Received: 3 October 2022 | Revised: 23 January 2023 | Accepted: 11 March 2023

DOI: 10.1002/ccr3.7160

CASE REPORT

Clinical Case Reports Open Access WILEY

Disseminated ectopic pregnancy after salpingotomy in a 30-year-old patient

D. M. Matlac[1] | **J. Ribbat-Idel**[2] | **K. Stroschein**[1] | **S. Perner**[2] | **A. Rody**[1] | **D. Offermann**[1]

[1]Department of Obstetrics and Gynecology, Universitätsklinikum Schleswig-Holstein, Lübeck, Germany

[2]Department of Pathology, Universitätsklinikum Schleswig-Holstein, Lübeck, Germany

Correspondence
D. M. Matlac, Department of Obstetrics and Gynecology, Universitätsklinikum Schleswig-Holstein, Lübeck, Germany.
Email: dietermatlac@outlook.com

Abstract

We present a case of a 30-year old patient who devoloped a disseminated abdominal pregnancy after receiving a salpingotomy due to a prior tubal pregnancy.

KEYWORDS

ectopic pregnancy, importance of ß-HCG-follow-ups, relapse of ectopic pregnancy

1 | INTRODUCTION

The ectopic pregnancy is one of the most relevant differential diagnoses of abdominal pain for women of childbearing age. Here a case of ectopic pregnancy is presented in which a patient developed a disseminated ectopic pregnancy with pregnancy tissue spread over her pelvis after a prior salpingotomy of a tubal pregnancy. The patient presented again with abdominal pain and persistent ß-HCG levels in follow-up examinations after the first operation. The disseminated ectopic pregnancy was electrocoagulation without any complications. This case rises the question if this outcome could have been prevented if a primary salpingectomy would have been performed and highlights the importance of persistent follow-up of ß-HCG-levels after treatment of an ectopic pregnancy.

An ectopic pregnancy is a pregnancy outside of the uterine cavity. It occurs in 1.2%–1.4% of all pregnancies.[1] Ectopic pregnancies are among the most important differential diagnosis regarding abdominal pain in women of childbearing age. As they bear the risk of rupture leading to internal bleeding a nonrecognition of an ectopic pregnancy may have lethal consequences. Approximately, 9.5% of all pregnancy-related deaths are caused by ectopic pregnancies.[1]

Up to 93% of all ectopic pregnancies are located in the fallopian tube. Abdominal ectopic pregnancies are the rarest type and represent in 1.3% of all ectopic pregnancies.[2]

Regarding tubal pregnancy, the choice of the right surgical method is still part of the discussion. In principle, the clinician has to weigh the risk of relapse against the risk of harming the fertility of the patient when choosing the right method.[3]

We present a case in which a woman who undergone a salpingotomy after a tubal pregnancy developed a disseminated abdominal ectopic pregnancy.

2 | CASE

The patient was sent to our clinic by her gynecologist to confirm an ectopic pregnancy. She had presented herself there due to a positive pregnancy test.

At that day, the patient was in the eighth week of gestation. It was her first pregnancy. She did not have any operations or other diseases in her medical history. An intrauterine pregnancy could not be detected. We confirmed the diagnosis of a tubal pregnancy at the right fallopian tube (Figure 1). In addition, the patient had blood ß-HCG levels of 1635 IU/L.

We performed a salpingotomy and sent the material to histological examination where pregnancy-associated cells were confirmed. The patient felt well after the operation and initially, ß-HCG levels were dropping adequately. She could be discharged a few days after (Figure 2 displays the course of ß-HCG-levels of this case).

Roughly a month later, the patient presented herself again at our clinic. This time she was symptomatic with abdominal pain. ß-HCG levels had increased in the follow-ups of her gynecologist. In the transvaginal ultrasound, an echoic mass was seen in the projection of the right fallopian tube. We concluded that there was persistent gravidity at that specific tube and indicated a laparoscopy.

In the operation, both fallopian tubes were normal with emphasis on the right former pathological tube (Figure 3). There were tumorous formations spread on the surface of the uterus (Figure 4). They were removed electronically and samples were taken for histological examination. The removed tissue consisted of pregnancy-associated cells (Figure 5).

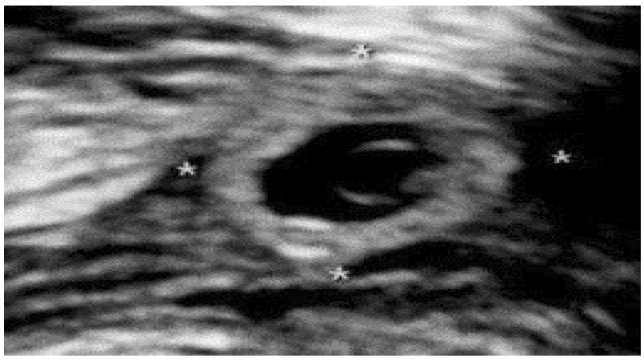

FIGURE 1 Sonographic image of the tubal pregnancy at the right fallopian tube.

