemoterapi neoadjuvant (NACT). Hasil pemeriksaan histopatologi post operasi adalah carcinoma ovarium tipe sel jernih dengan grade tinggi.

Kesimpulan: Pembedahan dengan mempertahankan fungsi fertilitas pada karsinoma ovarium invasif tipe epitelial bisa dipilih pada pasien dengan usia muda yang memenuhi kriteria. Edukasi dan informed consent merupakan hal penting yang harus dilakukan mengingat risiko rekurensi dan prognosis.

Kata kunci: EOC invasive, preservasi fertilitas, kriteria seleksi, rekurensi, prognosis

Objective: Improving knowledge to manage an invasive epithelial ovarian cancer at a young age who expect to preserve their reproductive function

Method: a Case report

Result : A 26 years old, nulliparity, Indonesian woman with chief complaint abdominal enlargement simultaneous with dyspnoea condition. Physical examination revealed an enlarged abdomen until processus xiphoides with positive shifting dullness. Gynecology examination found normal uterine size, palpable cystic mass originated from adnexa until navel, mobile. CT whole abdomen showed a cystic solid mass in the pelvic area up to mid abdominal size 17,8 x 10,7 x 18,8 cm accompanied by lymphadenopathy in paraaortic and bilateral inguinal. Ascites and pleural fluid cytology examination results were both positive for malignant cells (metastatic adenocarcinoma). The patient was assessed as advanced staged ovarian cancer and proceed for Interval Debulking Surgery (IDS) after 3 cycles of Neoadjuvant Chemotherapy (NACT). Postoperative histopathology examination result was high-grade clear cell ovarian carcinoma

Conclusion: Fertility-sparing surgery for invasive epithelial ovarian carcinoma could be chosen for selective young age patients who fulfilled the criteria. Education and informed consent is a must regarding the risk of recurrence and prognosis.

Keywords: Invasive EOC, fertility sparing, selection criteria, recurrence, prognosis

Apa yang sudah diketahui tentang topik ini?

Kanker ovarium invasive tipe epitelial

Apa yang ditambahkan pada studi ini?

Diagnosis dan penanganan kasus kanker ovarium invasive tipe epitelial pada usia muda yang ingin mempertahankan fungsi reproduksinya

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ARTICLE INFORMATION

Received: June 10th, 2021

Revised: March 23rd, 2022

Available online: May 18th, 2022

Introduction

Younger patients with advanced-stage epithelial ovarian cancer (EOC) frequently want to preserve their fertility, but the role of fertility-sparing surgery in EOC has not been well defined.¹ We want to review selection criteria, risk of recurrence and prognosis, especially for young age invasive EOC patients.

Case Illustration

History, Examination, and Management

We report a case, 26 years old Indonesian women, nulliparity, marriage for a year, complained abdominal enlargement simultaneous with dyspnoea condition for 4 months before admission. Physical examination revealed an enlarged abdomen until processus xhypoideus with shifting dullness. Gynecology examination found smooth portio with normal uterine size, palpable cystic mass originated from adnexa diameter around 20 cm until navel, mobile.

CT whole abdomen examination revealed a cystic solid mass in the pelvic area up to mid abdominal size 17,8 x 10,7 x 18,8 cm accompanied by lymphadenopathy in paraaortic and bilateral inguinal suggestive malignant ovarian tumor. There were ascites with multiple peritoneal suspected peritoneal metastasis.

She underwent ascites puncture and cytology examination, the result was positive for malignant cells (metastatic adenocarcinoma). She also being consulted with Pulmonologist, examination revealed left pleural effusion and she underwent pleural tapping. Pleural fluid cytology examination was also positive for malignant adenocarcinoma cells. The patient was assessed as advanced staged ovarian cancer and planned for Interval Debulking Surgery (IDS). We gave her Neoadjuvant Chemotherapy (NACT) consist of carboplatin 545 mg and carboplatin 230 mg.



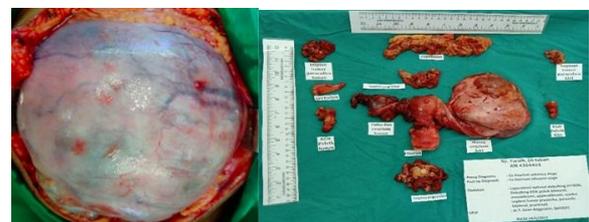
Picture 1. Abdominal CT scan before NACT

We evaluated her after 3 cycles NACT. The abdomen enlargement was decreased. CT scan examination evaluation showed a cystic mass with solid component in ovarium, the size was decreased around 17% (1,9 x 9,2 x 15,5 cm) whereas the size before was (17,8 x 10,7 x 18,8 cm). The ascites was decreasing significantly. The impression was stable disease (RECIST criteria). Monthly Ca -125 evaluation are 479,4 / 308,5 /317,6, respectively. The AMH result was 0,09 ng/ml. Initially, she wishes to preserve her fertility function. Adequate information and education were given clearly, continued with informed consent before the operative procedure.



