Pessary and infertility

DR. S. HOSSEINI
SBMU
introduction

- Women who conceived with (IVF) or (ICSI) are more likely to experience adverse pregnancy outcomes than women who conceived naturally.

- Cervical insufficiency (CI) is one of the important causes of miscarriage and premature birth.
• Minimal amounts of published data are available regarding the rate of CI or its risk factors in women conceived by IVF/ICSI procedure

• Which Risk factors prone IVF patients to have cervical insufficiency?
Development and validation of a model for individualized prediction of cervical insufficiency risks in patients undergoing IVF/ICSI treatment

Yaoqiu Wu¹,², Xiaoyan Liang¹, Meihong Cai³, Linzhi Gao¹, Jie Lan² and Xing Yang¹*
• androgens were vital for cervical remodeling and for the promotion of cervical ripening by altering the collagenase activity and thus decreasing fibrillar collagen organization

• circulating increase of androgens throughout the course of pregnancy probably resulted in improper remodeling and advanced timing of cervical ripening
• non-tumour ovarian hyperandrogenism’ which includes Polycystic Ovarian Syndrome (PCOS) and hyperreactioluteinalis (HL)

• Patients with PCOS with hyperandrogenism were reported to have a higher prevalence of CI and an approximately 6% higher risk of preterm delivery compared to women without PCOS
• Another risk factor of the occurrence of CI is uterine length which was less than 45 mm.

• Routine checks for uterine size before Artificial Reproductive Therapy (ART) is beneficial for detecting patients at an increased risk

• more intrauterine surgical intervention during IVF/ICSI procedure
The association between operative hysteroscopy prior to assisted reproductive technology and cervical insufficiency in second trimester

Ali Gökçe¹ ∙ Yavuz Emre Şükür¹ ∙ Batuhan Özmen¹ ∙ Murat Sönmezêr¹ ∙ Bülent Berker¹ ∙ Ruşen Aytaç¹ ∙ Cem Somer Atabekoğlu¹

Received: 22 April 2020 / Accepted: 28 October 2020
© Springer-Verlag GmbH Germany, part of Springer Nature 2020
• Can cervical insufficiency be diagnosed before pregnancy?

• The diagnosis of cervical insufficiency cannot be made or excluded in nonpregnant women by any test

• Evaluation of cervical function with dilators, balloons, or hysteroscopy is not helpful

• Ultrasound, magnetic resonance imaging, or hysterosalpingography may reveal a uterine anomaly, which is a risk factor for cervical insufficiency, but is not diagnostic.
Cervical incompetence associated with congenital uterine malformations

- must think that incompetence of the cervix could be associated

- assess the status of the cervix for these patients by serial ultrasound examinations starting between 16 and 20 weeks of gestation
MONITORING

• Women with no prior second-trimester pregnancy loss/extremely preterm birth, but **risk factors** for cervical insufficiency:

• Cervical measurement by ultrasound can be done every second week between 16 and 26 weeks (repeat in 1 week if significant shortening or borderline length not yet meeting criteria for intervention)
Women with risk factors for but no prior spontaneous preterm birth

- vaginal progesterone

- Cerclage

- Pessary
Cervical pessary application was associated with a reduced risk of SPB at < 37 weeks and a higher risk of vaginal discharge
The use of a cervical pessary may prolong gestation in twin pregnancies in women with an extremely short cervix until viable gestational age.
Cervical pessary to prevent preterm birth in women with twin gestation and sonographic short cervix: a multicenter randomized controlled trial (PECEP-Twins)

Maria Goya, MD, PhD; Maria de la Calle, MD, PhD; Laia Pratcorona, MD; Carme Merced, MD; Carlota Rodó, MD; Begoña Muñoz, MD, PhD; Miquel Juan, MD; Ariana Serrano, MD; Elisa Llurba, MD, PhD; Teresa Higueras, MD, PhD; Elena Carreras, MD, PhD; Luis Cabero, MD, PhD, on behalf of the PECEP-Twins Trial Group
conclusion

• SPB <34 weeks of gestation was significantly less frequent in the pessary group than in the expectant management group (11/68 [16.2%] vs 26/66 [39.4%])

• Pessary use was associated with a significant reduction in the rate of birthweight <2500 g
Cervical pessary for preventing preterm birth in singletons and twin pregnancies: an update systematic review and meta-analysis

• Comparing with the expectant treatment, the effectiveness of cervical pessary for reducing the risk of PTB remains uncertain. Additional trials are warranted to further evaluate the effectiveness of cervical pessary