

Psychosocial Impact of Recurrent Pregnancy Loss in a G7POA6 Patient with Hyperthyroidism: A Case Report

Leonardus Yogie Ricardo^{1*}, Hartati^{1*}, Kemala Andini Prizara^{1*}, Sisca Yulistiana^{1*}

¹Department of Obstetrics and Gynecology, Universitas Sriwijaya, Palembang, Indonesia

*E-mail : leonardusliano@gmail.com

Abstract

Recurrent pregnancy loss presents significant physical and psychosocial challenges, especially when complicated by comorbidities such as Graves' disease and polycystic ovary syndrome (PCO) with suspected insulin resistance. This case involves a G7POA6 woman at 21 weeks' gestation with euthyroid-phase Graves' disease and PCO, expressing a desire for tubectomy if another miscarriage occurs. She has no living children and shows psychosocial distress related to previous losses. Termination at 21 weeks carries risks of hemorrhage, infection, and endocrine instability, particularly in patients with autoimmune and metabolic disorders. Continuing the pregnancy, however, also entails potential complications including endocrine imbalance, fetal growth restriction, preterm delivery, or intrauterine death. Psychologically, repeated miscarriage can provoke anxiety, guilt, and depressive symptoms, often influencing irreversible decisions like sterilization without full consideration of alternatives. Given her emotional vulnerability and absence of living offspring, permanent contraception should be deferred. A multidisciplinary approach—integrating obstetrics, internal medicine, psychiatry, and psychology—is essential to optimize maternal health and guide ethical decision-making. Continuing the pregnancy with close medical and psychological monitoring is preferable to termination, as both options carry comparable risks, but continuation preserves the possibility of a living child. Antenatal psychological support and comprehensive contraceptive counseling should be provided to help the patient make well-informed, emotionally balanced decisions regarding future fertility.

Keywords: Recurrent Pregnancy Loss, High-Risk Pregnancy, Graves' Disease, Psychosocial Impact, Tubectomy

1. Introduction

Recurrent pregnancy loss (RPL) presents a major clinical and psychosocial challenge, particularly in patients with a history of multiple miscarriages. Recurrent miscarriage is defined as the loss of two or more consecutive pregnancies, and affects approximately 1–5% of women of reproductive age, with the majority of cases remaining unexplained even after extensive evaluation. Women with six or more previous pregnancy losses, as in this case, represent a highly complex subgroup with elevated risks for both maternal psychological distress and adverse obstetric outcomes. Bad Obstetric History (BOH) significantly increases the risk of anxiety, depression, and diminished self-efficacy in pregnancy, contributing to heightened vigilance and fear of loss during subsequent gestations.¹

Polycystic Ovary (PCO) is one of the most frequently identified endocrine disorders associated with recurrent miscarriage. It affects 6–15% of women of reproductive age globally, and insulin resistance is reported in up to 50–70% of patients with PCO, even in those with normal body weight. Insulin resistance not only contributes to subfertility and hyperandrogenism but also increases the risk of early pregnancy loss by affecting endometrial receptivity, implantation, and placental development. Additionally, hyperinsulinemia has been linked to a two- to three-fold increase in miscarriage rates among affected women.²

Thyroid dysfunction is another common comorbidity associated with adverse pregnancy outcomes. Graves' disease, although present in less than 0.5% of

pregnancies, poses a significant risk when inadequately controlled. Autoimmune thyroid disease has been associated with miscarriage rates up to 2–4 times higher compared to the general obstetric population. Even in the euthyroid phase, the presence of thyroid autoantibodies may predispose patients to pregnancy loss through immune dysregulation, placental dysfunction, and hormonal imbalance. Thyroid dysfunction is also known to interact with insulin resistance and PCO, creating a multifactorial pathway contributing to miscarriage risk.³

The psychosocial burden in women with BOH and endocrine comorbidities is substantial. Studies indicate that up to 50% of women with recurrent miscarriage experience clinically significant anxiety, while 30–40% report depressive symptoms. Feelings of guilt, hopelessness, fear of future loss, marital strain, and social withdrawal are frequently reported. The psychological impact tends to intensify with each consecutive loss, particularly in nulliparous women who have never achieved a viable pregnancy despite multiple conceptions. Cultural expectations, family pressure, and internalized stigma further exacerbate emotional distress, especially in populations where motherhood is highly valued.^{4,5}

To the best of our knowledge, this is the first reported case in Indonesia integrating medical, psychosocial, and ethical perspectives in managing a gravida seven (G7P0A6) patient with concurrent Graves' disease in the euthyroid phase and suspected insulin resistance due to polycystic ovary syndrome (PCO). Unlike previous reports that discussed these factors separately, this case highlights their combined impact on reproductive decision-making. Written informed consent was obtained from the patient for publication of this case report. The objective of this report is to describe the multidisciplinary approach required to

address the medical, psychosocial, and ethical challenges in managing a high-risk pregnancy with such complex comorbidities.

