

# Post laparoscopic massive vulvar edema in woman with ovarian hyperstimulation syndrome

Negjyp Sopa, Mette Toftager

## CASE REPORT

A 39-year-old female gravid 2 para 0 referred for in vitro fertilization (IVF) due to previous ectopic pregnancy followed by salpingectomy, presented with acute abdominal pain after IVF treatment. She was treated with a standardized GnRH antagonist protocol, where she received 150 IU of human menopausal gonadotropin (hMG, Menopur®) daily for ten days. Choriogonadotropin (hCG Ovitrelle®) 6500 IU was given to induce ovulation. Twenty-two oocytes were collected from 25 follicles. At day-5 one blastocyst was transferred and pregnancy was achieved. Luteal support was given using vaginal progesterone tablets (Lutinus®) 100 mg three times daily for two weeks. The patient was admitted to hospital eighteen days after oocyte retrieval with acute lower abdominal pain and symptoms of moderate ovarian hyperstimulation syndrome (OHSS). Adnexal torsion was suspected, thus an emergency laparoscopy was performed. Adnexal torsion was not confirmed and the pain was attributed to OHSS. Two days postoperatively, the patient gradually developed a massive vulva edema (Figure 1).

Blood tests showed that p-albumin had decreased significantly to 18 g/L (normal range 36–48 g/L). The patient was treated with infusion of human albumin “CSL Behring” solution for infusion 20% 100 ml daily for one week until p-albumin was within the normal

range. Vulva was completely normalized after one week (Figure 2) and an ultrasound scan showed a normal intrauterine singleton pregnancy in gestational week seven.

## DISCUSSION

Very few publications on ovarian hyperstimulation syndrome involve development of vulva edema. The first case describing OHSS and vulva edema was published in 1995 [1]. The suggested etiology was oncotic and hydrostatic pressure imbalance. Multiple treatments with local use of cortisone, antibiotic ointments and ice packs were initiated in combination with OHSS therapy. Another publication including nine cases of severe OHSS were paracentesis was indicated found presentation of unilateral vulva edema when the paracentesis was performed in the lower abdomen [2]. The location of



Figure 1: Massive vulva edema associated with ovarian hyperstimulation syndrome.

Negjyp Sopa<sup>1</sup>, Mette Toftager<sup>1</sup>

**Affiliation:** <sup>1</sup>MD, The Fertility Clinic, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark.

**Corresponding Author:** Negjyp Sopa, MD, The Fertility Clinic, section 4071, Rigshospitalet, Copenhagen University Hospital, Blegdamsvej 9, DK-2100 Copenhagen, Denmark; Email: negjyp.sopa@regionh.dk

Received: 13 November 2017

Accepted: 27 November 2017

Published: 01 January 2018



Figure 2: Vulva was normalized after a week.

the edema corresponded to the puncture side and was developed within less than 24 hours. This may be due to a fistula between the peritoneum and subcutaneous tissue caused by the paracentesis together with the increased intraabdominal pressure due to ascites, which forces the passage of fluid to the labia presenting as edema. Patients in whom were paracentesis was performed in the abdominal hypochondriac regions, and no development of vulva edema were seen. The same process is described in another case [3], and also in cirrhotic men and women suffering from scrotal and vulva edema, respectively, after paracentesis [4, 5]. Presentation of bilateral vulvar edema after transvaginal paracentesis has been described [6]. Vulva edema after laparoscopic surgery has been described previously, however, without association to IVF treatment and development of OHSS [7–9]. The pathogenesis of post laparoscopic vulvar edema is still unclear. In case, the patient developed OHSS laparoscopic surgery after IVF treatment after which. We believe that the rapid decrease of p-albumin to levels significant below normal range has contributed to the development of the vulva edema, with diminished oncotic pressure. One could further speculate that placement of the laparoscopic ports may have create a fistula where ascites fluid is forced into the interstitial space of the vulva area. The patient was successfully treated with infusion of human albumin.

## CONCLUSION

We present a rare manifestation of ovarian hyperstimulation syndrome and massive vulvar edema, after laparoscopic surgery. Infusion of human albumin

normalized the vulva completely and gives the impression that hypoalbuminemia is important for the development of vulva edema.

## REFERENCES

1. Coccia ME, Bracco GL, Cattaneo A, Scarselli G. Massive vulvar edema in ovarian hyperstimulation syndrome: A case report. *J Reprod Med* 1995 Sep;40(9):659–60.
2. Luxman D, Cohen JR, Gordon D, Wolman I, Wolf Y, David MP. Unilateral vulvar edema associated with paracentesis in patients with severe ovarian hyperstimulation syndrome: A report of nine cases. *J Reprod Med* 1996 Oct;41(10):771–4.
3. Vavilis D, Tzitzimikas S, Agorastos T, Loufopoulos A, Tsalikis T, Bontis JN. Postparacentesis bilateral massive vulvar edema in a patient with severe ovarian hyperstimulation syndrome. *Fertil Steril* 2002 Apr;77(4):841–3.
4. Conn HO. Sudden scrotal edema in cirrhosis: A postparacentesis syndrome. *Ann Intern Med* 1971 Jun;74(6):943–5.
5. Marks JW, Weil F. Conn's sudden labial edema. *Ann Intern Med* 1971 Nov;75(5):810.
6. Bhairavi S, Rajendran J, Dash S, Dash S. Postparacentesis vulvar edema in ovarian hyper stimulation syndrome. *Int J Reprod Contracept Obstet Gynecol* 2016 Nov;5(11):4064–6.
7. Trout SW, Kemmann E. Vulvar edema as a complication of laparoscopic surgery. *J Am Assoc Gynecol Laparosc* 1996 Nov;4(1):81–3.
8. Guven S, Guven ES, Ayhan A. Vulvar edema as a rare complication of laparoscopy. *J Am Assoc Gynecol Laparosc* 2004 Aug;11(3):429–32.
9. Pados G, Vavilis D, Pantazis K, Agorastos T, Bontis JN. Unilateral vulvar edema after operative laparoscopy: A case report and literature review. *Fertil Steril* 2005 Feb;83(2):471–3.

\*\*\*\*\*

**Keywords:** In vitro fertilization, Massive vulvar edema, Ovarian hyperstimulation syndrome

### How to cite this article

Sopa N, Toftager M. Post laparoscopic massive vulvar edema in woman with ovarian hyperstimulation syndrome. *Int J Case Rep Images* 2018;9(1):66–68.

Article ID: Z01201801CL10140NP

\*\*\*\*\*

doi: 10.5348/ijcri-201802-CL-10140

\*\*\*\*\*

### **Author Contributions**

Negjyp Sopa – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Mette Toftager – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

### **Guarantor of Submission**

The corresponding author is the guarantor of submission.

### **Source of Support**

None

### **Consent Statement**

Written informed consent was obtained from the patient for publication of this case report.

### **Conflict of Interest**

Authors declare no conflict of interest.

### **Copyright**

© 2018 Negjyp Sopa et al. This article is distributed under the terms of Creative Commons Attribution License which permits unrestricted use, distribution and reproduction in any medium provided the original author(s) and original publisher are properly credited. Please see the copyright policy on the journal website for more information.

Access full text article on  
other devices



Access PDF of article on  
other devices

