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Threatened and idiopathic recurrent miscarriage of Progrestogens hormone

Hisham Arab[1], Ahmed Jaber Alharbi[2], Ayman Oraif[3], Emad Sagr[4], Hana Al Madani[5], Hassan Abduljabbar[3], Osama Sadeak Bajouh[3], Yaser Faden6, Yasser Sabr[7]

[1]*Obstetrics and Gynecology Department, Dr. Arab Medical Center, Saudi Arabia*
[2]*Obstetrics and Gynecology Department, Ibinsina Medical Private College, Saudi Arabia*
[3]*Department of Obstetrics and Gynecology, King Abdulaziz University, Saudi Arabia*
[4]*Obstetrics and Gynecology Department, The International Medical Center, Saudi Arabia*
[5]*Obstetrics and Gynecology Department, Maternity Hospital, Saudi Arabia*
[6]*Department of Obstetrics and Gynecology, King Saud bin Abdulaziz University, Saudi Arabia*
[7]*Department of Obstetrics and Gynecology, King Khalid University Hospital, Saudi Arabia*

Abstract:

Progesterone is known to play an important role in maintaining pregnancy, especially in the early stages. Treatment of pregnant women at risk of idiopathic recurrent miscarriage or threatened is critical and complex. Therefore, a group of Saudi Arabia obstetricians and gynecologists gathered to update Saudi Arabia's 2014 Guidelines on Threatened and Recurrent miscarriage management. In preparation, a literature review was conducted to investigate the role of oral, vagina, and injection progestogens: It served as the basis for developing position statements to guide and correct practice across Saudi Arabia.

The Role of Hormones In Pregnancy:

Pregnancy is a hormone-mediated physiological condition that includes an increase in uterine blood flow and a decrease in uterine vascular tone. Progesterone and estrogen are two major hormones that remain elevated during pregnancy and play significant roles in causing anatomical adjustments in the uterus to create an environment conducive to fetal growth. Progesterone, rightly referred to as the "pregnancy hormone", is critical in maintaining pregnancy as it is involved in modulating maternal immune response, reducing uterine contraction, suppressing inflammatory response, improving uterine and the luteal stage and placental flow. Especially at the beginning of pregnancy, progesterone is responsible for preparing the endometrium for implantation and maintaining the gestational sac in the uterus.

Mechanisms Involved In Miscarriage:

Considerable progress has been made in the fields of cytogenetics and immunogenetics, which in turn has contributed to a better understanding of the mechanisms involved in abortion. The major mechanisms involved in premature miscarriage include chromosomal malformations or immunological, aberrations and immunogenic, endocrinological disorders, thrombophilic, sperm DNA fragmentation, uterine malformations, fetal selection failure, hCG polymorphisms and epigenetic causes. Fetal malformations were found to be responsible for 85% of early clinical abortions, with chromosomal abnormalities found in one of the spouses of 3-6% of couples who had recurrent abortion, which is ten times higher than the rate in the general population. Cytokine mediated responses are predicted to account for 40–60% of all cases of recurrent idiopathic spontaneous miscarriage. In recent years, it has become clear that immune tolerance of the fetus is the key to promoting fetal survival. It has been suggested that successful pregnancy is associated with regulating Th1- type actions and enhancing Th2 activity. Studies have reported that women with recurrent spontaneous abortions have elevated Th1 cytokines interleukin (IL) -2 and interferon-γ levels and lowered Th2 cytokineIL-10 levels, as considered by mononocular energy activation of peripheral blood cells. Progesterone supports the development of human T cells that producing Th2 cytokines and blocks Th1 cytokine production, indicating its role in pregnancy maintenance.

Materials And Methods:

A group of nine gynaecologists and obstetricians (ob/gyn), each with 10 years of clinical experience in Saudi Arabia, met on Nov15, 2018 and Jan 31, 2019 in Jeddah, Saudi Arabia, to update the current Saudi guidelines for threatened miscarriage and repeatedly, which is published in 2014. During the first session, the first guidelines were reviewed, updated with recent updates in clinical practice, and found actual gaps. Based on their assessment, the team of experts took two months to conduct a literature review on the role of vaginal, oral and injectable progestogens in early pregnancy and the treatment and prevention of threatened and idiopathic abortion. The experts also collected info on progestogens currently accepted by the Saudi Food and Drug Administration for the treatment of idiopathic and threatened miscarriage. A literature review was conducted using PubMed. Articles were briefly presented based on the title and then the abstracts were reviewed for relevance. Only articles published in English were reviewed. The expert team presented all the information gathered during the second session and used it as a basis for the position statements presented as part of this paper. This article will outline recommendations for using progestogens in a threatened and idiopathic abortion in Saudi Arabia. This document is intended for those local general practitioners, obstetricians (ob) / gynaecologists (gyn), and fertility specialists to manage these patients. However, physicians are required to manage patients based on the best available evidence and use their clinical judgment and should consider factors such as patient characteristics, medication profile, and available resources.

Terminology:

Currently, there is no consensus on the number of miscarriage needed to fulfill the re-current criteria; However, this group of Saudi experts agreed to follow the guidelines proposed by the European Society for Culture and Human Reproduction and Embryology, which defines recurrent abortion as "a loss of two or more pregnancies." "Biochemical loss" is defined as an abortion that occurs following a positive human chorionic gonadotropin (hCG) or increased β-hCG serum, but before an ultrasound or histologic examination. The term clinical miscarriage is used when histologic evidence or ultrasound examination has

confirmed that an intrauterine pregnancy exists. Clinical miscarriage may be divided into early and late. As stated in the expert panel, patients with biochemical and pregnancy ultrasound should be thoroughly investigated describing the clinical signs of threatened abortion before receiving a prescription for treatment.

Position Statements: Threatened Miscarriage:

1. For women who present a clinical diagnosis of threatened abortion, dydrogesterone may reduce the rate of abortion.

2. Oral dehydrogenase should be offered. Manufacturer Dosage: 40 mg loading, then 30 mg once daily until symptoms appear (bleeding). If the symptoms persist / recur, increase the dose by 10 mg three times a day. Maintain effective dosage for one week after the onset of symptoms and then gradually reduce the dose.

Recurrent Miscarriage: 1.Thorough investigations are warranted to rule out other causes of abortion. After diarrhoea, an idiopathic recurrent abortion diagnosis is confirmed.

2. For women presenting a clinical diagnosis of idiopathic recurrence (after having undergone two or more), there is a decrease in the incidence of abortion with the use of dehydrogestrone.

3. Dydrogesterone should be given as early as possible, in pregnancy diagnosis or in the luteal phase, in stimulating cycles.

4. Oral dehydrogenase should be offered. Manufacturer Dosage: 10-20 mg daily, up to the 20th week of pregnancy. It is sensible to start treatment before conception.