# Contraception and gynecological pathologies

**18 years old,**
**CMI normal**
**First menstruation at 14 years old**
**Irregular (every 2/3 months),**
**painful +**
**She does not need contraception**
**She is worried about the irregularity of her cycle but says that the pain is tolerable.**

# Teen agers and troubles of the menstrual cycle



- No need to give COC only for irregular cycle
- Need to explain that irregular cycles are normal and that she is fertile
- No need of hormonal blood test
- Dysmenorrhea can be treated by NSAID
- If Dysmenorrhea not controlled by NSAID, hormonal contraception can be an alternative

**20 years old**
**Nulliparous**
**No family or personnal history of CVD**
**Complaining of her hypertrichosis**
**Needs a contraception**

# Hypertrichosis and hormonal contraception



- L'hypertrichosis is not androgenic dependent and is only an excess of hair growth
- Hirsutism : excess hair on a male distribution pattern, such as facial and chest areas.
- Hormonal screening usually normal

# Hypertrichosis and contraception



- CHCs don't make it worse
- Some COC containing Cyprotèrone acetate(Diane 35®) are doing well decreasing hair
- When tolerance to this hypertrichosis is bad

Acetate de cyproterone (Androcur® 50 mg ) will improve significantly (add estrogene ).

# Uterine fibroids



Mrs A, 42 years old, nulliparous

has a large uterus and US noted:

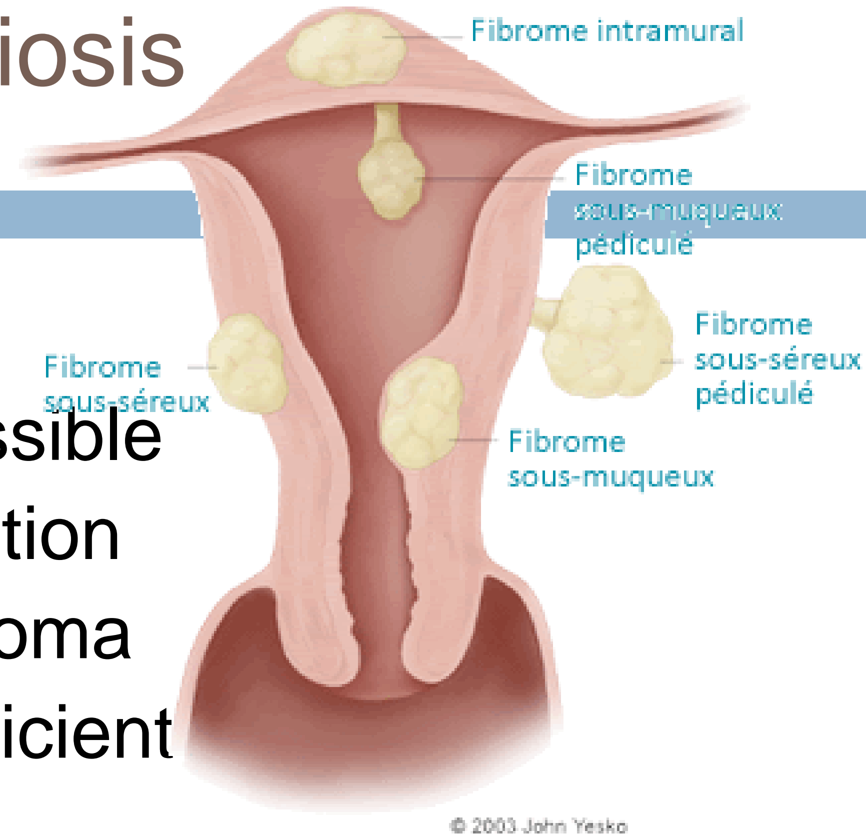
Fibroid uterus 11*10

- Menstruations regular/5 days and heavy (always she said)
- No smoking
- No personal or family history of CVD

Which contraception could be prescribed?

# Myomas/endometriosis






**Myomas**

- All contraception is possible depending of the localization and of the size of the myoma
- Progestogen are not efficient to decrease myomas
- IUD possible if no distorsion of the cavity

# Endometriosis



**Adenomyosis, endometriosis**

- COC or progestin-only pill recommended (continuous treatment)
- Hormonal IUD  if heavy bleeding

**Endometriosis ovarian cyst**

COC is not a treatment

No contraindication

# Ovarian cyst



- **Functional ovarian cyst**

COC is not a treatment for functional cysts

COC prevents functional cysts

Some COC (triphasic one) or progestin-only pill can generate functional cysts

- **History of ovarian benign tumor or border line tumor**

Hormonal contraception is not contraindicated

# Contraception after cervical therapy procedure (conization)



Mrs B. 32 years old had a conization 2 years ago for CIN III.

- Normal Pap test since conization

- Has two children and wants another one in one or two years

She is concerned about his fertility  but wants a contraception .