2. Case Report

On August 12, 2025, a 37-year-old woman, gravida 7 para 0 abortus 6 (G7P0A6), at 21 weeks of gestation, presented to the fetomaternal outpatient clinic for routine follow-up due to a history of recurrent pregnancy loss and comorbid endocrine disorders. The patient reported no abdominal cramps, vaginal bleeding, discharge, or watery leakage. Fetal movements were perceived, and there were no urinary or bowel complaints. She denied shortness of breath, palpitations, or weight loss but reported mild nausea without vomiting. There was no history of abdominal trauma, use of traditional medications, abdominal massage, or recent sexual activity.

The patient had been married for seven years and had experienced six previous pregnancy losses. Her obstetric history included four spontaneous miscarriages between 3–6 weeks' gestation from 2018 to 2020 without curettage, followed by two incomplete abortions at 8 weeks (2022) and 11 weeks (2023), both requiring uterine curettage at private clinics. She had never carried a pregnancy beyond the first trimester prior to the current gestation.

Her medical history was notable for Graves' disease diagnosed in November 2023 based on proptosis ocular dextra and enlargement of thyroid glands bilaterally, high free T4, low TSH, and high Anti-TPO. She denied hypertension, diabetes mellitus, asthma, or congenital disorders in the family. Socioeconomic status was adequate, and she had completed senior high school education. There was no history of previous surgery.

At the time of presentation, she was on thiamazole 5 mg once daily, folic acid 3×1 mg, and calcium (Callos) 3×500 mg. Prior

medications included propylthiouracil, which had been discontinued in June 2025. For antenatal supplementation, she had been prescribed Aspilet 160 mg, vitamin D 5000 IU, calcium 4×500 mg, microgest 200 mg, and folic acid.

On examination, she appeared healthy and was fully conscious. Vital signs were stable, with blood pressure of 107/70 mmHg, pulse rate of 77 beats per minute, respiratory rate of 20 breaths per minute, temperature of 36.7°C, and oxygen saturation of 99% on room air. Her weight was 57 kg, an increase from the pre-pregnancy weight of 53 kg, with a height of 149 cm and a BMI of 23.9 kg/m² (overweight). Mid-upper arm circumference was 26 cm.

Physical examination revealed no conjunctival pallor or scleral icterus. The thyroid gland was not enlarged, and there were no signs of exophthalmos or tremor. Cardiovascular and respiratory examinations were unremarkable, with normal vesicular breath sounds and no murmurs or abnormal heart sounds. The abdomen was soft and non-

tender, with normal bowel sounds and no hepatosplenomegaly. Extremities were warm without edema, and capillary refill was under two seconds.

Obstetric examination showed a gravid uterus with fundal height corresponding to 20 cm at the level of the umbilicus. External ballottement was positive, and uterine contractions were absent. Fetal heart rate was 153 beats per minute. Speculum and vaginal examinations were deferred.

Laboratory investigations on August 11, 2025, revealed hemoglobin of 11.6 g/dL, hematocrit 34%, erythrocyte count of $3.79 \times 10^6/\mu\text{L}$, leukocytosis at $12.54 \times 10^3/\mu\text{L}$ with 72% neutrophils, and platelet count of $382 \times 10^3/\mu\text{L}$. Random blood glucose was 115 mg/dL. Thyroid function tests showed a free T4 level of 0.84 ng/dL and TSH of 0.8346 $\mu\text{IU/mL}$, consistent with a euthyroid state. The Wayne Index score was 13, indicating borderline, while the Burch-Wartofsky score was 10, suggesting that thyroid storm was unlikely.

