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Why are Women not Using Long-Acting Contraceptives?

ABSTRACT & COMMENTARY

Tanfer and colleagues from the battelle centers for Public Health Research and Evaluation in Seattle, Wash., examined data from the 1993 and 1995 National Surveys of Women to examine the reasons why women do not use implant and injectable contraceptives. Implant use was relatively more prevalent among women who were young, who did not have a college degree, who had been married, who were Catholic, who were Hispanic, and who had two or more children and did not want any more children. Injectable use was similar except more prevalent among black women and among women who had attended college, and interestingly, among women who lived in the West. In 1993, the main reasons given for not using the implant were that more than one-fourth of the women in the survey had not heard of the implant, about one-fourth were satisfied with their current method, and 12% feared the method. By 1995, the proportion reporting lack of knowledge had declined to 9%; satisfaction with the current method had increased to 28.1%; and fear of the method had increased to 22%. Only 2.3% in 1995 cited excessive cost as a reason. In 1995, 9.1% of the women had not heard of the injectable method and 27% reported not knowing enough about it. Similarly to the implant method, 20.6% reported satisfaction with their current method and 17% feared the injectable method. Side effects were relatively common, a major reason for discontinuing implants (about 50% of those with side effects), but not a major reason for discontinuing the use of the injectable method (about 5% of those with side effects). Tanfer et al concluded that the use of these methods could be increased by targeting education about the methods to potential users. (Tanfer K, et al. *Fam Plann Perspect* 2000;32:176-183, 191.)

COMMENT BY LEON SPEROFF, MD

Norplant and Depo-Provera were marketed in the United States in 1991 against a background of many years of success, safety, and acceptance throughout the rest of the world. Nei-

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INSIDE

ther of these methods achieved a high level of use. In 1995, 0.9% of women of childbearing age were using the implant and 1.9% injectables. This failure to use new methods occurred despite the fact that half of pregnancies in the United States continued to be unintended. A general principle of family planning, supported by appropriate evidence, is that the more contraceptive methods available, the lower the rate of unintended fertility will be. So, what happened?

There were three probable reasons for the loss of appeal with the implant method. More awareness of the method may have increased concern for cost and side effects. The nearly doubling of the proportion of women fearing the implant method from 1993 to 1995 undoubtedly reflected the negative publicity surrounding litigation and suggestions of coercive use that occurred at that time. And it is likely that the marketing of Depo-Provera affected the implant's potential market.

The injectable method, according to this report, appeals to distinct groups of women (single women, women who have children, women with less than a college education, and women who want a future pregnancy). Interestingly, age and race were not factors.

After nearly a decade since the introduction of Norplant and Depo-Provera to the U.S. market, it is apparent that neither method will achieve the popularity of the oral contraceptive, sterilization, and barrier methods. Is the cup half empty or half full? The pessimistic response is that the implant and injectable methods have proved to be disappointing. The optimistic response is that other methods are very good, and that there is a niche for long-acting methods. Furthermore, this report indicates that the long-acting niche can be expanded with an educational effort directed to appropriately targeted groups of women.

This study identified the characteristics of the women who reported lack of knowledge or fear about the methods. Lack of knowledge was more likely encountered in younger women, married women, and women with no college education, while fear of side effects was more common in single women, women with one or more children, and women using a barrier method. Satisfaction with medically prescribed methods was an important reason for not using long-acting methods of contraception, especially among college-educated women.

Fear of side effects is an understandable motivation to avoid a method of contraception. But what really impresses me is the large proportion of women who had either not heard of the methods or did not know enough about the methods to make a choice. It seems to me that a significant number of those who feared the side effects could be accounted for by a lack of knowledge. Therefore, lack of knowledge emerges as the major operating force.

Contraceptive implants are a good choice for women of reproductive age who are sexually active and desire long-term, continuous contraception. Implants should be considered for women who:

- want to delay the next pregnancy for at least 2-3 years;
- desire a highly effective, long-term method of contraception;
- experience serious or minor estrogen-related side effects with oral contraception;
- have difficulty remembering to take pills every day, have contraindications or difficulty using IUDs, or desire a noncoitus-related method of contraception;
- have completed their childbearing but are not yet ready to undergo permanent sterilization;
- have a history of anemia with heavy menstrual bleeding;
- intend to breastfeed for a year or two;
- women with chronic illnesses, whose health will be threatened by pregnancy.

