Bilateral Pneumothorax Secondary to Septic Pulmonary Embolism

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Introduction :

Ovarian hyper stimulation syndrome (OHSS) is an iatrogenic, serious complication of controlled ovarian hyper stimulation, usually self-limited, but occasionally life threatening. In its severe form patients may present with pleural effusion.

Case Description:

35 years old nulliparous female presented to emergency room with complaints of shortness of breath and chest pain. Pt was being treated for infertility, recently had ovarian stimulation with gonadotropins followed by embryo transfer 2 days ago. She denied nausea, vomiting, abdominal pain or distension. On examination she was afebrile, tachycardic and hypoxic. Initial blood work shows mild leukocytosis of 14.4, hemoglobin 15.7, elevated hematocrit of 48.3 and elevated D-Dimer of 4226. Imaging studies showed large right and small left pleural effusion. Pulmonary embolism was excluded by CTPA, vascular study was negative for venous thrombosis. For worsening dyspnea ultra-sonogram guided right sided thoracentesis was done. Pleural fluid was exudative in nature with fluid protein of 4.5 gm/dl. Pelvic sonogram shows bilateral enlarged ovaries.

She received IV fluid to prevent hemoconcentration, subcutaneous heparin to prevent thrombotic complications. She improved clinically with less dyspnea, chest X-Ray shows improvement, later on discharged home after 3 days.

Discussion:

OHSS occurs when ovaries are hyperstimulated and enlarged from fertility treatments or rarely from mutations in the FSH receptor. Pathogenesis of OHSS is not fully understood, but increased capillary permeability and loss of fluid into the third space is its main feature. A predominant role of vascular endothelial growth factor and other vasoactive substances has been suggested. Women at higher risk include: younger age, polycystic ovaries, low BMI, rapidly rising serum estradiol level, and an elevated peak estradiol level. Clinically OHSS is classified into three forms. In mild forms the ovaries are enlarged with symptoms of nausea, vomiting, not feeling well. In moderate forms there is additional accumulation of ascites with mild abdominal distension. In severe form it may present with hemoconcentration, thrombosis, oliguria, pleural effusion, rarely pericardial effusion, and respiratory distress

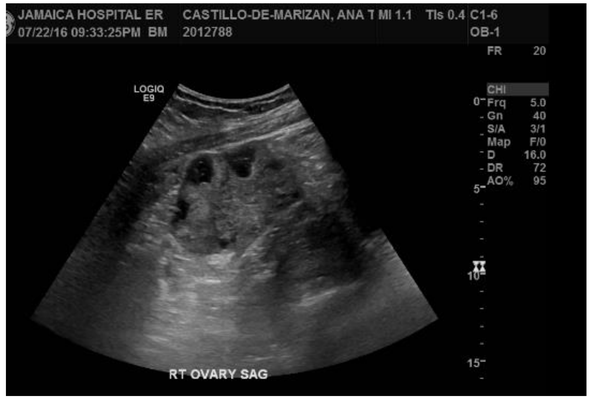

Fig.1.USG showing enlarged ovary .

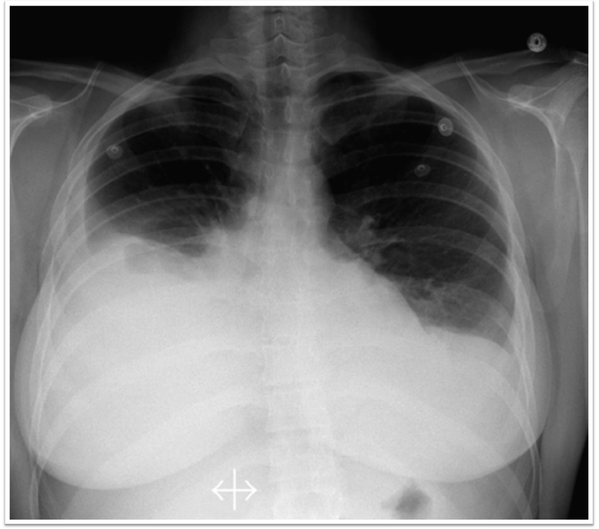

Fig.2. CXR showing pleural effusion .

Rarely may lead to life-threatening complications like thromboembolic events and even death. Thoracentesis is safe and efficient for symptomatic pleural effusion in OHSS and may be repeated. As number of fertility treatment is increasing physicians should be aware of this very real and perhaps underestimated complication.

Ref:

Royal College of Obstetricians and Gynaecologists, “The management of ovarian hyperstimulation syndrome,” Green Top Guideline 5, Royal College of Obstetricians and Gynaecologists, 2006.