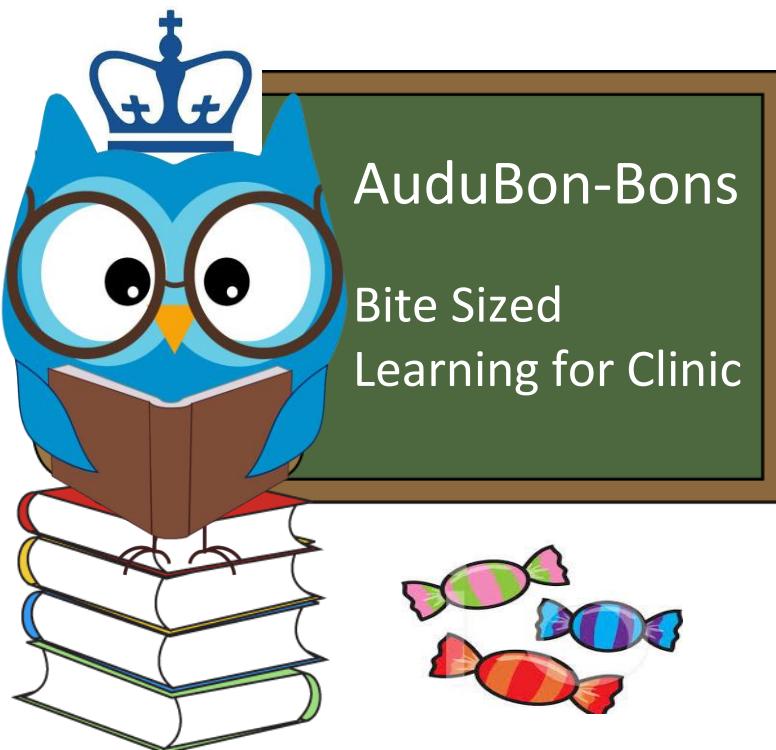


PCOS – EVALUATION/COUNSELING



Week 71

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Reading Assignment:

ACOG Practice Bulletin #194, June 2018
Polycystic Ovarian Syndrome

LEARNING OBJECTIVES



- To be comfortable defining PCOS and describing its pathophysiology
- To gain an understanding of the differential diagnoses to be considered
- To review the recommendations for evaluation and management
- To become comfortable with counseling a patient about the diagnosis and its implications



CASE VIGNETTE

- 24 y.o. G0PO presents with complaints of irregular periods. She states her periods have always been unpredictable, but that in the past few years they are have occasionally been heavier too.



FOCUSED HISTORY

What will be pertinent in her history?

- POB: G0
- PGYN:
LMP 45 days ago
Menarche 15y.o./**Cycle length 35-55d**/Duration 6d (4-7 pads/d)
No STIs; No known hx Cysts/Fibroids; No abnormal paps, last pap 2 years ago
Sexual history: Was last sexually active with 1 male partner 2 years ago, **used condoms for BCM**; No sexual activity since
- PMH: **Obesity**
- PSH: Denies
- Meds: **Multivitamin, Various OTC medications for acne for past several years**
- All: Shellfish - hives
- Soc: Denies toxic habits; lives with a roommate, feels safe; works as a teller
- FHx: **Both parents and MGM with DM; Mother with HTN, hyperlipidemia**



PERTINENT PHYSICAL EXAM FINDINGS

What will be pertinent in her physical exam?

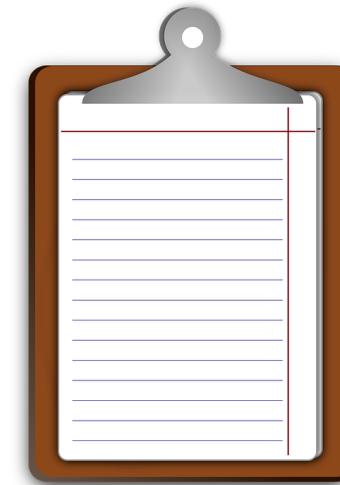
- P: 80 BP: 135/70 Wgt: 92kg Hgt: 160cm BMI: 36
- HEENT: Thyroid – no masses/enlargement
- Skin No acanthosis nigricans; mild-mod acne; mild hirsutism on chin
- Abd: Soft, obese, NT
- Pelvic:
 - Vulva: Normal external female genitalia; Normal hair distribution on mons and labia; No clitoromegaly; No lesions
 - Vagina: Healthy-appearing mucosa, No discharge
 - Cervix: Nulliparous os; L/C/P
 - Uterus: NT, ~8wk size, anteverted
 - Adnexae: No mass/tenderness b/l
- Ext: NT b/l



DIFFERENTIAL DIAGNOSIS

What is your differential diagnosis?

