

# An Unexpected Pregnancy in a 22-Year-Old Woman with History of Premature Ovarian Failure: A Case Report

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## Abstract

**Introduction:** Premature Ovarian Failure (POF) that leads to secondary amenorrhea is caused by early depletion of ovarian follicles. Therapeutic methods have been described for treating infertility in POF but even with these therapies the probability of pregnancy remains so low. However, some spontaneous gestations are reported in these patients.

**Case presentation:** In this report, we describe a young woman with diagnosed POF from two years earlier who referred to our emergency department with the possibility of acute appendicitis. Her chief complaint was periodic abdominal pain that had been started 4 hours before presenting to emergency room. During her staying in the emergency room for further investigations, the patient delivered a normal baby without even being aware of pregnancy throughout this period. The neonate was term and male. The Apgar score was 7 in the first minute after birth which rapidly improve to 10 in tenth minute after providing immediate suction, repositioning and stimulation the neonate. More evaluations of child didn't show any abnormality in child or a significant morbidity in both mother and child.

**Discussion:** POF is a condition that leads to secondary amenorrhea in women younger than 40 years. In this case, the patient didn't use any contraception due to POF diagnosis. It is important to consider the low possibility of getting pregnant, especially in patients who don't desire pregnancy. The mechanisms of spontaneous pregnancy in POF and attributing factors in these mechanisms are issues that need further investigations.

**Keywords:** Premature ovarian failure; Emergency department; Pregnancy

## Introduction

Premature ovarian failure (POF) is one of the causes of secondary amenorrhea in women younger than 40 years. It affects approximately 1% of women <40 years [1,2]. Beside hormonal deficiencies, infertility is a major problem in patients diagnosed with POF and the probability of pregnancy is low even with therapeutic interventions [3]. In this case report, we describe a young woman with POF, presented to the emergency department with acute abdominal pain and made a management challenge in emergency room.

## Case Presentation

A 22-year-old woman presented to our emergency department with the chief complaint of abdominal pain. The patient was referred from another medical center for an abdominal ultrasonography with a probable diagnosis of appendicitis. The pain had been started four hours earlier, and it was mostly in lower parts of her abdomen, radiating to the pelvic region. It was intermittent and very severe. The pain was not related to positioning or eating. She didn't have nausea, vomiting or anorexia. Her other symptoms were urinary frequency and abdominal distention and weight gain in recent months, for which she hadn't sought any medical care. She was not on any medications. Her past medical history included premature ovarian failure since two years earlier, so she had not experienced any menstruation from 3 years ago. Her obstetric history included one natural vaginal delivery with a normal term child three years earlier.

Her vital signs included a blood pressure of 110/65, heart rate of 104, and respiratory rate of 18 and body temperature of 36.8°C. Her lungs were clear to auscultation. Her heart examination was normal without any gallop or mummer. In abdominal examination, she had a distended abdomen with mild generalized tenderness. It was dull on percussion. She didn't have any striae or abnormal coetaneous findings.

While we were obtaining history and performing physical examination, the patient suddenly started a vaginal delivery and immediately transferred to the CPR for aiding in the delivery, but the

patient had delivered a normal term and male neonate naturally. The baby was taken out of her mother's covering. The umbilical cord was clamped. Initial steps for stabilization (providing warmth, positioning, clearing airway, drying the neonate and repositioning) were performed. The neonatal Apgar score was 7 in the first minute, 8 in fifth minute and 10 in the tenth minute. The neonate didn't suffer from any respiratory distress and didn't need any resuscitation. The placenta was delivered after 30 minutes without any problem. The patient was in good condition, and her vital signs were stable.

After the child delivery, with further questioning it was revealed that the patient hadn't been using any contraception after being diagnosed with premature ovarian failure two years earlier, and she didn't even become suspicious about being pregnant. She contributed her abdominal distention and weight gain to fattiness.

The further surveys showed no abnormality in the neonate and morbidity in both mother and baby after the birth. They also had been followed up for six months about any complication of this unexpected delivery. No complication was reported and baby's growing was normally.

## Discussion

Premature ovarian failure (POF) is a condition that leads to secondary amenorrhea in women younger than 40 years. The condition is the result of premature follicular depletion and leads to infertility.

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This disorder affects approximately 1 percent of women <40 years [1,2]. There are some factors that have been described for the etiology of this disorder. Genetic factors, Toxins, infections, drugs and autoimmunity are attributed to the development of POF. However, in most of the cases, the real etiology is unknown [1]. Low levels of gonadal hormones and high levels of gonadotropins are seen in these patients. FSH levels more than 30 U/L is indicative of POF [1,2]. Once the diagnosis is made, there are some challenges that the patient encounters. Infertility is a major problem in these patients, and it is irreversible in most cases [3]. There are some therapeutic methods that have been described for treating infertility but even with these treatments pregnancy rate is very low and oocyte donation is the only possible method in most cases [3]. However, there are some reports that have described spontaneous pregnancies without receiving any treatment in patients with POF [4-6]. In one study, it is concluded that positive family history for POF, secondary amenorrhea, presence of follicles at ultrasound and inhibin B and estradiol levels are significantly predictive of resumption of ovarian function.(5)The outcome of spontaneous pregnancies is another issue and among the reported cases miscarriage, fetus malformations and normal neonates are all described [4-6].

In our case report, the patient was diagnosed with POF without any known etiology, and she was told that she didn't have any chance of pregnancy, so she didn't use any contraception. It is important to

consider the low possibility of getting pregnant, especially in patients who don't desire pregnancy. As in this case, the patient didn't even become suspicious about being pregnant during those months. Although this patient strangely delivered a normal term baby without any complications but early diagnosis of pregnancy and performing screening programs is crucial, particularly in this patient population. The mechanisms of spontaneous pregnancy in POF and attributing factors in these mechanisms are issues that need further investigations.

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