Ovarian Hyperstimulation Syndrome (OHSS)

A 28-year-old G0P0 woman who had been taking fertility medications for the past 15 days and underwent egg retrieval one day ago presented with increasing abdominal pain and distention. Pelvic ultrasound (US) showed markedly enlarged ovaries bilaterally with multiple cysts (A, B) and normal vascularity. There was free fluid in the abdomen and pelvis, some of which was hemorrhagic, and bilateral pleural effusions (C, D).

Ovarian hyperstimulation syndrome (OHSS) is an iatrogenic condition that occurs due to increased capillary permeability following the administration of exogenous hormones for ovarian stimulation as part of assisted reproduction. It occurs most commonly following hCG administration but can rarely occur with clomiphene or GnRH. Risk factors include young age, low body weight, polycystic ovarian syndrome, high doses of exogenous hormones, high or rapidly rising estrogen, and prior OHSS.\(^1\) The syndrome is self-limited; however, it can be severe and life threatening due to complications such as renal failure, respiratory distress, and thromboembolism.

Bilateral, symmetrically enlarged ovaries containing multiple variably sized cystic lesions (“spoke wheel” appearance) representing enlarged follicles or corpus luteum cysts in the presence of ascites are the typical imaging findings.\(^2\) Corpus luteum cysts and ascites can be echogenic on US or dense on CT from hemorrhage. Additional imaging findings that can be seen on US, CT or MRI include pleural effusion and thromboembolism.

The modified Golan Classification is commonly used to measure the severity of OHSS and divides OHSS into mild, moderate, and severe based on ovarian sizes of < 6 cm, 6-12 cm, and > 12 cm, respectively.\(^2\) Other imaging features considered in the Golan classification are the presence of ascites, thrombosis, and/or hydrothorax.

REFERENCES