- PCOS
- Causes of androgen excess
 - Exogenous androgens – e.g. androgenic progestins
 - Adult-onset or Nonclassic CAH
 - Fasting 17-OHP in high-risk women
 - Androgen secreting tumor
 - Hirsutism onset rapid and severe, including signs/symptoms of virilization
 - Serum – Total testosterone, DHEAS
- Thyroid disease
- Prolactin disorders
- Primary hypothalamic amenorrhea
- Primary ovarian failure
- Cushing syndrome
 - Signs/symptoms of cortisol excess, e.g. purple striae and proximal muscle weakness



DIAGNOSIS

How are **the Rotterdam criteria** used to make a diagnosis of PCOS?

- Meet **any 2 of the following 3** criteria:
- Oligo-/Anovulation
- Clinical/Biochemical signs of hyperandrogenism
- Polycystic ovaries on transvaginal ultrasound

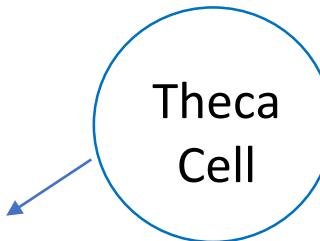


PATHOPHYSIOLOGY

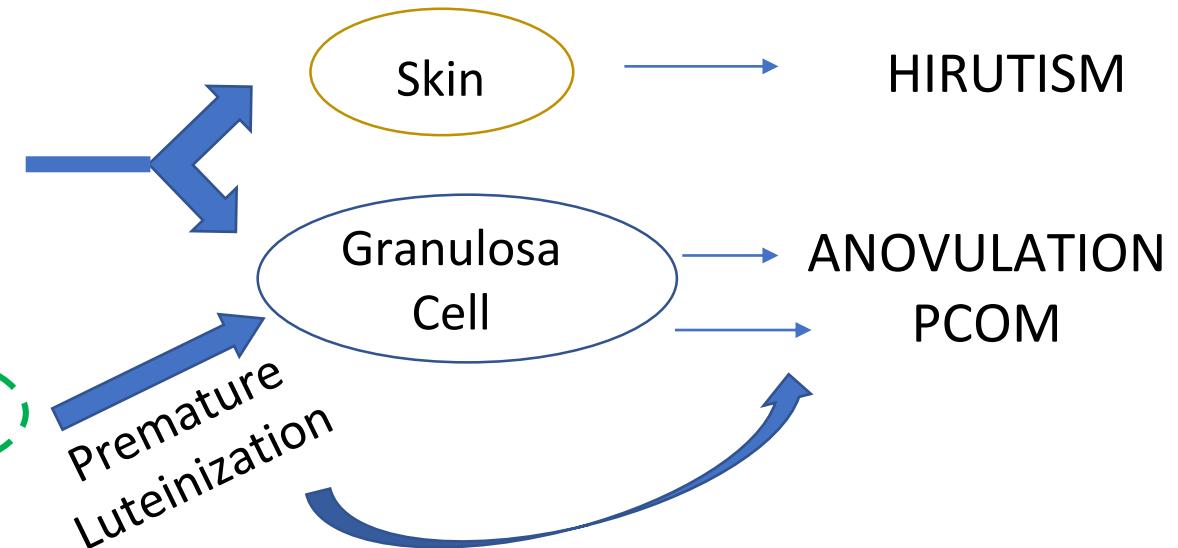
What is the pathophysiology of PCOS?

- Intrinsic ovarian hyperandrogenism

Upregulation
of Androgen
Production



- Insulin-resistant hyperinsulinemia



Promotes
Adiposity



EVALUATION

What will you add to your evaluation of this patient?