Table 1. Laboratory Examination (11th, August 2025)

Parameter	Result	Reference Range
Hematology		
Hemoglobin	11.6 g/dL	11.40 – 15.00 g/dL
Erythrocytes	$3.79 \times 10^6/\mu\text{L}$	$4.00 - 5.70 \times 10^6/\mu\text{L}$
Leukocytes	$12.54 \times 10^3/\mu\text{L}$	$4.73 - 10.89 \times 10^3/\mu\text{L}$
Hematocrit	34 %	35 – 45 %
Platelets	$382 \times 10^3/\mu\text{L}$	$189 - 436 \times 10^3/\mu\text{L}$
MCV	90.0 fL	85 – 95 fL
MCH	31 pg	28 – 32 pg
MCHC	34 g/dL	33 – 35 g/dL
RDW-CV	14.10 %	11 – 15 %
Differential Count		
– Basophils	0 %	0 – 1 %
– Eosinophils	1 %	1 – 6 %
– Neutrophils	72 %	50 – 70 %
– Lymphocytes	20 %	20 – 40 %
– Monocytes	2 %	2 – 8 %
Clinical Chemistry		
Random Glucose	115 mg/dL	<200 mg/dL
Free T4	0.84 ng/dL	0.70 – 1.48 ng/dL
TSH	0.8346 $\mu\text{IU/mL}$	0.3500 – 4.9400 $\mu\text{IU/mL}$

Serial ultrasound examinations confirmed a viable intrauterine singleton pregnancy with appropriate interval growth. At 7, 11, 15, 17, and 21 weeks, fetal biometric parameters corresponded to gestational age. Amniotic fluid levels were adequate, placental location remained posterior, and cervical length was within normal limits (4.7 cm at 21 weeks). Bilateral polycystic ovarian morphology was consistently noted, with enlarged ovaries and multiple peripheral follicles.

The working diagnosis was G7P0A6 at 21 weeks' gestation with bilateral polycystic ovaries suspected to be associated with insulin resistance, Graves' disease in the euthyroid phase, bad obstetric history, and an intrauterine live fetus. The prognosis was considered *dubia ad bonam*. Management included continuation of thiamazole, folic acid, calcium supplementation, and routine monitoring of thyroid function and fetal growth. Multidisciplinary follow-up with endocrinology and fetomaternal specialists was advised. The patient was scheduled for reevaluation in four weeks.

3. Discussion

3.1. Endocrine and Immunological Mechanisms Linking Graves' Disease to Recurrent Pregnancy Loss

Hyperthyroidism in Graves' disease contributes to recurrent pregnancy loss through hormonal, immune, and vascular pathways. Excess thyroid hormones disturb the hypothalamic–pituitary–ovarian axis, causing luteal phase defects and poor endometrial receptivity that hinder implantation. Autoantibodies such as thyroid-stimulating immunoglobulin may attack placental tissue, impairing early placentation, while increased maternal metabolism and cardiovascular demand reduce uteroplacental blood flow, heightening miscarriage risk when thyroid function is uncontrolled. The risk

further escalates when Graves' disease coexists with polycystic ovary syndrome and insulin resistance, which induce hyperandrogenism, chronic anovulation, endothelial dysfunction, inflammation, and hypercoagulability. Together, these endocrine, metabolic, and vascular disruptions create a multifactorial environment that destabilizes hormonal balance and compromises placental function, ultimately predisposing affected women to recurrent pregnancy loss.^{6,7}

Beyond hormonal imbalance, Graves' disease affects pregnancy through autoimmune and vascular mechanisms. Thyroid-stimulating immunoglobulins and related autoantibodies may cross the placenta, disrupt trophoblast invasion, impair decidualization, and provoke inflammatory cascades that hinder placental vascularization and fetomaternal interface formation, increasing early fetal loss. Abnormal cytokine profiles with heightened Th1/Th17 and reduced regulatory T-cell activity further weaken implantation and placental function. Hyperthyroidism also alters coagulation and endothelial integrity, compromising uteroplacental perfusion and causing local hypoxia. When combined with metabolic disorders such as PCOS and insulin resistance, additional factors like hyperinsulinemia, oxidative stress, and chronic inflammation amplify these effects, creating a hostile intrauterine environment that contributes to recurrent miscarriage in women with inadequately controlled Graves' disease.^{6,7}

Hormonal evaluation for polycystic ovary syndrome, including luteinizing hormone (LH), follicle-stimulating hormone (FSH), and androgen levels, was not performed in this case. The absence of these tests was deliberate, as pregnancy itself alters gonadotropin and androgen concentrations, leading to physiologic changes that can confound the interpretation of results.

