Special Problems of Contraception in the Teenage Girls

TEENAGE KIZLARDA KONTRASEPSİYONUN ÖZEL PROBLEMLERİ

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In the course of this century we observe a distinct change in the onset of menstruation to younger ages. The accelerated somatic development is related to the better nutrition and health care and therefore more remarkable in the high-industrialized countries. But similar figures are reported from other parts of the world.

During the first years after menarche most of the cycles are anovulatory. It takes about three years until at least in every second cycle a regular progesterone secretion occurs. And even five years after the first bleeding only two thirds of the cycles show signs of ovulation (1).

On the other hand there had been a marked change in the social life of the youth. There is an increase in freedom, which allows more interest and activity in the sexual life, while the old ethical values as chastity and virginity diminish. The young girls and boys start with intimate relationships more and more earlier in their life (Table 1). In 1982 the rate of 14 year old girls with coital experience was about 3% and 9% at the age of 15. Nowadays, the rates are 10% and 25% respectively (2,3). These recent data are reported from a new telephone hot line, which has been established by one of the major producers of oral contraceptives in Germany. Girls and boys can call or write and ask questions regarding the biology of the genital organs, sexuality, contraception and other problems related to the general subject of love and intimacy (3).

The records of this hot line give interesting figures on the sexual life of teenagers in Germany. On average, the first petting occurs at 14.5 years and the first sexual intercourse about 15 months later. But only half of the teenage girls and boys use any contraceptive method at this first event. The main reason is, that the intercourse comes by surprise and is not scheduled. Or if it was scheduled, it was wanted to occur without any influence by any method, just like some kind of celebration (3).

But besides that, the young people exhibit a tremendous lack of knowledge in the various methods of contraception and an unjustified fear of side-effects in using these methods. Most information on contraception are gained from the school (45%), from friends (20%) and from the sexual partner (11%) and only in 9% from a medical doctor (4).

Especially the girls under the age of 15 seldom ask for a contraceptive method when going to a gynecologist (Table 2). The number increases with the age, but remains at 50% between 16 and 18 years (3). Despite the easy availability of contraceptive items, we still see a high rate of teenage pregnancies. At the age of 11 to 15 there is a relation of 1.4% patients asking for contraception to 11% patients coming for prenatal care (3).

The pregnancy rate in teenagers is about 10 to 30 per thousand (Table 3). There are no clear figures, whether these rates are increasing or not during the recent years (5).

Unfortunately, only few information are available on the situation in Turkey. At a present population growth rate of 2.4%, about 20% of all Turkish people are within the most fertile lifespan between 15 and 24. The high rate of 25% elective abortions show that widespread information on contraceptive methods are urgently needed (6).

Councilling the adolescents has to consider the special problems of this age. From the stimulation of the girls and boys the demands for a suitable technique are:

-very low failure rate
-no short term or long term side effects
-low costs
-easy application.
Table 1. Coital experience in teenagers

<table>
<thead>
<tr>
<th>age</th>
<th>14 yr</th>
<th>15 yr</th>
<th>17 yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>girls (1982)</td>
<td>3</td>
<td>9</td>
<td>56%</td>
</tr>
<tr>
<td>(1992)</td>
<td>10</td>
<td>20</td>
<td>75%</td>
</tr>
<tr>
<td>boys</td>
<td>10</td>
<td>25</td>
<td>66%</td>
</tr>
</tbody>
</table>

first petting at 14.5 yr
first intercourse at 15.8 yr

Table 2. Reason for the first visit to the gynecologist

<table>
<thead>
<tr>
<th>age</th>
<th>11-15 yr</th>
<th>16-18 yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>contr.</td>
<td>11.0%</td>
<td>49.1%</td>
</tr>
<tr>
<td>preg.</td>
<td>1.4</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Table 3. Pregnancy rates in teenagers under the age of 19

<table>
<thead>
<tr>
<th>preg.</th>
<th>elective abortions</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>3.1% 40%</td>
</tr>
<tr>
<td>England</td>
<td>1.5% 42%</td>
</tr>
<tr>
<td>Sweden</td>
<td>1.8% 60%</td>
</tr>
<tr>
<td>Germany</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

Schwab. Günd 2.1% (58/2711 deliveries)
Maas/Rau-Gottesbüren (1992)

Interrupted intercourse is still frequently used worldwide. About 31% of all Turkish couples practising contraception do it this way (6). But there is a fairly high rate of unwanted pregnancies as already the first secretions from the prostatic and vesicular glands, long before the orgasm occurs, may contain viable sperms. Further, this method requires a very strong self-control to withdraw at the right time (4).

Spermicides

In the ancient Egypt and Arabia crocodile or elephant excrements had been applied intravaginally for family planning. But also more comfortable substances as dates or extracts from the acacia bush had been used. Even nowadays, some ingredients of the commercial spermicides derive from the acacia extracts. These substances are applied by vaginal suppositories or cremes and build up a foam, which acts as a mechanical barrier and in addition to this immobilize the sperms by chemical action.