Picture 2. Abdominal CT scan after NACT

Intraoperative finding clinically consistent with advance staged ovarian cancer and we proceed her for an optimal debulking procedure.



Picture 3. Tumor mass and postoperative specimens

Postoperative histopathology examination result was high-grade clear cell ovarian carcinoma invade to the contralateral ovary, appendiceal, prevesica, paracolic, pre rectal, pelvic lymph nodes, and omentum.

Discussion

Epithelial ovarian cancer (EOC) accounts for 25% of all malignancies in the female genital tract and is the most common cause of death among women who develop gynecologic malignancies.³ According to International Federation of Gynecology and Obstetrics (FIGO) guidelines, the current standard treatment for women with EOC consists of complete surgical staging, including total abdominal hysterectomy,

bilateral salpingo-oophorectomy, pelvic and paraaortic lymph node dissection, infracolic omentectomy, multiple peritoneal washing cytology, multiple peritoneal biopsy, and maximal cytoreductive surgery, followed by taxane/platinum-based adjuvant chemotherapy.⁴⁵

Standard surgical management, however, completely abolishes patient fertility. Recent changes in attitudes toward radical oncologic surgery have led to the idea that benefits should not be evaluated simply for disease control, but also to functional results that may affect patient quality of life. Preservation of fertility is regarded as one of the most important issues related to the quality of life in younger patients with cancer.¹

Park et al (2008) performed a study to patients with stages IA, IB, IC, and > II EOC disease who underwent fertility-sparing, the 5-year DFS rates were 83%, 100%, 78%, and 33%, respectively (p = 0.0396), and the 5-year OS rates were 91%, 100%, 88%, and 33%, respectively (p = 0.0014). For patients with grades I, II, and III diseases, the 5-year DFS rates were 93%, 80%, and 15%, respectively (p b 0.0001), and the 5-year OS rates were 95%, 100%, and 42%, respectively (p = 0.0002). Even in patients with stage IA disease, grade III disease showed significantly poorer DFS (p = 0.001) and OS (p = 0.001). For patients with serous, mucinous, endometrioid, clear cell, and mixed histology, the 5-year DFS rates were 100%, 80%, 75%, 50% and 50%, respectively (p b 0.0563), and the 5-year OS rates were 100%, 85%, 100%, 75% and 100%, respectively (p=0.6107).¹

Initially, fertility-sparing surgery for young women with invasive EOC was considered for those with stage IA, well-encapsulated tumors without adhesion or malignant peritoneal washings. Recently, however, fertility-sparing surgery was found to be safe in women with more advanced stage disease. A study has shown that fertility-sparing surgery is a safe treatment option in patients with stages IA–IC and grades I–II invasive EOC who desire to preserve reproductive function. Moreover, the reproductive outcomes of fertility-sparing surgery were promising. Safe fertility-sparing surgery should include complete surgical staging for all patients and postoperative adjuvant chemotherapy for patients with a high-risk factor. Fertility sparing surgery, however, should not be considered for patients with > stage

IC, grade III, or unfavorable histologic type of tumor.¹

Rizzuto et al (2014) develop a ROVAR score as a prognostic index that predicts risk of relapse in women who have completed first-line treatment for ovarian cancer (OC) 2. This tool may help the clinicians to give adequate information and education for the patient and her family before decided to proceed her for fertility-sparing surgery.

Table 1. ROVAR score prognostic index²

Calculation Steps		ROVAR Score Calculation
A	Initial score	Set initial score of -2.8899
B	Tumor evident on posttreatment CT scan?	
	Measurable disease	Add 2.9581 to initial score
	Nonmeasurable disease	—
C	Elevated CA-125 at diagnosis?	
	Yes	Add 1.0541
	No	—
D	FIGO stage	
	I	—
	II	Add 0.8935
	III	Add 1.8536
	IV	Add 2.5540
E	Tumor grade	
	Well differentiated (grade 1)	—
	Intermediately differentiated (grade 2)	Add 0.3122
	Poorly differentiated (grade 3)	Add 1.1800
F	Subtotal derived	Cumulative total of steps A-E
ROVAR score = 1 / (1 + exp (-cumulative score from steps A-E))		
ROVAR risk allocation		
	Low risk of relapse	Intermediate risk of relapse
	0-0.33	0.34-0.67
		High risk of relapse
		≥0.68

Conclusion

Fertility sparing is a reasonable choice for invasive epithelial cancer in young age who fulfilled the selection criteria based on stage and tumor histopathology grading. Informed consent and complete education should be done clearly before the procedure, regarding the risk of recurrence and prognosis.

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