Elevated estrogen and progesterone levels during gestation suppress gonadotropin secretion and modify ovarian steroidogenesis, making it difficult to distinguish true hyperandrogenism or LH/FSH imbalance from pregnancy-related hormonal adaptation. Consequently, the diagnosis of “PCO with suspected insulin resistance” was established based on characteristic ovarian morphology and supportive clinical features rather than laboratory confirmation. This limitation underscores the diagnostic challenge of evaluating endocrine disorders such as PCO during pregnancy, where hormonal testing may yield misleading or non-representative findings.⁸

3.2. Psychosocial Aspect of Habitual or Recurrent Pregnancy Loss

The patient’s history of six consecutive miscarriages before her current seventh pregnancy reflects prolonged reproductive trauma that places her at significant psychosocial risk. Recurrent loss undermines her sense of identity and bodily control, often leading to fear, anxiety, and diminished confidence in future pregnancies. The absence of a living child intensifies feelings of inadequacy and social pressure, especially within cultural contexts that equate motherhood with womanhood. Each miscarriage compounds emotional distress, creating chronic grief and anticipatory anxiety that may persist throughout subsequent gestations. These experiences foster guilt, shame, and self-blame, which are often unacknowledged by others, leaving the patient isolated and vulnerable to depression. The cumulative burden of repeated losses, combined with comorbid conditions such as Graves’ disease and insulin resistance, amplifies psychological strain and contributes to emotional exhaustion. Without structured psychosocial support and empathetic counseling, this cycle of loss and unresolved

grief can impair bonding with the current fetus, reinforcing distress and further threatening maternal mental health.^{9–13}

Findings from the international literature also indicate that women with repeated losses frequently negotiate guilt within the marital relationship, even when partners are supportive. Gierus et al. observed that spousal communication, sexual intimacy, and long-term relationship satisfaction can be disrupted by accumulated reproductive trauma. The current patient, having been married for seven years without a successful birth, may experience pressure to achieve a live birth as a measure of family continuity. Interpersonal tension may remain concealed but can silently influence mental health trajectories. Social expectations of motherhood in many communities compound this tension. Additional evidence from regional reproductive health studies, such as the work of Commodari et al., underscores that unresolved grief in women with recurrent pregnancy loss increases vulnerability to depressive and anxiety spectrum disorders. When emotional needs are unmet due to limited psychosocial support or absence of structured counseling, distress may manifest as somatic complaints, sleep disturbances, or psychosocial withdrawal. In the context of the current pregnancy, protective psychological mechanisms may be inadequate without intervention. This underscores the importance of integrating mental health assessment and support into antenatal care for women with a history of multiple miscarriages.^{5,9–12,14}

Findings from international literature support the multifactorial nature of recurrent pregnancy loss. Sugiura-Ogasawara et al. identified that endocrine, immune, and metabolic abnormalities contribute significantly to adverse pregnancy and perinatal outcomes in women with recurrent miscarriage. Cuadrado-Torroglosa et al.

further demonstrated that maternal–fetal immunological incompatibility and thyroid autoimmunity play a crucial role in pregnancy failure, emphasizing the biological interplay between immune dysregulation and reproductive outcomes. The present case complements these studies by addressing not only the pathophysiological aspects but also the psychosocial and ethical challenges encountered in managing a gravida seven (G7P0A6) patient with Graves' disease and suspected insulin resistance due to polycystic ovary syndrome. This broader perspective illustrates how medical comorbidities intersect with emotional distress and reproductive decision-making, highlighting the importance of a multidisciplinary and holistic approach to care.^{15,16}

In this case, the psychosocial impact was clinically evident during antenatal follow-up. The patient frequently expressed persistent anxiety, sleep disturbance, and feelings of hopelessness associated with fear of another miscarriage. She reported difficulty establishing emotional attachment to the fetus and often interpreted mild physical symptoms as signs of impending loss. Psychological evaluation revealed features of anticipatory grief and emotional exhaustion related to repeated reproductive trauma. A series of counseling sessions conducted by the psychiatry and psychology team emphasized coping strategies, relaxation techniques, and supportive communication with her spouse. Gradually, the patient showed improved emotional stability, better adherence to antenatal visits, and increased optimism about fetal survival. These observations highlight the crucial role of integrated psychosocial care and multidisciplinary counseling in mitigating psychological distress among women experiencing recurrent pregnancy loss.¹⁷

Beyond the emotional manifestations observed during antenatal follow-up, the

psychosocial burden of recurrent pregnancy loss in this patient extended to her interpersonal, marital, and functional well-being. The patient described persistent guilt toward her spouse and family, perceiving herself as responsible for repeated miscarriages and fearing judgment from relatives. This self-blame contributed to social withdrawal, decreased self-esteem, and avoidance of conversations related to motherhood. Marital dynamics were also affected, with communication becoming limited to medical concerns and emotional intimacy gradually diminishing. The cumulative reproductive trauma led to heightened anxiety and hypervigilance during each antenatal milestone, reflecting an ongoing struggle between hope and fear. From a clinical standpoint, such psychological distress can influence neuroendocrine balance, sleep patterns, and adherence to medical advice, indirectly impacting pregnancy outcomes. The integration of structured psychosocial counseling not only reduced her emotional volatility but also helped restore trust in the healthcare process, enhance coping capacity, and strengthen marital support, demonstrating that addressing mental health needs is integral to improving both emotional resilience and obstetric prognosis in women with recurrent pregnancy loss.¹⁷