Despite this technique is easily applicable just at the time, when protection is needed, for the unexperienced young people it imposes some problems. Many teenage girls feel protection is needed, for the unexperienced young people it imposes some problems. Many teenage girls feel very shy and don't like to touch their genital area, so, they may not push the suppositorium high enough into the vagina. The ovum needs some time to liquefy, therefore intercourse should not start earlier than about 10 minutes after insertion. But as the chemical agents get diluted by the vaginal secretions the protection diminishes after one hour (10).

Condom

The use of condoms is recommended all over the world not only as contraceptive technique, but as protection against sexually transmitted diseases and especially AIDS. Even if applied correctly, a tearing rate of 1-2% must be considered. But the major problem is not the application but the acceptance. A recent pub-
Table 5. Acceptance of condoms in teenagers

<table>
<thead>
<tr>
<th>condom experience</th>
<th>girls</th>
<th>boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>accepted</td>
<td>73%</td>
<td>79%</td>
</tr>
<tr>
<td>not accepted</td>
<td>3%</td>
<td>4%</td>
</tr>
</tbody>
</table>

During the first years after menarche menstrual cycles are irregular due to an irregular pattern of the LH and FSH secretions. Very often, there will be a late rise in the estrogen level and a late ovulation with insufficient luteal phase. In teenage girls the low dose of ethinyl-estradiol may not be sufficient for LH and FSH suppression. Therefore a follicular development and ovulation may occur. This explains the high rate of about 50% irregular bleedings in the first cycles during intake of the micro pills, which decreases to 5-7% in the third cycle. In cases with continuing bleeding disorders another kind of O.C. should be tried, e.g. a 50 ug O.C. or a sequential pill (12,4). The incomplete suppression of the follicular development with the micro pill may lead to the formation of an ovarian cyst and results in a slightly higher risk of a pregnancy. On the other hand, the mild dosage of the O.C.s may even exhibit a regulatory action on the pituitary gonadal axis (12).

Prescribing oral contraceptives the side effects and contraindications have to be considered. Most of the diseases mentioned in table 6 are very rare in young people. Therefore the fear of the girls especially regarding cancer or heart attack is unjustified. Other problems of the teenagers are related to the body-weight, headache, decrease of libido and skin-alterations. But as the micro pills contain only a low dose of estrogens and a gestagen with almost no androgenic activity, the side-effects well known from the earlier generation of the oral contraceptives are reduced greatly.

On the contrary, there is a variety of positive effects and of protective actions the OC exert (Table 7). Furthermore, the girls are afraid of an impairment of their fertility after OC intake for several years. Several previous studies showed that a post-pill amenorrhea does not occur more often after long term oral contraceptive use, compared to the general population at a rate of about 0.2-1%. But it is well documented that if irregular bleedings, anovulation or oligomenorrhea did exist before starting with OC these problems will reappear after discontinuation (12).

Usually ovulation will be restored immediately following the last OC cycle. Just the first follicular phase of the next cycle may be prolonged to about 3 to 4 weeks. Within 4 months after stopping the OC treatment more than 50% of the women achieve a pregnancy (13).

The low-dosage-gestagen oral contraceptives cause a suppression not of the gonadotropin secretion but of 40% take the "pill" (Table 4). Ovulation is stopped by suppression of the gonadotropin secretion depending on the dosis of the ethinyl-estradiol and the chemical structure of the gestagens. To reduce the side-effects of the estrogens the dosage had been decreased to 20 to 30 ug in the recent years. These so-called "micropills" are preferably described nowadays.

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Contraindications:
- Thromboembolic disorders
- Cardio-vascular disease
- Hormone-dependent neoplasia
- Cholestatic Jaundice
- Pregnancy
- Hepatic adenomas

Only in selected cases advisable:
- Hypertension
- Recurrent headache
- Diabetes
- Smokers

Table 7. Beneficial effects of oral contraceptives

Protection against:
- Ovarian cancer
- Endometrial cancer
- PID
- Iron deficiency anaemia
- Dysmenorrhea
- Benign mammary tumor
- Ovarian cyst
- Acne, seborrhea, hirsutism
- PMS
- Rheumatic arthritis

Table 8. Interaction of drugs with oral contraceptives resulting in a reduced protection

antiepileptics: barbiturate, carbamazepine, phenytoine

tuberculostatic agents: rifampin, isoniazid

analgetics: phenylbutazone

antibiotics: ampicillin, erythromycin, tetracycline

antihistamines: promethazine

tranquilizers: barbiturate

Remembering the demands of the young people on an acceptable contraceptive method - as mentioned above -, we think the micropills fit best. They are very secure, when taken regularly. They show only minor side effects and are easy to use. The monthly cost for the OC is comparable to 3 to 4 packs of cigarettes, if there is a lower frequency of intercourse of once a week or less, the use of condoms preferable in combination with a spermicide might be sufficient, if applied correctly.

Of course, the correct performance is very important for every technique in contraception, as the Pearl index significantly decreases with more experience. But teaching the handling of the methods is only the second step. The first one has to be making the girls and boys aware of the risk of an unwanted pregnancy and aware of the various possibilities to prevent it.

REFERENCES