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Questions & Comments

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For women who are spacing their pregnancies, the difference between implants and Depo-Provera in the timing of the return to fertility can be critical. Implants allow precise timing of pregnancy because the return of ovulation after removal is prompt. Depo-Provera, on the other hand, can cause up to 18 months' delay in return to fertility. By that time, 90% of users of either method will have ovulated, but in the first several months, the difference is dramatic. By three months after removal, half of implant users will have ovulated, but 10 months must elapse before half of Depo-Provera users are ovulatory.

A large, five-year follow-up study in developing countries confirmed the low pregnancy rates associated with Norplant, 0.23 per 100 woman-years for intrauterine pregnancy and 0.03 per 100 woman-years for ectopic pregnancy.[1] When the women using Norplant were compared to women using nonhormonal methods of contraception and to the expected population rates, there was no excess of cancers, connective tissue diseases, or cardiovascular events. Importantly, the complaints of headache and mood disturbances (including anxiety and depression) were similar to those reported by women using oral contraceptives, although higher than women using IUDs.

In the United States, the primary motivations for implant use have been problems with previous contraceptive methods and ease of implant use. Although fear of pain during implant insertion is a prominent source of anxiety for many women, the actual pain experienced does not match the expectations. The level of satisfaction has been high in self-motivated and well-informed users.[2] Teenagers provide an example of well-documented success. Their one-year pregnancy rates are much lower, and their continuation rates are much higher than that with oral contraceptives.[3-7] However, teenage discontinuation of the method due to side effects (especially irregular bleeding and weight gain) is more common with Norplant.[8]

The introduction of new implant methods hopefully will be a boost to the use of this long-acting method of contraception. The new methods include the two rod levonorgestrel implants (Norplant-2 or Jadelle), Implanon, a single implant that contains 3-keto desogestrel (etonorgestrel), and Uniplant, a single implant contraceptive containing nomegestrol acetate. A single silastic implant containing nestorone is also being studied.

Depo-Provera should be considered for women who have any of the following characteristics:

- At least one year of birth spacing desired
- Highly effective long-acting contraception not linked to coitus
- Estrogen-free contraception needed
- Private, coitally independent method desired
- Breastfeeding
- Sickle cell disease
- Seizure disorder

In Western societies, depression, fatigue, decreased libido, and hypertension are frequently encountered. Whether medroxyprogesterone acetate causes these side effects is difficult to know since they are very common complaints in nonusers as well.[9] When studied closely, no increase in depressive symptoms can be observed—even in women with significant complaints of depression prior to treatment.[10]

Even attempts to document a greater weight gain specifically associated with Depo-Provera are unable to do so.[11-13] As with oral contraception, the weight gain may not be hormone-induced but does reflect lifestyle and aging. Remember if symptoms are truly due to the progestin, Depo-Provera, unlike pills and implants, takes 6-8 months after the last injection to leave the body. Clearance is slower in heavier women.

It seems to me that a greater effort to educate women about these methods is needed. The responsibility for this effort must be shared by the pharmaceutical industry and clinicians. A favorable attitude based upon an awareness and knowledge of the vast amount of data derived from many studies and widespread use of these methods is a good starting point for all clinicians who care for women. ❖

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Pathologic Variables and Survival for Patients with Surgically Evaluated Carcinomasarcoma of the Uterus

ABSTRACT & COMMENTARY

Synopsis: *More than half of patients with carcinosarcoma clinically confined to the uterine corpus harbor occult metastases in a pattern similar to that found with endometrial carcinoma.*

Source: Yamada DS, et al. *Cancer* 2000;88:2782-2786.

Yamada and colleagues identified patients with carcinosarcoma clinically confined to the uterine corpus who underwent primary surgical assessment. The purpose of their study was to determine clinicopathologic variables associated with extrauterine disease, recurrence, and survival. Occult metastases were found in 38 of 62 patients (61%). At last follow-up, 31 (50%) had recurrence, with an extrapelvic component in 43%, and 53% had died. Depth of myometrial invasion and lymph-vascular space invasion (LVSI) were associated with extrauterine disease. Factors associated with recurrence and survival included depth of myometrial invasion, LVSI, adnexal and serosal involvement, positive cytology, and lymph node metastases. Of 24 patients with uterine disease only, 11 received no adjuvant therapy, yet eight (73%) were free of disease at last follow-up. Neither adjuvant radiotherapy nor chemotherapy was identified as an independent prognostic factor for recurrence or survival. Yamada et al concluded that more than half of patients with carcinosarcoma clinically confined to the uterine corpus harbor occult metastases in a pattern similar to that found with endometrial carcinoma. They further stated that, although the benefit of adjuvant therapy cannot be demonstrated by this study, a number of early-stage patients survive without adjuvant therapy. They recommend extending the International Federation of Gynecology and Obstetrics (FIGO) surgical staging system for endometrial carcinoma to include carcinosarcoma, and they also recommend conducting prospective trials to examine the benefits of adjuvant therapy for patients with early stage disease.