Women with recurrent pregnancy loss frequently experience overlapping biological and psychological stress responses that perpetuate reproductive dysfunction. Chronic anxiety and depressive symptoms may alter hypothalamic–pituitary–adrenal (HPA) axis activity, leading to elevated cortisol and corticotropin-releasing hormone levels that suppress gonadotropin secretion and impair ovulation or implantation. In this patient, recurrent reproductive trauma, combined with endocrine comorbidities such as Graves' disease and suspected insulin resistance,

likely intensified neuroendocrine dysregulation and contributed to her persistent emotional instability. Psychological evaluation revealed sleep disturbance, irritability, and recurrent intrusive thoughts about previous miscarriages, consistent with anticipatory anxiety and mild depressive features. These findings show that mood and anxiety disorders affect a large proportion of women facing infertility or repeated loss, often resulting in diminished self-efficacy, social withdrawal, and guilt. Integrating psychosocial therapy with medical management through structured counselling, stress-reduction techniques, and supportive partner involvement was therefore essential not only to improve her mental resilience but also to restore physiological balance and optimize pregnancy outcomes.¹⁷

Recurrent pregnancy loss also profoundly affects the couple's relationship and emotional dynamics. Couples experiencing repeated miscarriages often develop feelings of guilt, helplessness, and social isolation due to perceived stigma or lack of social acceptance. In this case, the patient and her spouse exhibited emotional detachment and reduced intimacy, reflecting the cumulative strain of multiple prior losses. Feelings of mutual blame and exhaustion weakened marital communication and increased the risk of sexual dysfunction, further disrupting emotional connection. The uncertainty surrounding future fertility and the demanding nature of medical interventions added additional psychological pressure, contributing to frustration and anxiety. However, consistent couple counselling and guided coping strategies gradually helped restore trust, strengthen emotional resilience, and rebuild a sense of partnership. Integrating psychosocial care within antenatal management proved essential not only for improving individual mental stability but also for supporting

marital harmony and long-term emotional well-being.¹⁷

3.3. Contraception Choice

The patient's request for tubal sterilization despite having no living children and being in her seventh pregnancy must be evaluated cautiously from medical, psychological, ethical, and legal perspectives. Although she faces a high-risk pregnancy due to Graves' disease, suspected insulin resistance, and a history of six miscarriages, sterilization should not be based solely on emotional fatigue or fear of recurrence. Her viable 21-week pregnancy still holds the potential for a live birth, making premature sterilization medically and ethically unjustified. Psychologically, repeated reproductive loss can cause anticipatory grief and reproductive hopelessness, leading to decisions driven by despair rather than rational planning. Counseling must therefore address emotional trauma, provide empathetic guidance, and ensure that consent is given in a stable state of mind. Ethically and legally, sterilization in nulliparous women demands clear documentation, informed consent free from coercion, and postponement until postpartum when psychological stability is achieved. A multidisciplinary team involving obstetricians, mental health professionals, and family planning counselors is essential to ensure that any reproductive decision reflects informed autonomy, emotional readiness, and long-term well-being.¹⁸⁻²⁰

The consideration of tubal sterilization in this gravida seven patient with no living children and six prior miscarriages requires careful medical, psychological, and ethical evaluation. Although her endocrine comorbidities and age increase obstetric risk, the current viable 21-week pregnancy shows that continuation to term remains possible with close multidisciplinary monitoring.

Immediate sterilization is therefore unjustified, as it could be driven by emotional exhaustion rather than informed decision-making. Long-acting reversible contraception, such as intrauterine devices or hormonal implants, should be prioritized as safer interim options until postpartum stability is achieved. Comprehensive counselling involving obstetricians, endocrinologists, mental health professionals, and family planning specialists is essential to ensure that any decision reflects true autonomy, emotional readiness, and a clear understanding of long-term consequences. Clinicians bear an ethical duty to prevent premature irreversible actions and to support the patient through empathetic, evidence-based guidance that balances reproductive rights, mental health, and medical safety.^{18,19,21,22}