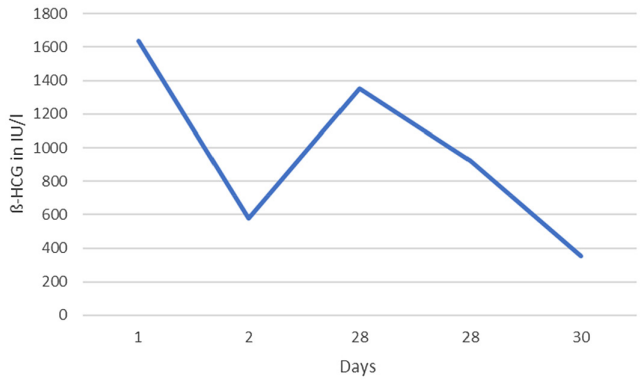

FIGURE 2 Course of ß-HCG-levels, day 1 being the day of initial presentation of the patient in our clinic.

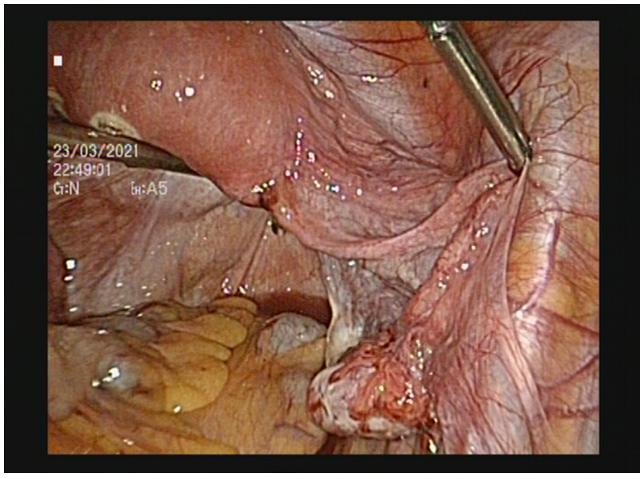

FIGURE 3 Unpathological right fallopian tube during revision operation.

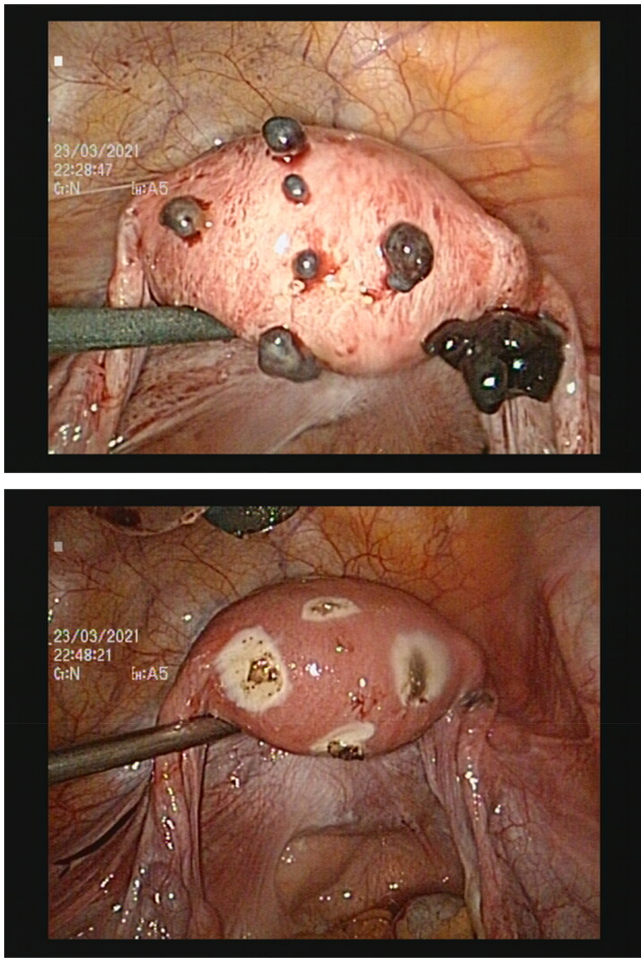

FIGURE 4 Tumorous formations spread on the surface of the uterus before and after removal.

