Obstetrics and Gynecology III

Editor
Süleyman Cansun DEMİR

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PREFACE

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Chapter 1

DIAGNOSIS AND MANAGEMENT OF HYPERANDROGENISM

Senem ALKAN AKALIN[1]

Hyperandrogenism is characterized by excessive androgen synthesis in the ovaries and/or adrenal glands. The most common clinical manifestation of hyperandrogenism in women is hirsutism, excessive terminal hair growth in androgen-dependent body areas.

Other clinical findings of hyperandrogenism;

-Acne vulgaris

-Weight gain

-Menstrual irregularities

-PCOS

-Acanthosis nigricans

The underlying cause of androgen increase can often be determined by a good history, including age of onset, duration and severity of symptoms, and examination of the skin, breasts, pelvis and abdomen. Specific laboratory studies (Serum total/free testosterone, DHEA-S) are requested if no cause is found in the history and FM. Most causes of hyperandrogenism are benign. However, the sudden onset and progressive worsening of symptoms should suggest malignancy.

EVALUATION OF HYPERANDROGENISM

Hirsutism, excessive terminal hair growth in androgen-dependent areas, is the most common finding of hyperandrogenism and is present in approximately 60-80% of patients. (1.Nikolaou D, Gilling-Smith C. Hirsutism. Curr Obstet Gynaecol 2005;15:174–82.)

Evaluation of Hyperandrogenism;

Hirsutism; It should not be confused with hypertrichosis, which occurs with diffuse growth of vellus hair. Hirsutism is seen in 5-10% of the general female

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- Assess for ovarian tumors

Lipid profile

-Lipids elevated in Hyperandrogenism

Source

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Chapter 2

GYNECOLOGY AND OBSTETRICS PSYCHIATRY

Ömer Furkan YILMAZ[1]

INTRODUCTION

Gynecology and Obstetrics Psychiatry is a sub-specialty of psychiatry that focuses on the mental health of women throughout pregnancy and postpartum period. This field of study is becoming increasingly important as research has shown that up to 20% of women through some form of mental health issue during pregnancy or postpartum (1).

Common conditions in this field include postpartum depression and anxiety, prenatal depression, bipolar disorder, and psychosis. These conditions can have significant consequences for both of the mother and the child, and early identification and intervention is crucial (2).

Obstetricians and gynecologists play an significant role in identifying and managing these conditions, as they are commonly the first point of contact for pregnant women. They can screen for these conditions using standardized questionnaires and refer to an obstetric psychiatrist or other mental health professional as needed (3).

Treatment options for obstetric psychiatric conditions include psychotherapy, medication, and support groups. Antidepressant medication is commonly used, but it is vital to note that these medications can have potential risks and advantage for both of the mother and the baby, and should be attentively considered (4).

It is critical to note that perinatal mental health is a complex and multifaceted field and it is essential that obstetric and gynecological care providers work in collaboration with mental health professionals to provide the finest care possible for women experiencing mental health issues throughout pregnancy and postpartum (5).

In conclusion, Gynecology and Obstetrics Psychiatry is an important field of study that focuses on the mental health of women while pregnancy and postpartum

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CONCLUSION: THE IMPORTANCE OF OBSTETRIC PSYCHIATRY IN WOMEN'S HEALTH CARE

Obstetric psychiatry is a vital field of study that concentrates on the mental well-being of women during pregnancy and postpartum. Research has shown that as much as 20% of women encounter some form of mental health issue during this period, with the most prevalent conditions being postpartum depression, prenatal depression, anxiety, and bipolar disorder (26).

Early identification and intervention is crucial to ensure the finest outcome for both of the mother and the child. Obstetricians and gynecologists play an critical role in identifying and managing these conditions, and a variety of treatment options are available, including psychotherapy, medication, and support groups (26).

It's important to note that perinatal mental health is a complex and multifaceted field and it is essential that obstetric and gynecological care providers work in collaboration with mental health professionals to provide the optimal care possible for women experiencing mental health issues throughout pregnancy and postpartum (5).