Sociocultural and ethical factors play a major role in this patient's decision-making regarding sterilization. In societies where motherhood defines social identity, the absence of a child after seven years of marriage can create both internalized guilt and external pressure from family and community, which may lead to decisions made under emotional strain rather than genuine autonomy. In this context, her request for tubectomy may reflect psychological exhaustion and fear of further loss rather than a fully informed reproductive choice. Ethical and legal considerations require that sterilization only proceed after comprehensive counselling and written consent confirming voluntariness, understanding of permanency, and emotional stability. Multidisciplinary counselling conducted privately and empathetically by obstetricians, mental health professionals, and family planning experts should ensure she makes decisions free of coercion and based on a clear understanding of alternatives such as long-acting reversible contraception. Postponing sterilization until postpartum

evaluation remains the most ethical approach, allowing time for recovery, reflection, and reassessment of long-term reproductive intentions.¹⁹⁻²²

3.4. Ethical Implication and Decision of Termination

This case demands an explicit, structured multidisciplinary decision-making process that brings together obstetricians, endocrinologists, psychiatrists or psychologists, and where needed ethics consultants, to appraise risks and options in a transparent, documented way. Clinically, the team should synthesize maternal status and fetal prognosis to offer individualized counseling on continuation versus termination at 21 weeks, while ethically grounding recommendations in autonomy, beneficence, nonmaleficence, and justice. Autonomy is upheld through robust informed consent that addresses medical uncertainties, the patient's nulliparous status, and the irreversibility of choices such as tubectomy; beneficence and nonmaleficence guide the preference to continue pregnancy when there is no clear maternal threat or lethal fetal anomaly, paired with intensive monitoring and mental health support to mitigate distress; justice calls for access to reversible postpartum contraception and psychosocial care, not only procedural options. The lesson learned from this case is that recurrent pregnancy loss in the setting of Graves' disease and suspected insulin resistance is not merely a biomedical problem but a bioethical one: biological vulnerability and psychosocial burden jointly shape reproductive choices, so the safest, most compassionate path is a team-based, ethics-informed approach that integrates endocrine control, maternal-fetal surveillance, and early antenatal mental health interventions to ensure decisions reflect informed, stable preferences rather than unresolved trauma.^{15,16}

Continuation of this pregnancy offers the patient her only realistic chance for a live birth given her history of six miscarriages, yet both continuation and termination involve significant ethical, medical, and emotional considerations. Proceeding without adequate psychosocial support risks worsening anxiety, nonadherence to antenatal care, and emotional exhaustion, while termination without counseling may deepen trauma and reinforce feelings of reproductive failure. Therefore, decision-making must occur through a multidisciplinary and ethically grounded process integrating obstetric, endocrine, and mental health expertise to balance autonomy, beneficence, and nonmaleficence. With stable maternal condition and viable fetal growth, continuation with intensive monitoring and psychosocial support remains the most appropriate course, emphasizing that compassionate, team-based management offers greater benefit than premature termination driven by distress.²³⁻²⁵

Medically, continuation of the pregnancy represents the most appropriate option for this patient, as there is no evidence of maternal decompensation or lethal fetal anomaly. The patient remains in a euthyroid state with controlled metabolic parameters, and with careful surveillance, maternal-fetal outcomes can remain favorable. Termination at 21 weeks carries substantial risks including hemorrhage, infection, uterine injury, and possible destabilization of endocrine balance, which could jeopardize both current and future reproductive health. Therefore, from a clinical perspective, continuing the pregnancy under intensive multidisciplinary management provides a safer and more beneficial path.²³⁻²⁵

Ethically, this decision aligns with the principles of autonomy, beneficence, and non-maleficence. The patient must receive clear and comprehensive counseling about

the risks and implications of both continuation and termination, as well as the permanent nature of sterilization. Beneficence favors preservation of a viable pregnancy when maternal health is stable, while non-maleficence discourages unnecessary procedural harm. Termination without strong medical justification would contradict these principles, as there is no imminent threat to maternal or fetal life. Psychologically, the patient's history of six miscarriages has led to emotional exhaustion, anxiety, and fear of repeated loss, which can impair rational decision-making. Her wish for tubectomy may reflect despair rather than an informed and stable reproductive choice. Ongoing mental health support from psychologists or psychiatrists may be needed if her symptoms worsen. Counseling is crucial to reduce distress, restore emotional resilience, and prevent impulsive decisions driven by unresolved grief. Through consistent psychosocial counseling, the patient can regain confidence in the pregnancy and improve adherence to antenatal care.^{7,15,16}

