Translated from German to English - www.onlinedoctranslator.com

Thieme

Accidental use of Mifegyne in the 3rd trimester

Management of accidental ingestion of Mifegyne through timely antagonism with high-dose Utro-gest and activated charcoal.

Mifepristone, approved since 1999, is a drug used for medical abortion. Mifepristone is a competitive progesterone and glucorticoid receptor antagonist. Progesterone serves to maintain the pregnancy - by inhibiting the hormone, this effect is canceled and an abortion is provoked. Mifepristone inhibits the effects of progesterone by having a 5 times higher affinity for the receptors of this hormone, but does not have any effect on the receptor. Absorption from the gastrointestinal tract occurs almost completely after oral administration. The drug has a high plasma protein binding. Metabolization occurs mainly hepatically, so that excretion takes place via the faeces.

Medical abortions are usually carried out using a progesterone receptor antagonist (mifepristone) with subsequent induction of labor (prosta-glandin). The advantage of progesterone receptor antagonists over prostaglandins is that they open the cervix, simultaneously detach the endometrium and sensitize the myometrium to prostaglandins. In most cases, after taking mifepristone, the abortion can no longer be stopped. In 60-80% of cases, pregnancy termination occurs even without subsequent administration of a prostaglandin derivative! [1, 2, 3, 4, 5]

Case report

The presentation of a 30-year-old II Gravida I Para (Z. after spontaneous partus 7 years ago, mother's blood group: A Rh-positive) followed as an emergency in the calculated 28 + 5 week of pregnancy (week of pregnancy) approx. 1 hour after accidental ingestion of 600 mg Mifegyne po in a gynecologist's practice. Ultimately, it was not possible to clarify how the medication was “accidentally” taken.

On admission there was a sonographically timely development of a vital fetus with an estimated weight of 1247 g, a posterior placenta without evidence of premature placental abruption or retroplacental hematoma, an unremarkable feto-maternal Doppler and an unremarkable laboratory. First, the patient received 60 g of activated charcoal (1 g per kg of body weight with a maternal weight of 58 kg at the time of admission), and we induced lung maturity by administering 2 × 12 mg of celastane IM within 24 h.

An analysis for Mifegyne in the maternal serum was carried out using liquid chromotography-mass spectrometric detection by colleagues from the Center for Preventive Doping Research at the German Sport University in Cologne. These were able to detect mifeprostone in a concentration of 500 ng/ml (corresponding to 25% of the expected concentration).

With an estimated residence time of up to 90 hours (almost 4 days) in the blood, the patient was continuously monitored by cardiotocography and intermittent Doppler sonography in the delivery room over this period. For antagonism, she also received 3 × 200 mg Utrogest/day vaginally for 5 days. Vaginal spotting occurred on the 5th day after exposure. Sonography showed no evidence of retro-placental hematoma formation. The bleeding stopped over time and the patient was discharged after a total of 8 days. An outpatient re-presentation of the patient

The 32nd week of pregnancy showed no further abnormalities. Fortunately, the patient was admitted to hospital again at 39 + 2 weeks' gestation with premature rupture of the membranes and the start of contractions. There was an uncomplicated spontaneous birth of a healthy male newborn (weight:
3300 g, length: 52.0 cm, Head circumference:
34.0 cm, Apgar 9/10/10, umbilical cord pH value: 7.33, base excess: − 8.1). The post-partum histological examination showed a hypertrophic placenta (> 90th percentile according to Vogel et al. [6]) with individual infarcts up to 0.5 cm in diameter, without evidence of malignancy.

discussion

There are hardly any studies or publications in the literature that prove the success of antagonism with Utrogest. All describe a small group of patients and the intake in the 1st trimester. We are not aware of any cases of Mifegyne being taken in the third trimester. In the cases described, therapy with Utrogest vaginally led to the successful prolongation of the pregnancies until the expected date, so that, contrary to the recommendations of the various professional societies (American College of Obstetricians and Gynecologists, Royal College of Obstetricians and Gynecologists, Faculty of Sexual and Reproductive Healthcare), decided to treat the patient with high doses of progesterone. If this treatment is undertaken, it must be given with reservations as an off-label use [7, 8, 9].

Downloaded from: University of Massachusetts - Amherst. Protected by copyright.

CONCLUSION

Mifegyne must always be taken under the supervision of a gynecologist. In rare cases of accidental ingestion, the patient should be admitted to a perinatal center immediately - without any delay. The immediate administration of activated charcoal and the antagonization with high-dose Utrogest vaginally should be carried out under intensive monitoring of child and maternal parameters.

