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OVARIAN HYPERSTIMULATION SYNDROME

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Technology-induced ovarian hyperstimulation syndrome (OHSS) is an iatrogenic side effect of assisted reproduction. Ovarian neoangiogenesis and enhanced capillary permeability cause a fluid shift from the intravascular to the third space, which is a characteristic of the disease. The ovaries also expand cystically. Human chorionic gonadotrophin (hCG) injection is necessary for it to occur. It is quite uncommon for OHSS to occur without hCG treatment. There have been rare reports of fatal occurrences, and it can have a very negative effect on the patient's overall health. It is believed that the angiogenic molecule VEGF is the mediator of the link between hCG and OHSS. According to estimates, the incidence of moderate OHSS ranges from 3 to 6%, but the severe form may manifest in 0.1 to 3% of cycles.

Although the exact pathophysiology of OHSS is uncertain, the condition is thought to be caused by increased vascular permeability in the vasculature surrounding the ovaries.[3] The key is a balance between the follicular fluid's proangiogenic and antiangiogenic components. Prolactin, histamine, β-hCG and its analogs, estrogen, estradiol, endothelin-1, prostaglandins, and other vasoactive substances are now known to be associated with OHSS. These substances include interleukins, tumor necrosis factor (TNF)-α, endothelin-1, and VEGF, which are secreted by the ovaries and promote vascular permeability.

Classification:-

- **Mild OHSS** Grade 1: Discomfort and distention in the abdomen

Grade 2: Grade 1 illness plus ovarian enlargement measuring 5 to 12 cm along with nausea, vomiting, and/or diarrhea

- **Moderate OHSS**

Grade 3: Ascites is shown on ultrasonography along with mild OHSS symptoms.

- **extreme OHSS**

Grade 4: Ascites, hydrothorax, and/or breathing difficulties in addition to features of moderate OHSS

Grade 5: Everything listed above plus altered blood volume, hemoconcentration-related elevated blood viscosity, abnormal coagulation, and reduced renal perfusion and function

When necessary, supportive care is given for OHSS. Particularly if conception occurs, mild ovarian hyperstimulation might progress to moderate or severe illness. Thus, for at least two weeks or until menstrual flow starts, women with moderate illness should be monitored for increasing belly circumference, sudden weight gain, and discomfort in the abdomen when walking. Treatment for moderate OHSS includes bed rest, observation, giving enough fluids, and using sonography to track cyst sizes.. When the cysts reduce as demonstrated by two consecutive ultrasonographic exams and when the clinical symptoms go away, the OHSS will start to resolve. On the other hand, persistent weight gain (>2 lb/d), a heightened severity of current symptoms, or the emergence of new symptoms (such as vomiting, diarrhea, or dyspnea) are indicative of an early stage of the syndrome's progression towards the severe form.