Ovarian Stimulation in a Woman with a Yolk Sac Tumour Requesting Fertility Preservation

Guys and St. Thomas Hospital, London UK
Kieren Wilson & Michela Quaranta

INTRODUCTION

This case illustrates a young woman diagnosed with a malignant ovarian germ cell tumour (MOGCTs) seeking fertility preservation as part of comprehensive cancer care. The cycle was cancelled due to a poor ovarian response in the presence of known MOGCTs and oocytes were not collected. This case highlights the need for designated cancer units with expertise in fertility preservation.

CASE REPORT

Twenty seven year old primigravida woman diagnosed with a **yolk sac ovarian tumour** and subsequently underwent ovarian stimulation as part of an IVF cycle.

On the day of presentation to the emergency department, she awoke from sleep with severe right sided abdominal pain, described as a stabbing sensation associated with nausea and vomiting. On examination, vital signs showed she was haemodynamically stable, afebrile and her abdomen had mild tenderness over the right iliac fossa. No abdominal dissention or rebound tenderness noted and rosvig sign negative. Formal pelvic ultrasound showed right ovarian mass 112mm x 77mm x 81mm solid cystic structure suggesting possible dermoid cyst, haemorrhagic cyst and ovarian torsion. Taking into account worsening pain, clinical examination and ultrasound findings the decision was made to proceed to emergency laparoscopy. Operation findings included a 8cm right haemorrhagic cyst, torted x1. Detorsion was followed by spontaneous rupture of cyst. Right oophorectomy performed to control bleeding from ovary. Histology of the right ovary reported a germ cell tumour with majority yolk sac component.

FERTILITY SERVICE

The fertility service became involved for fertility preservation with a diagnosis of Stage 1c ovarian germ cell tumour. Informed consent for ovarian stimulation was obtained. Tumour markers CA 125 27 & AFP 6801. The patient was commenced on an antagonist cycle and received 8 days of 250iu FSH. On the day of Egg Collection the patient presented with severe abdominal pain. Pelvic ultrasound showed no follicles. Egg Collection was cancelled. The patient was admitted for stabilisation and subsequently underwent chemotherapy.

DISCUSSION

There is a dearth of published literature addressing this topic of ovarian stimulation in the context of MOGCTs. There are mixed reports about how cancer patients respond to the IVF stimulation protocols. Some report no significant change while others demonstrate poorer ovarian response in cancer patients compared with age matched healthy women.

RECOMMENDATIONS

- Fertility preservation counseling for women of reproductive age with ovarian cancer disease must include the risk of cycle cancellation, poor response, low oocyte retrieval and risk of disease dissemination and bleeding
- Fertility preservation may not be possible for all cancer patients, the availability of different options must be discussed with each patient.
- A designated lead should coordinate patient care and liaise with different specialists.
- Despite all efforts to preserve a young woman's fertility and undertake ovarian stimulation, this treatment may be unsuccessful due to variables beyond the control of the medical team.

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