COMMENT BY DAVID M. GERSHENSON, MD

Mixed mullerian tumors of the uterus, or carcinosarcoma, comprise approximately 5% of all uterine cancers. They are the most common of the uterine sarcomas, and they are noted to have an aggressive behavior. As Yamada et al point out, these tumors are excluded from the FIGO staging system. In this study, 61% of patients had occult extrauterine metastases—an incidence higher than in most series. This high incidence is probably related to surgical staging that was more extensive than usual in this study population. The extent of surgical staging was also responsible for the higher than usual five-year survival for patients with disease confined to the uterine corpus—74%. In most studies, the five-year survival for this group is approximately 50%. Such findings argue for comprehensive surgical staging in patients with such tumors. This study highlights the most important issue regarding uterine sarcomas—the efficacy of adjuvant treatment for patients with disease limited to the uterine corpus. Interestingly, eight out of 11 (73%) patients who received no adjuvant therapy were disease-free at the time of follow-up; however, the number of patients in this study is much too small to resolve this dilemma. The dogma states that, for instance, adjuvant radiotherapy may reduce the incidence of local recurrence but does not improve survival. The few randomized trials that have been conducted have shown no benefits of the adjuvant therapy studied. I agree with Yamada et al that there is a need for further prospective randomized trials to identify efficacious adjuvant therapy. ❖

Hyperspectral Diagnostic Imaging of the Cervix

ABSTRACT & COMMENTARY

Synopsis: *Noncontact in vivo fluorescence imaging of the uterine cervix shows promise as an instrument for the detection of the cervical intraepithelial neoplasia.*

Source: Parker MF, et al. *Journal of Lower Genital Tract Disease* 2000;4:119-124.

The current methods used to screen for and diagnose preinvasive cancer of the cervix (pap smear, colposcopy, and biopsy) require multiple office visits and considerable expense. Because all human tissues fluoresce when subjected to ultraviolet (UV) light, it might be possible to develop an instrument that can use the fluorescence emissions of the tissues on the surface of the uterine cervix either to screen for or diagnose cervical intraepithelial neoplasia (CIN).

Parker and colleagues developed a prototype instrument that directs UV light, generated by a mercury vapor lamp, at the cervix. This causes fluorescence of the tissues on the surface of the cervix. The intensity of the fluorescence can be measured using a scanning imager that reads the intensity of the fluorescence from each pixel in the scanned area. Total scan time was approximately 12 seconds for this prototype instrument. Prior to scanning, the cervix was cleansed with 3% acetic acid.

Thirty-five women were included in the analysis; four women with normal Pap smears and 31 women with abnormal Pap smears. Following each fluorescence scan, the patient underwent standard colposcopy with biopsy of abnormal areas. Two pathologists reviewed all biopsies, and only when the pathologists agreed on the diagnosis were the patients included in the study.

The technique, hyperspectral diagnostic imaging (HSDI), was able to discriminate CIN from normal tissues. The prototype machine did have difficulty differentiating squamous epithelium from squamous metaplasia. Because these preliminary results indicate that HSDI might eventually have clinical applications, Parker et al have begun testing a second-generation instrument.

COMMENT BY KENNETH L. NOLLER, MD

At the present time, I know of at least five different groups that are developing some sort of instrumentation that uses a variety of electronic techniques to identify CIN. Some of the instruments require touching the cervix with a probe whereas others (like the HSDI instrument in this report) use a "no touch" technique. It has been known for some time that normal and abnormal human tissues respond differently when subjected to various external stimuli such as UV light, electrical currents, etc. Perhaps the best example is the difference in the orientation of tissue molecules when subjected to an external magnetic field (MRI).