**Which contraception could be advised ?**

# Contraception after cervical therapy procedure (conization)



- After cervical therapy procedure, fertility rate does not decrease

- Cervical disease is not hormono-dependant but a viral and a STD
- **All contraception are possible**
- **IUD possible**

Expulsion rate of IUD not more frequent

# Contraception and benign breast disease



You have prescribed COC to Mrs D. 38 years old

She comes back 6 months later because she feels something in her breast.

Mammogram and US (and biopsy) conclude adenofibroma of 3 cm.

Do you switch for an other contraception?

# Contraception and benign breast disease



Benign breast pathology is not a risk factor of breast cancer

- Adenofibromas are benign and will not become a cancer

Hormonal contraception is not contraindicated

Decrease sometime with COC

- Brest cysts

No contraindication for hormonal contraception

# Family history of breast cancer



Mrs D. is 30 years old.

Her mother had a breast cancer when she was 55yo

Her aunt when she was 60 yo.

She wants pills and nothing else.

Will you prescribe?

Which one?

# Family history of breast cancer



- WHI and the Million Study don't find an increase of risk of breast cancer when in the family history (first degree) cancer occurs after menopause ( Million study et WHI 2002)

- No excess risk of breast cancer with COC when there is a family history of breast cancer ( Breast cancer and hormonal contraception : 54 epidémiologicals studies Lancet 1996 347 )

## Recommendation

All contraception are possible (hormonal and non hormonal)

# Contraction and breast cancer



- 42 years old, breast cancer 3 years ago
- Under medical supervision, is fine.
- Condom use but has a new “regular partner” and ask for another contraception.

Which contraception will you recommend ?

# Contraception and breast cancer



- Contraindication of all hormonal contraception regardless the type of hormones or routes

- IUD progestin does not increase the risk of breast cancer but is is not recommended (no studies)

- Copper IUD : YES
- Barriers method//sterilization

# Relationship between hormonal contraception and genital cancers

# Relationship between hormonal contraception and cervical cancer



28 studies including 12 531 femmes COC users with a cervical cancer (compared to COC non users).

Taking into account number of sexual partners, screening, smoking or use of condom,

there is an increase risk with duration of COC use

- OR : 1.1 < 5 years
- OR : 1,6 >5 and < 9 years
- OR : 2.2 > 10 years

The risk decreases when COC is stopped

Lancet 2003: 361: 1159-1167 Smith JS

# Relationship between hormonal contraception and ovarian cancer



- Ovarian cancer is the second most common gynecologic malignancy and is associated with 5-year survival rates between 20% and 30%.
- 13 cohort studies et 32 case-control studies :

31% of the cancer cases were COP users versus 39% for non COC users

To use COC 5 to 9 years reduces of 1/3 the risk of ovarian cancer and the effect lasts for at least 10 years

After 15 years decrease of more t han half

Collaborative group on epidémiological studies of ovarian cancer Lancet 2008 371: 303-314

# Relationship between hormonal contraception and endometrial cancer



Risk of endometrial cancer is reduced by 20% after 1 year and by about 50% after 4 years of use

Protective effect : 15 years

# Relationship between hormonal contraception and breast cancer



Research findings difficult to interpret

1. *Meta analysis with 54 case controls studies* (Kumle cancer epidemiology 2002)

53 297 breast cancers/100 239 controls

In COC users : OR 1.24 ( IC à 95% 1.15-1.33)

But these women have more screening

No excess risk after discontinuation 10 years ago

2. *Scandinavian prospective study 1992-1999*

103 027 women/1008 breast cancers

In COC and POP users OR : 1.6 ( IC à 95% 1.2-2.21)

# Relationship between hormonal contraception and breast cancer



*3. Case controls survey* ; (NEJM PA.Marchbanks 2002)

women 35-64 years old

4575 breast cancers/4682 controls

COC users OR 1 ( IC to 95% 0.8 -1.3)

No excess risk whatever the duration of exposure, the dose of estrogen, the age at the beginning and the family history

# Medical eligibility criteria for contraceptive use in case of gynecological pathologies



**NO HORMONAL METHOD** : breast cancer

**No restriction for hormonal method:**

Fibroids uterus, endometriosis

History or cervical intra epithelial neoplasia (CIN)

Family history of breast cancer

Benign breast disease (fibroma, cyst)

History of benign or border line ovarian tumor

History of trophoblastic disease or during the follow up of hCG

Thyroid disease

WHO criteria eligibility 2009

# Contraception for women infected with HIV or have AIDS

# Contraception for women infected with HIV or have AIDS



1. Contraceptive methods and increase risk of HIV acquisition in women

1. Interaction between antiretroviral therapy (ARV) and hormonal contraceptive

# Hormonal contraceptive methods and risk of HIV acquisition in women



- Data do not support an association between use of oral contraceptives and increased risk of HIV acquisition
- Uncertainty persists regarding whether an association exists between depot-medroxyprogesterone acetate (DMPA) use and risk of HIV acquisition.
- No data have suggested significantly increased risk of HIV acquisition with use of implants, though data were limited.
- No data are available on the relationship between use of contraceptive patches, rings, or hormonal intrauterine devices and risk of HIV acquisition

Polis CB, et al. Contraception. 2014 Oct;90(4):360-390.