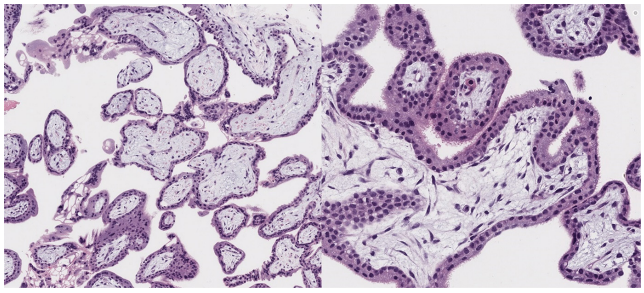

FIGURE 5 Histologic examination revealed placenta tissue consisting of immature villi with trophoblastic giant cells (H&E, original magnification 10× (left) and 20× (right).).

The patient was well after the operation. ß-HCG levels fell adequately during the follow-ups until reaching normal levels.

3 | DISCUSSION

This is the first case published where an initial salpingotomy may have led to a spreading of pregnancy-associated cells in the lower abdomen.

A higher rate of relapse after salpingotomy compared with salpingectomy is well known.[4] However, in our clinic, it is common to perform a salpingotomy in every first presentation of a tubal pregnancy prioritizing the fertility outcome of the patient. If a relapse occurs we do perform a salpingectomy. This was also planned in this case. In Germany, it is within the responsibility of the physician to set the procedural method as there is currently no guideline regarding ectopic pregnancy available. Such a guideline is being written at the moment and will not be published before January 2023. The Royal College of Obstetricians and Gynecologists guideline published in 2016 recommends performing a primary salpingectomy if the patient does not have any risk factors concerning fertility such as previous tubal damage due to pelvic infection or prior surgery, smoking or in vitro fertilization.[5] A prospective study is quoted where patients with previous salpingectomy have been compared to patients with previous salpingotomy. If patients did not have a risk factor regarding their fertility the fertility outcome had been the same for both groups. If such a risk factor did exist the fertility outcome in the salpingotomy was better.[6]

Internationally, the question of the better operation technique is still of high interest. In a recent meta-analysis, the outcome of patients regarding the relapse risk and future fertility was analyzed. Here data derived from cohort studies did suggest a decrease in fertility after salpingectomy in patients without risk factors.[3] Regarding patients with risk factors, the results were similar to the aforementioned study, which was indeed included in the meta-analysis.[3,6]

Would a primary salpingectomy have prevented the course of events? A relapse is a common risk of salpingotomy,[4] although this time it has been in an atypical location. This patient did not have any other risk factors according to the guidelines of the Royal College of Obstetricians and Gynecologists. Therefore, a primary salpingectomy could have been considered which indeed would have lessened the risk of a relapse.

4 | CONCLUSION

In patients, without risk factors regarding their fertility, a salpingotomy is not the first choice per se. Risks and benefits based on current data have to be discussed with the patient. This case highlights the importance of ß-HCG follow-ups to facilitate the early detection of relapses after treatment of ectopic pregnancies.

AUTHOR CONTRIBUTION

Dieter Michael Matlac: Visualization; writing – original draft; writing – review and editing.

FUNDING INFORMATION

None.

ACKNOWLEDGMENT

Open Access funding enabled and organized by Projekt DEAL.

CONFLICT OF INTEREST STATEMENT

No author has any conflict of interest.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

CONSENT

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy.

ORCID

D. M. Matlac https://orcid.org/0000-0002-4328-992X

REFERENCES

1. Rana P, Kazmi I, Singh R, et al. Ectopic pregnancy: a review. *Arch Gynecol Obstet*. 2013;288(4):747-757.
2. Bouyer J. Sites of ectopic pregnancy: a 10 year population-based study of 1800 cases. *Human Reprod*. 2002;17(12):3224-3230.
3. Ozcan MCH, Wilson JR, Frishman GN. A systematic review and meta-analysis of surgical treatment of ectopic pregnancy with salpingectomy versus salpingostomy. *J Minim Invasive Gynecol*. 2021;28(3):656-667.

4. Mol F, van Mello NM, Strandell A, et al. Salpingotomy versus salpingectomy in women with tubal pregnancy (ESEP study): an open-label, multicentre, randomised controlled trial. *Lancet*. 2014;383(9927):1483-1489.
5. Diagnosis and management of ectopic pregnancy: green-top guideline no. 21. *BJOG: Int J Obstet Gy*. 2016;123(13):e15-e55.
6. Becker S, Solomayer E, Hornung R, et al. Optimal treatment for patients with ectopic pregnancies and a history of fertility-reducing factors. *Arch Gynecol Obstet*. 2011;283(1):41-45.

How to cite this article: Matlac DM, Ribbat-Idel J, Stroschein K, Perner S, Rody A, Offermann D. Disseminated ectopic pregnancy after salpingotomy in a 30-year-old patient. *Clin Case Rep*. 2023;11:e7160. doi:10.1002/ccr3.7160