The field of Obstetric Psychiatry is also important in addressing the mental health requirements of women, regardless of their life stage, and it is essential to evaluate the potential long-term impacts of psychiatric disorders on the mother's overall well-being and on her future pregnancies (27).

In summary, Obstetric Psychiatry is a significant field of study that concentrates on the mental well-being of women during pregnancy and postpartum. Early identification and intervention are crucial to guarantee the optimal outcome for both of the mother and the child. Obstetricians and gynecologists have an essential role in identifying and treating these conditions, and various treatment options are accessible. It is crucial that healthcare providers collaborate with mental health professionals to provide the optimal care possible for women and to address their mental health requirements in the long-term (27).

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Chapter 3

INTRAHEPATİC CHOLESTASIS OF PREGNANCY

Gülay BALKAŞ[1]

Intrahepatic cholestasis of pregnancy (ICP), characterised by pruritus and elevated serum bile acid concentrations, typically develops in the late second and/or third trimester and is associated with increased rates of adverse fetal outcomes. The etiology of cholestasis is poorly understood, and management is difficult due to limited data on diagnosis, treatment, and associated adverse outcomes. It is thought to result from the cholestatic effects of reproductive hormones and their metabolites in genetically susceptible women and resolves rapidly after delivery. The mechanisms by which fetal complications occur are also unclear.

INTRODUCTION

Cholestasis, translated from the Greek, describes the "stoppage of bile". This disturbance of bile flow can occur at any site in the biliary system and can be caused by extrahepatic mechanical obstruction, pathology of the intrahepatic biliary tree, or dysfunction of individual hepatocytes. Usually, the disorder does not result in a complete interruption of bile flow, and often only certain components of bile become pathologic. The clinical and biochemical manifestations of cholestasis may therefore vary. Conventionally, cholestatic liver diseases are first divided into those with extrahepatic and those with intrahepatic etiology. Cholestasis in pregnancy is an intrahepatic disorder that occurs only during pregnancy and regresses rapidly after delivery (1). ICP was originally described by Ahlfeld in 1883 as recurrent jaundice in pregnancy which resolved after delivery. Pruritus was not mentioned in this report, but subsequent case reports published in the 1950s reported severe pruritus with or without jaundice associated with the condition, in addition to complete resolution after delivery and high recurrence rates in subsequent pregnancies (2).It is the most common pregnancy-specific liver disorder. The etiology of intrahepatic cholestasis in pregnancy (ICP) is poorly understood. It is likely to be a multifactorial disease, with genetic, environmental,

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- With peak bile acids 40 to 99 micromol/L and no other risk factors, the risk of stillbirth is similar to the background risk up to 38 to 39 weeks' gestation. Consider planned delivery at 38 to 39 weeks' gestation.
- For peak bile acids ≥100 micromol/L, the risk of stillbirth is higher than the background risk. Consider planned delivery at 35 to 36 weeks' gestation.
- The American College of Obstetricians and Gynecologist (ACOG)/Society for Maternal-Fetal Medicine (SMFM) recommends (40):
- For patients with total bile acid levels <100 micromol/L, delivery is recommended at 36/7 to 39/7 weeks' gestation or at diagnosis if diagnosed at >39/7 weeks.
- For patients with total bile acid levels ≥100 micromol/L, delivery is recommended at 36/7 weeks or at diagnosis if diagnosed later.

There are no special considerations for labour in patients with ICP. Continuous fetal monitoring during labour is indicated because of the increased incidence of fetal death and non-fatal asphyxia. Induction of labour does not necessarily increase the risk of caesarean section compared with expectant management. The risk of postpartum hemorrhage is not increased when ICP is treated with UDCA. Therefore, do not routinely assess coagulation parameters or prescribe vitamin K before delivery. In rare refractory cases, prothrombin time can be checked and vitamin K administered if it is prolonged (41, 42).