- Physical
 - Already performed: BP, BMI, Present/absent stigmata of hyperandrogenism, e.g.?
 - Waist circumference - $\leq 35"$
- Labs
 - Biochemical Hyperandrogenemia – Total testosterone, SHBG
 - Exclusion of other differentials – TSH, Prolactin, 17-OHP
 - Metabolic abnormalities – 2-hr OGTT, Fasting lipid profile and lipoprotein level
- Imaging
 - Determination of PCOM
 - Identification of endometrial abnormalities



MANAGEMENT

What interventions can you employ for this patient's menstrual irregularities?

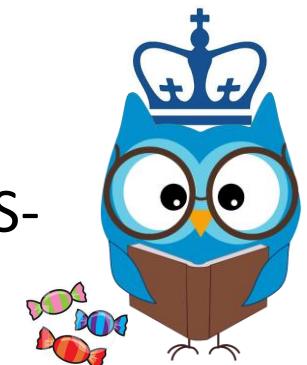
- COCs
 - Most commonly used medication for long-term management
 - Endometrial protection
- How do they work?
 - Decrease secretion of?
 - LH by the pituitary gland
 - Androgen by the ovary
 - Increase circulating levels of?
 - SHBG



MANAGEMENT

Other options?

- **Progestins**
 - 50-89% of users experience abnormal bleeding patterns
- **Insulin-sensitizing agents**
 - Improvement in insulin sensitivity is associated with a decrease in circulating androgen levels, improved ovulation rate, and improved glucose tolerance
 - No antidiabetic agent is currently approved by the U.S. FDA for PCOS-related mental disturbances



COUNSELING

How will you counsel this patient about the possibility of fertility issues?

- PCOS diagnosis  Future need for IVF
- May require **ovulation induction**
- **Lifestyle modifications**
 - **ASRM/ESHRE** - *Before any intervention is initiated, preconception counseling should emphasize the importance of lifestyle modification (especially weight reduction and exercise in women who are overweight), smoking cessation, and reduction of alcohol consumption*



CODING/BILLING

Diagnosis	ICD-10
PCOS	E28.2
Irregular menstruation	N92.6



SOCIAL DETERMINANTS OF HEALTH

- Demographic characteristics of PCOS-related visits

- Race
 - White – 86.9%
 - Black/Other – 13.1%
- Private insurance
 - Yes – 82%
 - No – 17.1%

Racial and ethnic minority women may be more susceptible to PCOS and its complications, compared to White women; yet screening for metabolic disorders among racial and ethnic minority women with PCOS in general tends to be low.

-Better counseling needs to be provided to patients at the time of PCOS diagnosis to ensure a more comprehensive understanding its multi-faceted nature. This will empower patients to more appropriately seek out PCOS-related visits and associated screening and care.

-Along with improved access to care for all patients, there needs to be a heightened commitment to awareness of PCOS and its multi-system sequelae among providers beyond those that specialize in Women's Health.



EVIDENCE

Reference

- Sanchez, N., 2018. Suitability of the National Health Care Surveys to examine behavioral health services associated with polycystic ovary syndrome. *The journal of behavioral health services & research*, 45(2), pp.252-268.



EPIC Phrase

- .BBonPCOSCounseling
 - Description: PCOS Diagnosis Counseling
 - The patient was informed of and counseled regarding her diagnosis of PCOS. We reviewed that sequelae are not limited to menstrual irregularities and hirsutism. The patient was advised regarding the risk of long-term complications including metabolic syndrome the risk of endometrial hyperplasia/malignancy. Additionally, we discussed that while the patient may experience difficulty conceiving, the extent of necessary intervention may be limited to oral medication. Finally, we reviewed healthy lifestyle habits to help lower the risk of possible complications and sequelae associated with PCOS.
- ***The patient was encouraged to follow up with her established PCP to ensure awareness of her PCOS diagnosis beyond her Ob/Gyn providers to optimize her care.
- ***As the patient does not have her own PCP, a referral was given so she may initiate ongoing routine care to ensure continued optimization of her health.



EVIDENCE

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