Conflict of interest

The authors declare that there is no conflict of interest.

Authors

Georgi Stefanov Kirov
Senior physician at the Clinic for Obstetrics and Prenatal Medicine, Perinatal Center Level 1, at the Jung Stilling Clinic in Siegen

Dr. med. Senem Elena Alsat-Krenz
Senior physician at the Clinic for Obstetrics and Prenatal Medicine, Perinatal Center Level 1, at the Jung Stilling Hospital Siegen

Janet Pester
Senior physician at the Clinic for Obstetrics and Prenatal Medicine, Perinatal Center Level 1, at the Jung Stilling Hospital Siegen

Dr. med. Ulrich Hennig
Lead OA in obstetrics at the Clinic for Obstetrics and Prenatal Medicine, Peri-natal Center Level 1, at the Jung Stilling Hospital in Siegen

Dr. med. Prisca Schneider
Senior physician at the Clinic for Anaesthesiology, Intensive Care and Emergency Medicine at the Jung Stilling Hospital in Siegen

Prof. Dr. med. Mario Thevis
Head of the Institute for Biochemistry and spokesman for the Center for Preventive Doping Research at the German Sport University in Cologne

Dr. med. Flutura Dede
Chief physician at the Clinic for Obstetrics and Prenatal Medicine, Perinatal Center Level 1, at the Jung Stilling Hospital in Siegen

Correspondence address

Georgi Stefanov Kirov
Clinic for obstetrics and prenatal medicine,
Perinatal Center Level 1, Diakonie Klinikum Young Stilling
Wichernstr. 40
57074 wins
Germany
georgi-stefanov.kirov@diakonie-sw.de

literature

[1] Hoopmann M, Hirneth J, Paulusschke-Fröhlich J et al. Influence of Mifepristone in Induction Time for Terminations in the Second and Third Trimester. Obstetrics Frauenheilkd 2014; 74: 350-354. doi:10.1055/s-0033-136 0361

[2] Grossmann D, Baba CF, Kaller S et al. Medica-tion Abortion With Pharmacist Dispensing of Mifepristone. Obstet Gynecol 2021; 137: 613-622

[3] Soon J, Rebić J, on behalf of the Contraception and Abortion Research Team (CART-GRAC). Guide for Dispensing Mifegymiso® (MIFEpristone/MISOprostol) for Medical Abortion. October 18, 2018 (version 8) . Accessed March 26, 2023 at: https://med-fom-cart-grac.sites.olt.ubc.ca/files/2020/03/Canadian_Medical_Abortion_Dispensing_Guide_V8_2018-10-18.pdf

[4] Swiss Society for Gynecology and Obstetrics. Expert letter No 65 (replaces No 15). Accessed on March 26, 2023 at: https://www.sggg.ch/fileadmin/user_upload/65_Medikamentoeser_Gestationabbruch_im_ersten_ Trimester.pdf

[5] Pharmacovigilance: Appendix 2 - Decision of the CMDh coordination group of January 24, 2018. July 17, 2018 . Accessed on March 26, 2023 at: https://www.bfarm.de/SiteGlobals/Forms/Suche/Servicesuche_formular.html?input_=468476>p=469344_list%253D2&resourceId=468548&submit.x=8&submit.y=11&templateQueryString=Mifepriston+&pageLocale=de

[6] Vogel M. Atlas of morphological placenta diagnosis. Berlin, Heidelberg: Springer Verlag; 1992.

[7] Creinin MD, Hou MY, Dalton L et al. Mifepristone Antagonization With Progesterone to Prevent Medical Abortion A Randomized Controlled Trial. Obstet Gynecol 2020; 135: 158-165

[8] Garratt D, Turner JV. Progesterone for preventing pregnancy termination after initiation of medical abortion with mifepristone. Eur J Contracept Reprod Health Care 2017; 22: 472-475. doi:10.1080/13625187.2017.1412424

[9] Delgado G, Condly SJ, Davenport M et al. A case series detailing the successful reversal of the effects of mifepristone using progester-one. Issues Law Med 2018; 33:21–31

bibliography

Birth anniversary Frauenheilk 2023; 83: 502–503 DOI 10.1055/a-2010-8490
ISSN 0016-5751

© 2023. Thieme. All rights reserved.

Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

Downloaded from: University of Massachusetts - Amherst. Protected by copyright.