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Chapter 4

MORPHOLOGY OF THE OVARY

Sevilay ERİMŞAH[1]

INTRODUCTION

A crucial element of female reproductive capacity lies in a cyclic nature, which is prominently exemplified by the growth and development of dominant follicles. To gain insight into the menstrual cycle, it becomes imperative to comprehend the cycle of the dominant follicle and the mechanisms that govern it.

FOLLICULOGENESIS

Folliculogenesis commences with the selection of a primordial follicle to join the cohort of developing follicles, culminating in either ovulation or cessation through atresia.

OVULATION

Histologically, ovulation witnesses various tissue changes, especially during the transformation and release of the Graafian follicle. The connections between the granulosa cells weaken and the stigma is formed.

LUTEINIZATION

The corpus luteum, during the luteal phase of the menstrual cycle, functions as a prominent endocrine gland, generating substantial quantities of progesterone and estradiol.

CONCLUSION

Knowledge of the interaction between the morphological structure and function is of great importance in a number of medical and research applications such as reproductive health, infertility treatments and hormonal regulation.

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the corpus luteum functions for approximately eleven to fourteen days, but in cases of luteal phase defects, its activity diminishes in less than nine days. This deficiency is commonly attributed to inadequate progesterone levels, which are responsible for sustaining the corpus luteum. Clinically, luteal phase deficiency can contribute to recurrent early pregnancy loss. In the past, the gold standard for diagnosis involved a luteal phase biopsy; however, due to its recognized imprecision, it is no longer considered clinically relevant. Treatment options may include progesterone supplementation (17).

The visualization of the corpus albicans is a rare occurrence in clinical imaging. However, in post-menopausal women, alterations in the appearance of the corpus albicans may arise as a consequence of hormonal changes related to menopause. Reduced estrogen levels and decreased immune-mediated phagocytic and fibroblastic activity can result in inadequate development and regression of the corpus albicans. Consequently, this can lead to the ultrasound detection of these structures, potentially causing confusion with ovarian neoplasms. The presence of hemosiderin and calcium deposits within the corpus albicans itself can enhance its ultrasound visibility, manifesting as small echogenic foci devoid of distal acoustic shadowing. In addition to ultrasound, these calcifications may also be evident in plain film radiographs of the pelvis (18).

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Chapter 5

OSTEOPOROSIS

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INTRODUCTION

Osteoporosis (OP) is the most common disease affecting the metabolism of bones. The first definitive definition of OP was made in 1820 by a French pathologist named Jean Georges Lobstein as "porous bone", then in 1947 by Albright as "too little bone in bone". Osteoporosis is a condition characterized by decreased bone density, resulting in fragile and porous bones. It is defined as a reduction in bone mass per unit volume. (1). The World Health Organization (WHO) defines OP as "a systemic skeletal disease characterized by low bone mass and an increase in bone fragility and fractures as a result of impairment of the microarchitectural structure of bone tissue". This definition is an international consensus set at the 1990 World Health Organization Osteoporosis Conference (2). With the consensus of WHO in 1994, the definition of OP was revised, so it was adopted that the definition of OP should be made according to the values obtained using DXA (dual x-ray absorptiometry) and the presence of fracture (WHO Study Group 1994). In fact, the purpose of this definition is both to prevent conceptual confusion and to clarify the prevalence of OP over certain numerical values (3).

According to this;

Normal: Bone mineral density (BMD) and bone mineral content below 1 standard deviation (SD) compared to a young adult,

Osteopenia: BMD is between -1 and -2.5 SD compared to young adults,

Osteoporosis: BMD greater than -2.5 SD compared to young adults,

Established OP: BMD greater than -2.5 SD compared to a young adult and the presence of one or more additional fractures.

According to this last definition, fracture is not essential for my definition of osteoporosis. If DEXA is not used, the old definition will apply.