While none of the five techniques that are being tested is ready for widespread clinical application, the eventual development of a useful technique is almost certain. Whether the technique will be applicable for widespread screening, or as a method to avoid tissue biopsy is a matter for speculation at present. While I do not think an instrument that merely identifies areas to biopsy will be helpful, an instrument that could be used for screening or in place of actual biopsies might find a place in everyday practice. For example, a woman might have a screening scan performed in a few seconds, a report generated in a few more seconds, and if the report is abnormal the actual tissue diagnosis printed out. Thus, in perhaps less than a minute a woman with CIN might be ready for discussion of treatment. We are probably about a decade away from clinical application. It would be wise, however, for clinicians to keep abreast of the literature as it is published for I firmly believe that we will eventually be using more and more of these techniques in everyday practice.

One interesting bit of information was included in this article on which I did not comment. Sixty-two women were initially scanned, but only 35 were included in the report. While there were several reasons for non inclusion, 15 of the 62 women were not included because the two pathologists could not agree on a diagnosis! Often times, we clinicians assume that a pathology diagnosis is the "gold standard." We need to remember that developing a tissue diagnosis is a very subjective process, much like developing a colposcopic impression. While pathology is very good when things are very abnormal it is far less reliable when dealing with the lower end of a spectrum disease such as CIN. ❖

Sentinel Lymph Node Procedure Is Highly Accurate in Squamous Cell Carcinoma of the Vulva

ABSTRACT & COMMENTARY

Synopsis: *Sentinel lymph node procedure with the combined technique is highly accurate in predicting the inguinofemoral lymph node status in patients with early-stage vulvar cancer.*

Source: de Hullu JA, et al. *J Clin Oncol* 2000;18: 2811-2816.

In a recent issue of the *Journal of Clinical Oncology*, de Hullu and colleagues reported 59 patients with primary vulvar cancer who entered a two-center prospective study. All patients underwent sentinel lymph node procedure with the combined technique (preoperative lymphoscintigraphy with technetium-99m-labeled nanocolloid and intraoperative blue dye). Radical excision of the primary tumor with uni- or bilateral inguinofemoral lymphadenectomy was performed subsequently. Sentinel lymph nodes and lymphadenectomy specimens were sent for histopathologic examination

separately. Sentinel lymph nodes, negative at the time of routine pathologic examination, were re-examined with step sectioning and immunohistochemistry. In 59 patients, 107 inguinofemoral lymphadenectomies were performed (11 unilateral and 48 bilateral). All sentinel lymph nodes, as observed on preoperative lymphoscintigram, were identified successfully intraoperatively. Routine histopathologic examination showed lymph node metastases in 27 groins, all of which were detected by the sentinel lymph node procedure. The negative predictive value for a negative sentinel lymph node was 100%. Step sectioning and immunohistochemistry showed four additional metastases in 102 sentinel lymph nodes that were negative at the time of routine histopathologic examination. de Hullu et al concluded that sentinel lymph node procedure with the combined technique is highly accurate in predicting the inguinofemoral lymph node status in patients with early-stage vulvar cancer. They further concluded that future trials should focus on the safe clinical implementation of the sentinel lymph node procedure in these patients. Step sectioning and immunohistochemistry slightly increase the sensitivity of detecting metastases in sentinel lymph nodes and should be included in these trials.

COMMENT BY DAVID M. GERSHENSON, MD

The treatment of invasive vulvar cancer has changed dramatically in the past two decades. Until the mid-1980s or so (and even to the present time in a few centers), radical vulvectomy and bilateral inguinofemoral lymphadenectomy was standard treatment. Beginning in the late 1970s, a few groups began to use less radical surgical treatment—wide radical excision (or hemivulvectomy) for the primary lesion. In addition, optimizing our knowledge of lymphatic drainage of the vulva, for unilateral vulvar lesions, unilateral inguinal lymphadenectomy was practiced. Other advances include the practice of superficial inguinal lymphadenectomy rather than total lymphadenectomy. In 1994, our group at M.D. Anderson Cancer Center was the first to report the use of sentinel node mapping in the management of vulvar cancer. At that time, we were only using the intraoperative blue dye injection approach. At present, we are also using the lymphoscintigraphy technique described in this paper. Based on our work, the Gynecologic Oncology Group is now conducting a prospective clinical trial to validate the use of lymphatic mapping in vulvar cancer. This paper represents an important contribution to the literature. As we gain more knowledge and experience with these techniques, the radicality of surgical treatment of vulvar cancer will be reduced even further. ❖

Special Feature

Dermatologic Disorders of Pregnancy

By Steven G. Gabbe, MD

During the course of prenatal care, patients frequently present with concerns about dermatologic changes related to pregnancy or with dermatoses specific for pregnancy. To assist the obstetrician in caring for these patients, this review will describe the skin changes associated with normal pregnancy, identify specific dermatoses of pregnancy, describe dermatoses that may be exacerbated by pregnancy, and develop a plan for the evaluation and treatment of pregnant patients presenting with a dermatologic disorder in pregnancy.