Socially and culturally, continuing pregnancy carries significant value, especially for a nulliparous woman with no living children. Efforts to sustain the pregnancy represent both medical prudence and moral sensitivity to the meaning of motherhood within her sociocultural context. At the same time, healthcare providers must ensure that societal expectations or family pressure do not compromise the patient's autonomy. Counseling should be conducted in a calm, private, and nonjudgmental setting, where the patient and her spouse are encouraged to express fears, beliefs, and expectations openly. The process must include empathetic listening, clear explanation of risks and options, and gradual decision-making rather than a single-session consent. Psychiatrists and psychologists should assess emotional

readiness and coping capacity, while obstetricians and endocrinologists provide evidence-based information on prognosis and management. Postpartum contraceptive counseling should remain patient-centered, focusing on reversible methods until psychological stability and reproductive clarity are achieved. The continuation of pregnancy with close multidisciplinary supervision is medically justified, ethically sound, and psychologically supportive. A collaborative framework involving obstetricians, endocrinologists, psychiatrists, and ethical advisors ensures balanced decision-making grounded in safety, compassion, and respect for autonomy. This comprehensive approach not only maximizes the chance of a successful live birth but also promotes holistic maternal well-being through medical, ethical, and emotional integration.^{6,7,16,23}

A limitation from this study is the absence of objective psychological assessment evidence from psychiatrist. This may affect the validity of the patient's emotional assessment and adaptability. In this case, patients will be referred to a psychiatrist when their emotional symptoms do not improve or worsen. Moreover, the diagnosis of "PCO with suspected insulin resistance" was made based on the characteristic ovarian morphology and supporting clinical features, rather than laboratory confirmation. This limitation highlights the diagnostic difficulty of assessing endocrine disorders like PCO during pregnancy, where hormonal tests may produce inaccurate or unrepresentative results. Furthermore, given the patient's history of recurrent pregnancy loss and endocrine disorders, genetic karyotyping and counseling could have been considered to evaluate the role of potential genetic factors in her pregnancy losses.

4. Conclusion

This case underscores the importance of a structured multidisciplinary decision-making process involving obstetricians, endocrinologists, psychiatrists, and psychologists in managing complex high-risk pregnancies. Through coordinated evaluation, the team was able to provide individualized counseling on whether to continue or terminate the pregnancy, balancing medical safety with ethical and emotional considerations while upholding patient autonomy. The key lesson from this case is that recurrent pregnancy loss in women with endocrine–autoimmune comorbidities, such as Graves' disease and insulin resistance, cannot be approached solely as a medical problem. The intersection of biological vulnerability and psychosocial distress strongly influences reproductive decisions, emphasizing that optimal outcomes require not only medical stabilization but also early, integrated mental health and ethical support throughout antenatal care.

References

1. Boedeker D, Hunkler K, Mahdy H. [Recurrent pregnancy loss](#). Treasure Island (FL): StatPearls Publishing; 2025
2. Wartena R, Matjila M. [Polycystic ovary syndrome and recurrent pregnancy loss, a review of literature](#). Front Endocrinol (Lausanne). 2023;14:1183060.
3. Bogović Crnčić T, Čurko-Cofek B, Batičić L, Giroto N, Tomaš MI, Kršek A, et al. [Autoimmune Thyroid Disease and Pregnancy: The Interaction Between Genetics, Epigenetics and Environmental Factors](#). J Clin Med. 2024 Dec 31;14(1).
4. Tavoli Z, Mohammadi M, Tavoli A, Moini A, Effatpanah M, Khedmat L, et al. [Quality of life and psychological distress in women with recurrent miscarriage: a comparative study](#). Health Qual Life Outcomes. 2018 Dec 28;16(1):150.
5. Cuenca D. [Pregnancy loss: Consequences](#)

