



# A Young Woman with Severe Ovarian Hyperstimulation Syndrome in Modern Day IVF.



Perry C<sup>1,2</sup>, Arulpragasam<sup>1</sup>

1 Royal Hospital for Women, Sydney  
2 School of Women's and Children's Health, UNSW Sydney, NSW, Australia

## Background

Ovarian Hyperstimulation Syndrome (OHSS) is an excessive response to fertility medications. Severe OHSS has an incidence of 0.1-2% and can result in life threatening complications such as renal failure, hepatic injury, ascites, acute respiratory distress syndrome and multiorgan failure. Risk factors include Polycystic Ovarian Syndrome (PCOS), high antral follicle count (AFC), Anti-mullerian Hormone (AMH) level and serum oestradiol, large number of oocytes retrieved, previous OHSS and hcg rather than progesterone for luteal phase support.

Aims The aim of this case presentation is to review a case of severe OHSS.

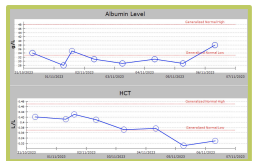
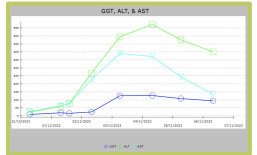
## Case

A G0P0 31 year old female presented to emergency two days following retrieval of 52 oocytes for social fertility preservation. She had a known background of PCOS, an AMH of 161, her CST was normal and up to date and had no history of STIs. On her first cycle she was treated with a GnRH antagonist protocol with 125 FSH and HCG trigger. 52 oocytes were successfully harvested.

She presented to Emergency two days later with severe abdominal pain, two presyncopal episodes and developing exertional dyspnoea. On examination she was febrile (temperature 38 C) with a distended, tender abdomen with guarding. Her abdominal girth measured 87cm at maximum. She was suspected of having severe OHSS and therefore recommended for admission, further investigation and management.

## Results

Bloods showed an estradiol level of 8761, hypoalbuminaemia (Alb 28 at lowest, hct 0.4) and severe transaminitis (ALT 571, AST 390, GGT 127). Pelvic Ultrasound [images below] showed ovarian volumes of 590mL (left) and 410mL (right) with approximately 1L of abdominal free fluid and bibasal pleural effusions. Blood and urine cultures were both negative.



## Management

She was admitted for conservative management: fluid resuscitation, analgesia, LFT monitoring, thromboembolism prophylaxis and a high protein diet. On day 3 her oxygen requirement increased secondary to abdominal splinting and effusions. She was placed on supportive oxygen therapy and an ascitic drain was placed. She drained 3L of ascitic fluid and required 7 units of albumin. Prior to discharge, she was well, haemodynamically stable with an abdominal girth of 81cm and improving LFTs.

## Discussion

This case illustrates even with extensive research into OHSS and lower risk protocols, the challenges of fertility treatments and potential for deterioration of high risk fertility patients. When undertaking a stimulated cycle it is important to risk stratify patients by risk of OHSS. Some preventative measures when managing high risk patients include regular ultrasounds and blood tests to monitor developing follicles and hormone levels, the use of antagonist cycles, GnRH agonist trigger and Cabergoline following trigger.