

# Ovarian hyperstimulation syndrome - Two case reports

K K Wong, MRCOG,  
*Lecturer*

S Raman, MRCOG, FICS, FACS  
*Associate Professor*

*Department of Obstetrics and Gynaecology, University Hospital, 59100 Kuala Lumpur*

## Summary

Two cases of ovarian hyperstimulation syndrome (OHSS) following the GIFT procedure are reported. This article highlights the potential dangers of this condition and discusses the classification and management.

*Key words:* Hyperstimulation, ovarian, ovulatory inductors.

## Introduction

Ovarian stimulation using various regimens has become widespread in the management of infertile couples. The Ovarian Hyperstimulation Syndrome (OHSS) is a potential complication. We report two cases of this problem managed in our department over the last year.

## Case Report 1

A 27 year old primigravida with five years primary infertility underwent ovulation induction with Clomiphene, Human Menopausal gonadotrophin (HMG) and Human Chorionic Gonadotrophin (HCG) prior to the GIFT procedure at a private medical centre.

Twelve days later, she developed abdominal pain and distension suggestive of OHSS. Ultrasound examination revealed multiple large ovarian cysts occupying the lower third of the abdomen, the largest three measuring 61 x 37mm, 52 x 37mm and 33 x 57mm. There was associated mild ascites (Fig. 1). Her vital signs were stable. Haematological investigations were as follows: Hb 13.1 gm/dl, PCV 38%, white cell count and platelet counts were normal. The blood urea and serum electrolytes (BUSE) were normal.

She was managed conservatively with bed rest, abdominal girth measurement and gentle leg exercises. Serial haematological and biochemical parameters remained normal.

She improved gradually and two weeks later the ovarian cysts were just palpable in the suprapubic region. Repeat ultrasound revealed five follicular cysts on the left ovary measuring approximately 40 x 30 mm each, and two cysts on the right ovary measuring approximately 50 x 40mm each. No ascites was noted.

This patient was discharged well and had a twin pregnancy which was delivered at 38 weeks gestation by caesarean section. No abnormality was noted on the ovaries during surgery.

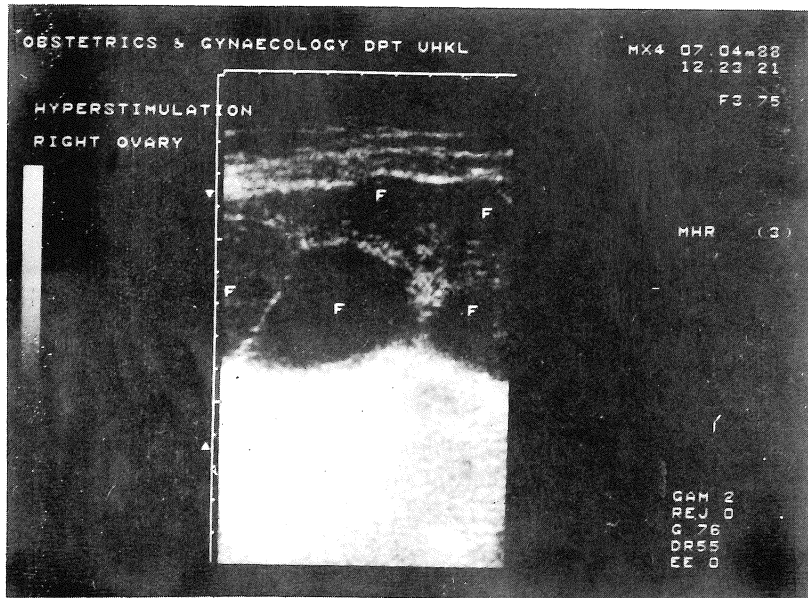


Fig.1 Large multiple ovarian follicles seen on the right ovary on ultrasound during the acute phase (Case 1). F- Follicle

### Case Report 2

A 32 year old primigravida with six years infertility underwent ovulation induction with Clomiphene, HMG and HCG followed by a GIFT procedure at a Government centre. A few hours following the procedure the patient experienced epigastric pain, nausea, vomiting and vulval swelling. Physical examination revealed normal vital signs and mild dehydration. There was slight lower abdominal distension and tenderness on gentle palpation. The vulva was oedematous. Pelvic examination was not done due to the pain. Ultrasound scan of her pelvis showed multiple follicular cysts in both her ovaries measuring approximately 80mm x 100mm. No ascites was noted. The haemoglobin was 16.3 gm/dl, packed cell volume was 46% and the white cell count was 30,900/cc mainly neutrophilia.