- [for mental health](#). *Front Glob Womens Health*. 2023 Jan 23;3.
6. Godines-Enriquez MS, Miranda-Velásquez S, Enríquez-Pérez MM, Arce-Sánchez L, Martínez-Cruz N, Flores-Robles CM, et al. [Prevalence of Thyroid Autoimmunity in Women with Recurrent Pregnancy Loss](#). *Medicina (B Aires)*. 2021 Jan 22;57(2):96.
 7. Dou Q, Ma LY, Li PF, Xu XT, Yu G, Zhang D, et al. [The influence of polycystic ovary syndrome on abortion rate after in vitro fertilization/intracytoplasmic sperm injection fresh cycle pregnancy](#). *Sci Rep*. 2023 Apr 12;13(1):5978.
 8. Fang Y, Zhao X, Wang C, Liu C, Liang Y, Yang X. [Successful Pregnancy in a PCOS Patient with Elevated Basal Luteinizing Hormone and Repeated Ovulation Induction Failures: A Case Report](#). *Int J Womens Health*. 2025;17:3145–54.
 9. Rahayu T, Wahyuni S. [Respon psikologis pada perempuan pasca keguguran](#). *NURSCOPE: Jurnal Penelitian dan Pemikiran Ilmiah Keperawatan*. 2020 Aug 29;5(2):17.
 10. Zareba K, La Rosa VL, Ciebiera M, Makara-Studziska M, Commodari E, Gierus J. [Psychological effects of abortion. An updated narrative review](#). *Eastern Journal Of Medicine*. 2020;25(3):477–83.
 11. Biggs MA, Neilands TB, Kaller S, Wingo E, Ralph LJ. [Developing and validating the Psychosocial Burden among people Seeking Abortion Scale \(PB-SAS\)](#). *PLoS One*. 2020 Dec 10;15(12):e0242463.
 12. Inversetti A, Perna G, Lalli G, Grande G, Di Simone N. [Depression, Stress and Anxiety among Women and Men Affected by Recurrent Pregnancy Loss \(RPL\): A Systematic Review and Meta-Analysis](#). *Life (Basel)*. 2023 May 27;13(6).
 13. Cuenca D. Pregnancy loss: [Consequences for mental health](#). *Front Glob Womens Health*. 2022;3:1032212.
 14. Alipanahpour S, Zarshenas M, Taheri M, Akbarzadeh M. [A Cross-sectional Study of Psychosocial Problems Following Therapeutic Abortion With the Mother's Spiritual Experiences](#). *International Journal of Women's Health and Reproduction Sciences*. 2023 Mar 11;11(2):65–72.
 15. Sugiura-Ogasawara M, Ebara T, Yamada Y, Shoji N, Matsuki T, Kano H, et al. [Adverse pregnancy and perinatal outcome in patients with recurrent pregnancy loss: Multiple imputation analyses with propensity score adjustment applied to a large-scale birth cohort of the Japan Environment and Children's Study](#). *American Journal of Reproductive Immunology*. 2019 Jan 13;81(1).
 16. Cuadrado-Torroglosa I, García-Velasco JA, Alecsandru D. [Maternal-Fetal Compatibility in Recurrent Pregnancy Loss](#). *J Clin Med*. 2024 Apr 19;13(8):2379.
 17. Hutner LA., Catapano LA., Nagle-Yang SM., Williams KE., Osborne LM. [Textbook of women's reproductive mental health](#). American Psychiatric Association Publishing; 2022. 754 p.
 18. Gazibara T, Bila J, Tulic L, Maksimovic N, Maksimovic J, Stojnic J, et al. [Lifetime Practice and Intention to Use Contraception After Induced Abortion Among Serbian Women in Belgrade](#). *Medicina (B Aires)*. 2024 Nov 26;60(12):1944.
 19. Ogbu-Nwobodo L, Shim RS, Vinson SY, Fitelson EM, Biggs MA, McLemore MR, et al. [Mental Health Implications of Abortion Restrictions for Historically Marginalized Populations](#). *New England Journal of Medicine*. 2022 Oct 27;387(17):1613–7.
 20. Dagneu GW, Asresie MB. [Post-abortion contraceptive uptake, choices, and factors associated with it among women seeking abortion services in Africa: a systematic review and meta-analysis](#). *Front Glob Womens Health*. 2025 Jun 16;6.
 21. Valencia K, Moayeddi G, Raidoo S, Soon R, Kaneshiro B, Tschann M. [Survival Analysis](#)

- [of Patient Contraceptive Choice Method at Time of Abortion](#) - Honolulu, Hawai'i, May 2010-December 2016. Hawaii J Health Soc Welf. 2020 Sep 1;79(9):272–8.
22. Ferreira ALC, Souza AI, Lima RA, Braga C. [Choices on contraceptive methods in post-abortion family planning clinic in the northeast Brazil.](#) Reprod Health. 2010 Dec 10;7(1):5.
23. Deng T, Liao X, Zhu S. [Recent Advances in Treatment of Recurrent Spontaneous Abortion.](#) Obstet Gynecol Surv. 2022 Jun;77(6):355–66.
24. Yang X, Mu F, Zhang J, Yuan L, Zhang W, Yang Y, et al. [Reproductive factors and subsequent pregnancy outcomes in patients with prior pregnancy loss.](#) BMC Pregnancy Childbirth. 2024 Mar 25;24(1):219.
25. El Hachem H, Crepaux V, May-Panloup P, Descamps P, Legendre G, Bouet PE. [Recurrent pregnancy loss: current perspectives.](#) Int J Womens Health. 2017 May;Volume 9:331–45.