Normal pregnancy is characterized by a variety of skin changes, including hyper pigmentation, hirsutism, striae distensae, and vascular changes.[1] Hyper pigmentation is common and is associated with an increase in melanocyte-stimulating hormone. Darkening may occur in the areolae of the breast, the linea alba, and pigmented nevi. These changes usually regress postpartum. Hyperpigmentation of the face, melasma or chloasma, is observed in most pregnant women and is increased with exposure to sunlight. It may lighten after delivery but will persist in some form in 30% of women. Melasma may also occur with oral contraceptive use. During pregnancy, there is a slower conversion of hair growth from the growth phase (or anagen) to the resting phase (or telogen). For this reason, increased hair on the face, limbs, and back may be seen. These changes usually regress within six months after delivery. Striae distensae, pink or purple atrophic longitudinal bands occur on the abdomen of most pregnant women. These changes may be associated with stretching as well as the increased levels of cortisol and estrogen, and they usually fade postpartum. Vascular changes due to the increasing estrogen levels observed during gestation are common, including spider angiomata, palmar erythema, and capillary hemangiomas. These usually regress after delivery.

In a detailed study of 200 women referred to a special clinic for dermatoses of pregnancy, Vaughan Jones and associates found that the most common reason for referral was eczema.[2] The two dermatoses of pregnancy that most often led to referral were polymorphic eruption of pregnancy (PEP), formerly known as pruritic urticarial papules and plaques of pregnancy (PUPPP) and pemphigoid or herpes gestationis.

Eczema is commonly associated with a personal or

family history of atopy including asthma or hay fever. Its distribution is variable, usually on the limbs and/or trunk and face. Eczema may occur in an acute, subacute, or chronic form, with the subacute presentation common, appearing as red, scaling, and numular lesions. Eczema can be treated successfully with topical corticosteroids, emollients, or ultraviolet light phototherapy.

Polymorphic eruption of pregnancy is the most common dermatosis of pregnancy, observed in 1/160-1/300 women.[1-3] It occurs in nulliparous women in the third trimester or postpartum period. Recurrence in subsequent pregnancies is rare, and PEP is not associated with adverse fetal outcomes. The onset is often in abdominal striae with subsequent spread over 2-3 days to the breasts, upper thighs, and arms. The periumbilical area and face are spared. PEP is characterized by a variety of lesions including 1-2 mm erythematous papules surrounded by a narrow, pale halo that later coalesce into urticarial plaques. Small vesicles may also develop. Occasionally, a skin biopsy may be required to rule out pemphigoid gestationis, but in most cases, PEP can be diagnosed by its appearance and characteristic presentation. PEP is more commonly seen with a male fetus, and recent studies have identified fetal DNA in the maternal dermis or epidermis of women with PEP.[4] The treatment for PEP includes antihistamines such as chlopheniramine, diphenhydramine, hydroxyzine, or promethazine. Topical steroids such as fluocinonide 0.05% ointment or triamcinolone 0.1% ointment may be used. Systemic corticosteroids may be required in the most severe cases. Induction of labor may also be considered as symptoms usually regress postpartum.

Pemphigoid gestationis is a rare autoimmune bullous disorder closely related to bullous pemphigoid.[1-3] It occurs in approximately 1/7000 pregnancies with its onset usually in the second or third trimester or postpartum. Recurrence is common, and the disorder may appear earlier in subsequent pregnancies and be more severe. It is associated with other autoimmune diseases such as Graves' disease. Pemphigoid gestationis presents as pruritic erythematous plaques that develop into vesicles or bullae. The abdomen is involved initially, including the periumbilical region, with subsequent spread to the extremities. Skin biopsies reveal characteristic IgG and Complement 3 staining along the basement membrane between the epidermis and dermis. Pemphigoid gestationis is associated with uteroplacental insufficiency and intrauterine growth restriction. For this reason, antepartum fetal testing has been recommended. Neonatal involvement has been observed in up to 10% of cases due to transplacental antibody passage. Neonates developed generalized erythematous plaques with vesicles that resolve spontaneously in days to weeks. Treatment of pemphigoid gestationis includes topical steroids and antihistamines in mild cases, although most patients will require systemic corticosteroids, prednisone 40-60 mg per day. Of note, oral contraceptives may produce flares in pemphigoid gestationis.

