CONTRACEPTION

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Overview

Various contraceptive options exist, allowing choice based upon ease, efficacy, side-effects and cost. In 15-17 year old women, oral contraception and condoms have been found to be the primary methods used with sterilization being more common in 35-44 year old married couples.[4]

Diagnostic Considerations

Review different methods of contraception:

Hormonal

- Combined OCP = estrogen + progestin
- Progestin only pill/"mini-pill" (Micronor)
- IM progestin (Depo-Provera)
- Transdermal Patch (Evra)
- Vaginal Ring (NuvaRing)

Barrier

- Condom

Intra Uterine Device (IUD)1

- Copper (NovaT, Liberte, Flexi-T)
- Progestin/levonorgestrel (Mirena)

Surgical sterilization

- Vasectomy
- Tubal ligation

OCP

Different types of combined OCP[1]:

• 21/28 cycle = 21d of OCP + 7d of placebo

- Advantage: Decreased spotting
- Disadvantage: Inconvenience of regular withdrawal bleed
- Monophasic (same dose of estrogen+progestin for 21d) vs. Biphasic (same dose of estrogen but 2 different dose of progestin during 21d) vs. Triphasic (same dose of estrogen but 3 different dose of progestin during 21d)

• Continuous regimens

- Advantages: Convenience of fewer withdrawal bleeds, decreased: pelvic pain, H/A, bloating, and breast tenderness, better control of endometriosis/PCOS
- Disadvantages: Limited data on long term safety, increased spotting, increased cost
- Seasonale = 150mcg levnorgestrel + 30 mcg ethinyl estradiol (EE) x 84d + placebo x 7d
- Seasonique = 150mcg levnorgestrel + 30 mcg EE x 84d + 10mcg EE x 7d

• Absolute contraindications of OCP:[5]

- Current pregnancy or < 6 wk post partum if breastfeeding
- Undiagnosed vaginal bleeding
- Smoker > 35 yrs old (>15 cigs/day)
- HTN (sBP >160 or dBP >100)
- Current or past venous thromboembolism history
- PMHx of Ischemic heart disease, CVA, or complicated valvular heart disease
- Migraine with focal neurological symptoms
- Current breast cancer
- Diabetes with end-organ involvement
- Severe cirrhosis, or liver tumour

• Drugs that can cause contraceptive failure:

Anticonvulsants (carbamazepine, oxcarbazepine, phenytoin, phenobarbital, topiramate, primidone), anti-TB (Rifampin), anti-fungal (Griseofulvin), anti-retroviral (Ritonavir), St. John's wort[1]

• How to start: [1]

- 1st day start (start 1st day of cycle): No back-up contraception (BUC) required, more S/E's
- Quick start (start immediately): BUC required for 1 week, less S/E's
- Sunday start (start 1st Sunday after menses): BUC required for 1 week if starting >5d since LMP

• What to do if 1 or more missed pills:[2]

During 1st week: Take 1 pill ASAP and next pill at regular time (ie. may be taking 2 pills in 1 day) ➔ Continue taking 1 pill daily until the end of the pack ➔ Use BUC for next 7 days ➔Consider emergency contraception if unprotected intercourse (UIC) within last 5 days

During 2nd and 3rd week: Take 1 pill ASAP and next pill at regular time ➔ Continue taking 1 pill daily until the end of the pack, discard any placebo pills, start a new cycle with no hormone free interval ➔ If more than 3 pills missed, use BUC for 7 days ➔Consider emergency contraception if UIC within last 5 days

• Side-effects:[1]

• Irregular bleeding:

- Occurs in 10-30 % of women in the 1st month with improvement usually seen over time
- If persists > 3 months rule out: Poor compliance, uterine/cervical pathology, malabsorption, pregnancy, smoking, other meds (see list above), infection (especially chlamydial infection if new onset spotting in regular OCP user)
- Tx: 7d trial of oral estrogen or switching to OCP containing different type of progestin

• Breast tenderness and nausea

- Improve with time
- Tx: Switch to lower estrogen OCP

• No withdrawal bleeding during placebo:

- Rule out pregnancy
- Tx: Switch to OCP containing different type of progestin (levonorgestrel) or higher dose estrogen

• Placebo-controlled trials failed to show significant weight gain or mood changes in OCP users

• Other Considerations:

• Headache

- Warning: Consider stroke in Ddx
- Red flags: Visual change, slurred speech, weakness/numbness, migraine starts/ worsens with OCP
- OCP contraindicated with a past history of migraine if:
  - Smoker
  - Migraine worse on OCP
  - Migraine with aura or neurological symptoms
  - Other risk factors: HTN, Age > 35, DM, Afib, Cardiopathy, thrombophilia, dyslipidemia

• Pregnancy

- Greater risk when:
  - Interval between two packs of pills > 7d
  - Skipping a pill in the first week
- Risk of fetal malformation = minimal

• Breastfeeding

- • Avoid OCP in 6 weeks post-partum, to avoid interfering with lactation
- Management = progestin only pill

Progestin only pill[1]

- Ovulation inhibited in 60% of women; primary mechanism of action is endometrial suppression and thickening of cervical mucous
- Taken PO same time (within 3 hour window) OD with no pill free periods
- No estrogen related side effects
- Indications: Smoker > 35 yrs old, migraine with focal neurological symptoms, breastfeeding, other unwanted S/E's of combined OCP
- Side effects: Inter-menstrual bleeding, headache, functional ovarian cysts, amenorrhea

IUD

Available in Copper intrauterine device (foreign body reaction in endometrium, toxic to sperm or Mirena intrauterine system (endometrial decidualization and glandular atrophy +/- inhibition of ovulation)

• Risks:

- Uterine perforation: 0.6 – 1.6/1000 insertion
- Infection: small risk
- Expulsion: 5.8% (progestin), 6.7% (copper)
- Failure: Higher rate of miscarriage/ectopic pregnancy

• Contraindications:[5] Current pregnancy, current, recurrent, recent (past 3 months) PID or STI, unexplained vaginal bleeding, puerperal sepsis, immediate post-septic abortion, severely distorted uterine cavity, cervical/endometrial Ca, breast Ca (for progestin IUD), malignant trophoblastic disease, copper allergy (for copper IUD)

Emergency contraception[3]

• Hormonal methods:

- Levonorgestrel method (Plan B, NorLevo, Next Choice) = 2 doses of 0.75 mg levonorgestrel taken orally 12 hours apart or 1 dose of 1.5mg levenorgestrel
- Yuzpe method (Ovral) = 2 tablets of 50 µg of ethinyl estradiol and 250 µg of levonorgestrel taken orally 12 hours apart
- Levonorgestrel methods more effective and has less S/E than Yuzpe method
- No difference in efficacy and S/E between single dose (1 dose of 1.5 mg) vs. double dose (2 doses of 0.75 mg) of levonorgestrel methods
- Effective up to 5d after UIC

• Post-coital copper IUD

- Effective up to 7d after UIC