• Contraceptive Management
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♦ Contraception

♦ In 2001 49% of the 6.4 million pregnancies in the US were unintended. About half of unintended pregnancies are attributable to contraceptive failure or incorrect use.

♦ A Practical Patient Centered Approach

1. Review of Contraceptive Methods

  Pills
  patch
  ring
  implants
  IUDs
  permanent
  emergency

♦ A Practical Patient Centered Approach

2. Targeted Contracepting

  • Teens
  • Diabetics
  • Epilepsy
  • Migraines
  • Obesity

♦ Pills

♦ Oral contraceptives (OCs) have been used for more than 40 years in the United States and are the second most popular contraceptive choice for women after sterilization.

♦ When used correctly OCs are over 99% effective but the true failure rate is 3%

♦ Non contraceptive benefits

♦ Most pills today are low dose
Pills

Noncontraceptive benefits

- Improvements in dysmenorrhea
- Shortened menses, decreased anemia
- Improvement of acne
- Improvement of Hirsutism
- Decreased risk of osteoporosis
- Decreased risk of Endometrial cancer
- Decreased risk of Ovarian cancer

Pills

The New Progestins

- In the 1940s, chemists made structural changes to testosterone and changed its activity from androgen to progestin
- Second generation highly androgenic
  - Levonorgestrel
- Second generation less androgenic
- Norgestrel, ethynodiol diacetate and norethindrone and norethindrone acetate

Pills

Third generation Progestins were developed with structural modifications to lower their androgenic activity

- Norgestimate
- Desogestrel

Yasmin: 3mg Drospirenone (DRSP) and 30mcg of ethinyl estradiol

DRSP is a synthetic analog of spironolactone and has antiandrogenic and antimineralcorticoid effects. More closely resembles progesterone biochemically than other synthetic progestins
\begin{itemize}
\item \textbf{Pills}
\item Extended Cycle Contraception
\begin{itemize}
\item Cyclic withdrawal bleeding is not necessary to obtain contraceptive efficacy
\item Cyclic cycles developed because women’s acceptance partially predicated on the appearance of monthly menstrual flow to confirm absence of pregnancy
\item Some women feel regular monthly cycles are needed to clean the uterus or are “more natural”
\end{itemize}
\item \textbf{Extended Cycle Contraception}
\item Any monophasic pill can be used
\item Prepackaged FDA formulation
\begin{itemize}
\item 30-mcg ethinyl estradiol (EE) and 0.15mg levonorgestrel (LNG) 84 active pills and 7 days placebo
\end{itemize}
\end{itemize}

“Unacceptable bleeding” accounts for 8% discontinuation

Irregular bleeding decreases after two cycles

Data now supports “extending” the bleeding free interval further

\begin{itemize}
\item \textbf{Pills}
\item Quick Start Contraception
\item Vs Conventional Sunday Start OR Day 5 Start
\item Quick Start described by Westoff et al was implemented to increase patient compliance and to prevent unintended pregnancy during the period before initiation of OC
\item Urine pregnancy test performed in the office. Patients with a negative test take the first pill in the office and are given a perscription for the remainder
\end{itemize}
- **Patch**
  - 2001 FDA approved transdermal contraceptive patch, Ortho Evra (20-mcg EE and 150-mcg norlgestromin per 24hr) with new patch administered weekly
  - Alternative route of administration
  - Avoids food interactions
  - Avoids “first pass” metabolism by the liver
  - Avoids daily administration, improves compliance

- **Ring**
  - The NuvaRing, designed in the Netherlands
  - 15-mcg estradiol and 120-mcg etonogestrel a low androgenicity progesterone daily over 3 consecutive weeks
  - Provides another alternative route of administration
  - Avoids the “first pass” metabolism, minimizing the amount of steroid administered
  - May offer greater cycle control

- **Implants**
  - Etonogestrel implant (Implanon)
  - 25-30ug/day of etonogestrel is require to suppress ovulation. The etonogestrel in Implanon is released initially at about 60-70ug/day and decreases to 30ug/day over time. The progestin level inhibits ovulation for up to 3 years
Implanon

Discontinuation

- Abnormal bleeding patterns 11%
- Weight gain 2.3%
- Emotional Lability 2.3%
- Headache 1.6%
- Acne 1.3%
- Depression 1.0%

Permanent Birth Control Options

- Vasectomy
- Tubal ligation
- Essure procedure

PBC Procedure Comparison

What is the Essure procedure?

- First and only transcervical sterilization procedure approved by the FDA
- Can be performed with local anesthesia
- Micro-insert elicits benign tissue response and permanently occludes tube
  - does not contain or release hormones
  - micro-insert location and tubal occlusion confirmed by hysterosalpingogram at three months

Essure Micro-insert

- Soft, light and flexible
- Does not contain hormones
Made from materials used successfully for decades in medical procedures such as heart and other surgeries

**Should Hysteroscopy Replace Laparoscopy for Sterilization**

**Comparison of: Contraceptive efficacy, Complications and Cost**

Efficacy: Failure rate of ESSURE one-tenth that of Filche Clip and one-hundreth that of all methods of laparoscopic sterilization

TROCAR INJURIES: Between 1997-mid 2002 the FDA received more than 1300 laparoscopic trocar-associated injury reports, including reports of approximately 30 deaths

**Emergency Contraception**

- Taken after an episode of unprotected intercourse
- The sooner you take it the more effective it is
- If ECPS are taken within 72 hours of unprotected intercourse the risk of getting pregnant is reduced by 89%
- If taken within 5 days reduces pregnancy risk by 80-85%
- Does not cause an abortion
- Available as “plan B”

**Targeted Contracepting**

- Teens
- Diabetic
- Epilepsy
- Migraines
- Obesity

**Bibliography**


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