# Contraceptive methods and risk of HIV acquisition in women



- Spermicids (nonoxynol): not recommended when used several time a day

May even increase the risk of infection because it affects the vaginal lining in such a way that any HIV that was not killed could enter the system through vaginal tissue

Polis CB, et al. Contraception. 2014 Oct;90(4):360-390.

# Case study
# Contraception and HIV



- 32 years old,  HIV + for 10 years,
- 2 abortions
- Adequately controlled by the treatment
- Viral load negative
- Her partner is HIV negative

# Contraception and HIV



If viral load negative, condom is not essential

Recommendation (WHO, 2009)

- COCs,POP, POI, implants, can be used unless their therapy includes ritonavir which may reduce the effectiveness of hormonal contraception
- Emergency contraception (EC)

- ARV therapy (favirenz (Sustiva®) or névirapine (Viramune® ) may reduce the effectiveness of levonorgestrel (LNG).

  - Double the dose of LNG is an option but no data
  - No data on interaction with ulipristal

# IUD and women with infected with HIV or have AIDS (WHO criteria eligibility 2009



- IUDs can be used in case of HIV infection, except for women with AIDS and those not on antiretroviral therapy.
- No need to remove IUD if a woman develops AIDS while she had an IUD in place.
- IUD use by HIV-infected women has not been associated with increased risk of infection-related complications.
- The fact that copper-bearing IUDs may increase menstrual bleeding, and subsequently the risk of anemia, has to be taken into account in case of HIV positive women;

Stringer EM, Kaseba C, Levy J, et coll. (2007) A randomized trial of the intrauterine contraceptive device vs hormonal contraception in women who are infected with the human immunodeficiency virus. Am J Obstet Gynecol 197 (2): 144.e1-8

Richardson BA, Morrison CS, Sekadde-Kigondu C, et coll. (1999) Effect of intrauterine device use on cervical shedding of HIV-1 DNA. AIDS 22; 13 (15): 2091-7

# Interaction between antiretroviral therapy (ARV) and hormonal contraceptive



- ARV (ritonavir**)** reduce the effectiveness of hormonal contraception

But also probably nelfinavir,, lopinavir (Kaletra) et névirapine (Viramune)

- Increase thromboembolic risk for efavirenz, indinavir, atanazavir et fozamprézavir ?

- Be aware of drugs interaction when associated treatment (tuberculosis, epilepsy).

# Contraception for women infected with HIV or have aids



- Back up contraception with hormonal methods when they are on ARV therapy because reduce the effectiveness of hormonal contraception

- Urge women to use condoms along with all other contraceptive methods
- Only condom protect against IST and HIV.

# Contraception and liver disease

**34 years old, primiparous**
**Cholestasis during the pregnancy**
**Delivery 3 month ago**
**She wants to take the COC she was used to**

# History of cholestasis pregnancy related



- Cholestasis disappears few days after the delivery.

Recommendation (WHO criteria eligibility 2009)

- Combined C. generally can be used but has to be stopped  and not any more taken if jaundice appears
- POC can be used in any circumstances

# Liver disease (WHO, 2009)



- **Gall bladder disease**

Recommendation (WHO criteria eligibility 2009)

Treated by cholecystectomy : Hormonal contraception can generally be used

Medically treated : Combined contraception not to be used  except if asymptomatic

POP can generally be used

# Liver disease (WHO, 2009)



| Condition | I | C | I | C | I | C | I | C | Clarifications/Evidence |
|---|---|---|---|---|---|---|---|---|---|
| **VIRAL HEPATITIS** | | | | | | | | | |
| a) Acute or flare | 3/4 | 2 | 3/4 | 2 | 3/4 | 2 | 3 | 2 | **Clarification**: The category should be assessed according to the severity of the condition. |
| b) Carrier | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **Evidence**: Data suggest that in women with chronic hepatitis, COC use does not increase the rate or severity of cirrhotic fibrosis, nor does it increase the risk of hepatocellular carcinoma.(483;484) For women who are carriers, COC use does not appear to trigger liver failure or severe dysfunction.(485-487) Evidence is limited for COC use during active hepatitis.(488;489) |
| c) Chronic | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| **CIRRHOSIS** | | | | | | | | | |
| a) Mild (compensated) | 1 | | 1 | | 1 | | 1 | | |
| b) Severe (decompensated) | 4 | | 4 | | 4 | | 3 | | |
| **LIVER TUMOURS*** | | | | | | | | | |
| a) Benign | | | | | | | | | |
| (i) Focal nodular hyperplasia | 2 | | 2 | | 2 | | 2 | | **Evidence**: There is limited, direct evidence that hormonal contraceptive use does not |