Intrahepatic cholestasis of pregnancy is a common cause of pruritis during gestation.[1] It usually appears in the third trimester and is marked by nocturnal pruritis that is progressive but resolves soon after delivery. There are no characteristic skin abnormalities. The diagnosis of intrahepatic cholestasis of pregnancy is based on a three-fold increase in fasting serum bile acids. It is the deposition of bile acids in the skin that is responsible for the pruritis. Bilirubin levels may be increased, but usually not above 5 mg/dL, and serum transaminase levels are normal or moderately elevated. Intrahepatic cholestasis of pregnancy has been associated with an increase in preterm birth and fetal death. For this reason, antepartum fetal surveillance and elective delivery have been advised. If prolonged for several weeks, intrahepatic cholestasis of pregnancy may result in impaired reabsorption of vitamin K, decreased prothrombin production, and a prolonged prothrombin time. Treatment includes antihistamines and, in most cases, ion-exchange resins such as cholestyramine. These agents may take several weeks to become effective.

As noted above, nevi may increase in size, and new nevi may develop during pregnancy. A skin biopsy should be considered if melanoma is suspected.[1] Lesions marked by darkening, irregular borders, satellite pigmentation, elevation, ulceration, and bleeding are characteristic of a melanoma. The effect of pregnancy on the prognosis for melanoma has been controversial. Pregnancy does not appear to affect the five-year survival of stage I melanoma. Patients who have been treated for melanoma should wait 2-3 years before attempting another pregnancy.

In evaluating a patient with a dermatosis of pregnancy, a careful history is important.[2,3] One should determine if a skin disorder was present in a prior pregnancy. Has there been an exposure to allergens, including drug or occupational exposures? Does the patient have a past or current history of atopy? How long has the rash been present, when did it begin, and what are its distribution and characteristics? Are there associated symptoms? Urticaria, papules, and vesicles on the trunk suggest PEP. Vesicles and bullae on the trunk are consistent with pemphigoid gestationis. Unlike PEP, pemphigoid gestationis involves the periumbilical area. Skin biopsy should

be considered to confirm the diagnosis of pemphigoid gestationis. Treatment for most patients will include antihistamines and topical corticosteriods, although systemic cortiocosteriods may be required for pemphigoid gestationis. Antepartum fetal surveillance should be used in cases of pemphigoid gestationis and intrahepatic cholestasis of pregnancy. Elective delivery may be advised to relieve symptoms in cases of PEP or intrahepatic cholestasis of pregnancy. In patients with normal physiologic skin changes of pregnancy, the basis for these changes should be explained and the patient reassured. ❖

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CME Questions

14. Hyperspectral diagnostic imaging (HSDI) uses which of the following techniques to develop a statement concerning the presence or absence of CIN?

a. The natural fluorescence of the cervix is measured.
b. After stimulation with UV light, the fluorescence emission of the cervix is measured and evaluated.
c. Following injection of a fluorescent dye, the emissions of the cervix are measured.
d. Fluorescent dye is applied to the surface of the cervix and the differential absorption of the dye is measured.

15. The following statements are true regarding long-acting methods of contraception *except*:

a. The major reason reported for not using implants or injectables is lack of knowledge regarding the methods.
b. A major difference between Norplant and Depo-Provera is the prompt return of fertility after the removal of implants.
c. Depo-Provera is definitely associated with weight gain.
d. Norplant is especially used with success by teenagers.

16. The most effective adjuvant therapy for patients with carcinosarcoma confined to the uterine corpus includes:

a. external radiotherapy.
b. platinum-based chemotherapy.
c. doxorubicin chemotherapy.
d. taxol.
e. None of the above

17. In the management of vulvar cancer, the use of the combined sentinel lymph node procedure resulted in a negative predictive value for a negative sentinel lymph node of:

a. 30%.
b. 50%.
c. 70%.
d. 90%.
e. 100%.

In Future Issues:

Long-Term Satisfaction and Social Function Following Bilateral Prophylactic Mastectomy