Her BUSE was within normal limits. The patient was managed conservatively with bed rest and gentle leg exercises. A strict Intake/Output chart was maintained.

Four days later her abdominal distension, pain and tenderness worsened. There was leakage of serious ascitic fluid from the laparoscopic and suprapubic site. Two units of plasma were infused intravenously. Serial haematological investigations remained within normal limits.

The symptoms subsided after four days and the ascitic fluid leakage stopped. She was then sent on home leave. Three weeks later a repeat ultrasound scan showed good regression of her ovarian cysts, the right was 49mm x 37mm, the left 60mm x 39mm (Fig. 2). No ascites was noted. This patient did not conceive in this cycle but later conceived spontaneously but this pregnancy resulted in a spontaneous abortion at seven weeks.

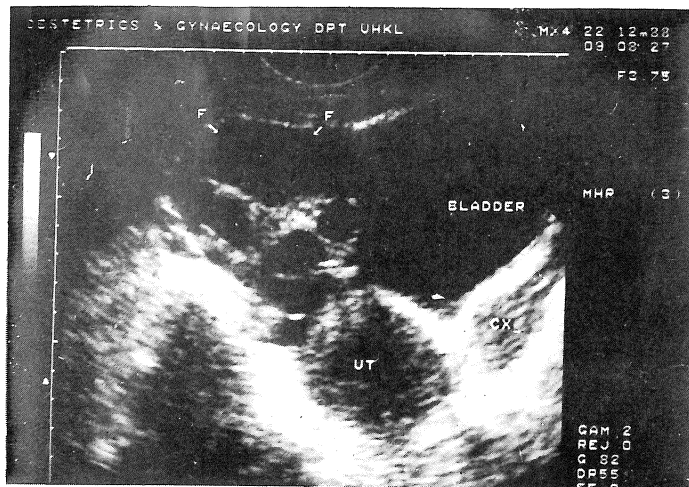


Fig. 2 A much diminished hyperstimulated ovary after the acute phase ( Case 2 )  
 F- Follicle Ut - Uterus Cx - Cervix

### Discussion

Ovulation induction is commonly used before a GIFT or IVF procedure. One of the complications is the ovarian hyperstimulation syndrome (OHSS) which occurs only after HCG is administered<sup>1</sup>. This complication may be seen more frequently with the increasing number of patients undergoing this procedure in Malaysia, especially anovulatory patients in group II (WHO classification)<sup>2</sup>. There is a higher incidence of this condition in cycles where pregnancy<sup>3</sup> occurs and this is illustrated by Case 1.

The best known and widely used classification of OHSS is that of Rabau et al<sup>4</sup>. According to this classification which was reorganised by Schenker and Weinstein<sup>1</sup> both our patients are in the moderate category (Grade 3). These patients can deteriorate rapidly and therefore require hospitalisation which was done in both our patients. The basic management in OHSS is conservative but in the severe forms there is massive fluid shift into the third space resulting in increased blood viscosity, oliguria and hypovolemia. Therefore the patient's full blood count, electrolytes and renal function tests should be done. These were normal in both patients. Ultrasonography is a useful non-invasive method for assessment of ovarian size and ascites<sup>2</sup>. Both the cases had serial ultrasound monitoring. Since fluid balance is important and there was ascitic fluid leakage in our second case, plasma was transfused although dextran or albumin could have been used.

Rupture or torsion of the ovary may occur in OHSS. Laparotomy is warranted should this occur. Since OHSS can never be completely prevented from occurring this article hopes to highlight some of the potential dangers with current ovulation induction methods. With vigilance and a high index of suspicion this potentially lethal condition can be successfully managed conservatively.

### Reference

1. Schenker JG, Weinstein D: Ovarian Hyperstimulation Syndrome: A current survey. *Fertil. Steril.* 1978; 30:255-268.
2. Golan A, Ron-el R, Herman A, Soffer Y, Weinraub Z, Caspi E. Ovarian Hyperstimulation Syndrome: An Update Review. *Obs and Gyn Surv* 1989;44: 430- 440.
3. Tyler E. Treatment of anovulation with menotropins. *J. Am. Med. Assoc.* 1968;205: 16:22
4. Rabau E, Serr D M, David A. Human menopausal-gonadotropins for anovulation and sterility. *Am. J. Obstet Gynaecol.* 1967; 96: 92-96