Hormonal Contraception: Asian View

1. Need for Contraception
2. Use of Contraception
3. Importance of Non-contraceptive benefits
4. Risks and Side effects with main importance for clinical practice
5. Women’s view of hormonal contraception Importance on Counselling of the women

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Contraception compared to rate of induced abortions to prevent unwanted pregnancies in China (2010)
- Number of women in reproductive age in China: 363 Million women
- 50.3% of these women take no conception methods
- only 12.3% women take conception methods every time
- eight – ten Million induced abortions to prevent unwanted pregnancies every year in China!

Urgent need for more education
Urgent need for more contraception

China Government, Health Authorities, Data 2010
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**Contraception in Asia: Large differences between China and Japan, but in both countries COCs < 2%**

**Contraception in China – Changes over the last 30 years**

- non-hormonal IUD constant about 90%
  - still small and further ongoing increase
- small increase of LNG-IUD (Mirena available since 1990), however, still less than 0.2%
  - Use about 100,000 Mirena/year, about 50% for contraception 50% for treatment such as Heavy Menstrual Bleeding (HMB)
- Importance of injections: less than 0.2% (despite DMPA is available since 30 years)
- Importance of implants: less than 0.2% (despite Implanon is available since > 10 years)

**Contraception in China – Changes over the last 30 years**

- COCs containing levonorgestrel or desogestrel available since 20-30 years
  - Availability of other COCs: Ethinyl Estradiol/Drospirenone (Yasmin) since two years Ethinyl Estradiol/Cyproterone acetate for symptoms of hyperandrogenism, especially in PCOS
  - still no progestin-only pills available (exception levonorgestrel as emergency contraception)
  - since launch of Yasmin (2010), small increase, but still less than 2% of women in reproductive age
  - In specialized Women’s hospitals more than 95% of COC is used for problems in Gyn.Endocrinology (like bleedings, PCOS etc), but not for contraception

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Contraception in China: Changes over the years
(Percentage of Women in Reproductive Age)

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<th>Methods</th>
<th>1990</th>
<th>2000</th>
<th>2012</th>
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<tr>
<td>IUD</td>
<td>52.1</td>
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<tr>
<td>Female sterilization</td>
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<td>Male sterilization</td>
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<td>OCPs</td>
<td>8.2</td>
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<td>Condom</td>
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</tr>
<tr>
<td>Injection and impl</td>
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<td>0.3</td>
<td>0.2</td>
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<tr>
<td>others</td>
<td>4.0</td>
<td>0.2</td>
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</tr>
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</table>

China Government Health Authorities Data 2012

Own experience in clinical practice during the last 10 years
Importance and use of contraception in China

- It is difficult to get more detailed figures for China regarding different types of contraception, especially for COCs.

- My own view is based on experience in one of the largest (may be the largest) departments of Gyn. Endocrinology in China, which was founded 10 years ago as the first in China.

- Own view is somehow different from average use, because:
  - we see more patients with preexisting diseases
  - we are particularly good informed by the companies of new activities, of new substances launched and coming soon
  - we are involved in studies for contraception, particularly also using new types of COCs
  - we see many patients: every day > 3,000 outpatients in Beijing OB/GYN-Hospital, about 500/day in our department, increasing every year

About 70,000 outpatients 2012 in our Department of Gyn.Endocrinology
Beijing OB/GYN Hospital, Capital Medical University, China

- In future we can expect an increase of the use of COCs caused by more informations to the women via media, internet etc. (in our department > 30% of contraceptive methods used; all over China average use only about 1.5%)

- However, Chinese women often prefer IUD as long-acting method, and non-hormonal IUDs are free in China (family planning policy)

- More use of injections can not be expected, especially because Chinese women do not like it.

- At least in the near future also more use of implants can not be expected, especially because Main reason are bleeding problems observed during launch of Implanon, without information and education about this problem

- The use of Mirena is well assessed by experts, but it is too expensive and more education about benefits and problems (bleedings) is needed

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Importance on Counselling of the women

- Chinese gynaecologists are well informed about the benefits to treat symptoms of hyperandrogenism like acne and hirsutism. For these symptoms almost exclusively only Diane 35 has the indication.

- There is only very little discussion about other non-contraceptive benefits with the exception of experts in the field of hormones (exception: COC are often used for bleeding problems!)

- The benefits of long-cycle treatment using COC are not known, Until now no use of this form of treatment (we started just now in our department, especially in women with PCOS).
Own experience in clinical practice during the last 10 years

Importance of non-contraceptive benefits in China

- An exception for the importance of non-contraceptive benefits also in China may be the use of contraceptive pills in PCOS in specialized centres.

- In our department about 180 women with PCOS/day whereby almost exclusively Diane is used.