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is recommended in patients with acute vertebral fractures or chronic pain from multiple vertebral fractures. However, patients should be trained to perform isometric exercises when using back braces, as long-term brace application can lead to muscle atrophy and muscle weakness. walking aids; It consists of conventional canes, broad-based supporting canes and walkers. Most hip fractures occur as a result of falls. Therefore, in addition to the above measures, specially designed trochanteric cushions can be used to provide external protection to the hip joint during falls in elderly men and women (39,40). In the prevention of osteoporosis, pain due to fractures, prevention of falls and improving the quality of life, physical therapy agents as well as exercise and physical activity are useful. its importance will gain more importance with increasing age as it is today (39,40,44).

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Chapter 6

THE APPROACH TO MALE FACTOR INFERTILITY IN IVF

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INTRODUCTION

A)Definition of male factor infertility

Male factor infertility refers to a condition in which a man's reproductive system has difficulties or abnormalities that contribute to the couple's inability to conceive a child. This can result from various factors such as low sperm count, poor sperm motility (movement), abnormal sperm shape, or other issues affecting sperm production or function. Male factor infertility can be a significant factor in a couple's fertility problems and may require medical evaluation and intervention to address.

B) Prevalence and significance

The prevalence and significance of male factor infertility can vary depending on geographic location, lifestyle factors, and individual health. Here are some general points:

1. Prevalence: Male factor infertility is a common issue, accounting for approximately 40-50% of infertility cases. However, it's important to note that male infertility can often be a contributing factor alongside female infertility issues.
2. Significance: Male factor infertility is significant because it can impact a couple's ability to conceive naturally. It can lead to emotional and psychological stress for both partners and can strain relationships. Additionally, male infertility may be indicative of underlying health conditions that need attention.
3. Potential Causes: Several factors can contribute to male factor infertility, including medical conditions, lifestyle choices (such as smoking or excessive alcohol consumption), exposure to environmental toxins, genetic factors, and hormonal imbalances.

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Hope for Couples Facing Male Factor Infertility:

Couples facing male factor infertility should remain hopeful and proactive. With the advancements in reproductive medicine, personalized treatment plans, and ongoing research, there are numerous options and strategies available to help individuals and couples achieve their dream of parenthood. It's crucial to seek the guidance of fertility specialists who can provide tailored solutions and support throughout the journey. While the path to parenthood may have its challenges, many couples ultimately find success and fulfillment in building their families.

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6. American Society for Reproductive Medicine (ASRM):The ASRM website (https://www.asrm.org/) offers a wealth of information on infertility, including male infertility. They provide educational materials, guidelines, and resources for individuals and couples seeking help with fertility issues.
7. The American Urological Association (AUA): AUA (https://www.auanet.org/) provides guidelines and information on male reproductive health, including male infertility, urological treatments, and specialists.
8. Resolve: The National Infertility Association:Resolve (https://resolve.org/) is a nonprofit organization dedicated to providing support, education, and advocacy for individuals and couples dealing with infertility. They offer a variety of resources, including support groups and educational materials.
9. Mayo Clinic:Mayo Clinic's website (https://www.mayoclinic.org/) contains informative articles on male infertility, its causes, diagnosis, and treatment options. It's a trusted source for medical information.
10. National Institutes of Health (NIH):The NIH's MedlinePlus (https://medlineplus.gov/) provides comprehensive information on male infertility, including articles, videos, and links to clinical trials.
11. Books:There are many books available on male infertility that provide in-depth information and personal stories. Some recommended titles include "The Male Biological Clock" by Harry Fisch and "Sperm Wars" by Robin Baker.
12. Support Groups: Consider joining online or in-person support groups for individuals and couples dealing with male infertility. Websites like Fertility Network (https://fertilitynetworkuk.org/) and Fertility Friends (https://www.fertilityfriends.co.uk/)

provide forums and communities where you can connect with others facing similar challenges.

13. Consulting a Specialist: If you or your partner are experiencing male infertility, it's essential to consult a reproductive specialist or urologist. They can prov