1) to treat symptoms of hyperandrogenism
2) to treat hyperandrogenism, which can treat the PCOS (In China this is a labelled indication for Diane !)
3) to increase fertility in women with PCOS who want to get pregnancy (use for three months)

Benefits for the use of COC with special importance in women with PCOS

Benefits for the use of COC with special importance in women with PCOS (if not wanting fertility)

Contraceptive Reduction Benefits
Pregnancy > 99
Deaths at birth > 90
Abortions (spontaneous/induced) > 90
Extraterianal Pregnancy > 90

Noncontrceptive Reduction Benefits
Cycle disturbances 25-50
Dysmenorrhea 25-50
Anemia 25
Acne, Hirsutismus 10-50
Pelvic inflammation 50
Rheumatoid arthritis 50
Benign Breast Disease 25-50
Benign ovarial tumours 25
Ovarial follicle cysts 25
Ovarial carcinoma 50
Endometrium carcinoma 50
Colon/Rectal carcinoma 50

In addition COC like Diane can decrease hyperandrogenism which is a main factor in the pathophysiology of PCOS !

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Assessment of main risks using COC

1) Venous thromboembolism (VTE): only little discussion, induced not by Chinese gynecologists but by the BAYER company (giving us information about the controversal studies)

VTEs are very rare in China, genetic alteration of clotting factors very rare. Since 2 months discussion about CPA, caused by information of BAYER company, labelling perhaps will be changed.

2) Stroke: Risk largely not known (exception experts)

need for more education in risk factors (smoking, hypertension, obesity etc.)

3) Myocardial Infarction: risk largely not known (exception experts)

4) Risk of Bone loss and fractures: risk largely not known (exception experts)

5) Cervical cancer: risk well known, no problem in practice (annually cervical smear, vaccination only available in Hongkong)

6) Breast cancer: more than 50% of gynecologists growing awareness and fear

Own experience during endocrinological education of gynecologists over the last 10 years in China

Assessment of side effects using COC in China

1) Weight gain: very often observed in clinical practice (greatest fear of the gynecologists and of the women)

2) Irregular bleedings/Spotting: problems not with CDC, but with progestin-only (IUD, implant)

Bleeding problems caused by ovarian cysts

3) loss of libido: perhaps important, but no data available

others like headache, migraine, mood changes, breast tenderness, acne not really a problem !
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Main problem in China: No time to give extended counselling (3,000 outpatients/day in our hospital; 500/day in our department !)

Breast Cancer Collaboration project
Germany - China

1,096 German medical students using COC different types of contraception
The same study now will be performed in Beijing OB/GYN Hospital
using the validated Female Sexual Function Index (FSFI score)
aim: 10,000 Chinese women

Leading causes of death in view of the women


PrP-receptor 1 Membrane-bound

Progesterone

Cell membrane

ER/PR

COPD

Pneumonia

Other causes (11%)

Breast cancer (39%)

Other causes (28%)

COPD (4%)

Pneumonia (4%)

Cancer (5%)

Heart disease (46%)

Old age (17%)

Other causes (16%)

Heart disease (18%)

Old age (15%)

Other causes (15%)

Heart disease (20%)

Old age (17%)

Other causes (18%)

Heart disease (19%)

Old age (16%)

Other causes (20%)

Heart disease (21%)

Old age (15%)

Other causes (17%)

Heart disease (22%)

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Other causes (18%)

Heart disease (23%)

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Heart disease (96%)

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Other causes (92%)

Heart disease (97%)

Old age (14%)

Other causes (93%)

Heart disease (98%)

Old age (14%)

Other causes (94%)

Heart disease (99%)

Old age (14%)

Other causes (95%)

Heart disease (100%)

Old age (14%)}
Conclusion

- Induced abortion rate to prevent unwanted pregnancies similar to Europe (although large differences between the countries)
- Most frequently used is non-hormonal IUD (50%), almost no change since 30 years; COC since 20 y. less than 2%, slowly increasing
- Because of the low use of COC, the risks are not well known in China, only little discussion about VTE (this risk is in general low in China)
- By far most important side effects weight gain and bleedings. Increasing fear of risk of breast cancer (gynecologists and women)
- With increasing use of COC and LNG-IUD more bleeding problems

More education especially needed:

- benefits of long-acting contraception like LNG-IUD
- differences between COCs
- use and benefits of long-cycle regimen using COCs
- non-contraceptive benefits of COC

Europe/China

<table>
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<tr>
<th>Europe</th>
<th>China</th>
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<tr>
<td>COCs</td>
<td>43.7%</td>
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<tr>
<td>IUD</td>
<td>40.2%</td>
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<td>condom</td>
<td>9.2%</td>
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<tr>
<td>Tubal ligation</td>
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<td>Vaso ligation</td>
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<tr>
<td>Others</td>
<td>0.2%</td>
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<tr>
<td>Total</td>
<td>100.0%</td>
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Thank you for your attention!