THE "CURABILITY" OF OVARIAN CARCINOMA

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IN 1826, William P. Dewees, M.D., Adjunct Professor of Midwifery at the University of Pennsylvania, wrote of the ovaries in his *Treatise on the Diseases of Females*[1] as follows:

> They seem to be removed so far from the general sympathies of the system; so insulated in position; so independent in function; that the common agents for the removal or control of disease, seem to waste themselves in unavailing attempts to influence their actions or modify their affections. Who flatters himself that he has removed a dropsy, resolved a scirrhus, or interrupted a suppuration in these bodies? We believe, if he be candid, none will confess he has, little more then at present is ascertained than that they are very liable to disease and but very little susceptible to cure.

In the 129 years since Doctor Dewees' comments were published, we have made great strides in medicine and surgery. We now are able to cope with suppurations and, on occasion, control the function of the ovaries—but what of our progress with dropsy and scirrhus? Our knowledge about these diseases has increased greatly, and we seemingly are able to cure a significant number of patients. However, are we doing as well as we think we are?

Recent literature on ovarian carcinoma is confined mainly to statistical analyses of large groups of cases, with a general sameness of conclusions. These statistics allow us to draw the following profile in regard to ovarian carcinoma: The woman afflicted with ovarian carcinoma may be of any age, though most frequently she is 40 years of age or older. Symptoms, when present, tend to be protean and to have existed for an average of eight or nine months. The correct diagnosis is suspected preoperatively in 50 to 55 per cent of patients; at surgery, 40 per cent of patients have inoperable carcinoma. Carcinoma involves both ovaries in 30 to 50 per cent of the cases and the uterus in 6 to 8 per cent of cases. Munnel,[2] and Pearse and Behrman[3] have been unable to demonstrate any correlation between the duration of pretreatment symptoms and the length of survival. Throughout the country the five-year survival rate approximates 15 to 20 per cent, with a progressive decrease in the number of these survivors as the years pass. As a matter of fact, more women are dying of ovarian carcinoma today than did 20 years ago. This chiefly results from increased life expectancy secondary to improved treatment of nonneoplastic diseases and from better recognition of ovarian carcinoma. It is readily apparent that our therapeutic efforts in this disease leave much to be desired. Indeed, we are not controlling

"dropsy and scirrhus" today. On the basis of present knowledge and employing available diagnostic and therapeutic tools, can we improve the situation?

Symptoms and Diagnosis of Ovarian Carcinoma

The classical symptoms of ovarian carcinoma consist of abdominal pain, increase in abdominal size, abdominal mass, loss of body weight, and occasionally vaginal bleeding. Since symptoms tend to be protean and late in occurrence, increased awareness of them is unlikely to increase the possibilities of accurate early diagnosis.

Improved patient education. It has been suggested that a program of better education of the patient is desirable. The significance of abnormal vaginal bleeding and new and unusual vaginal discharge is now fairly well appreciated, yet few women understand the need for periodic examination when no symptoms are present. Certainly it would seem that if women were to be examined more frequently we should be able to diagnose cases of ovarian carcinoma at earlier stages of development. However, as previously stated, the correct diagnosis is suspected preoperatively in only 50 per cent of cases, and at surgery 40 per cent of the total are inoperable. This should make us a bit less complacent in following supposedly benign conditions. With an adequate educational program we shall need to improve our diagnostic acumen.

Diagnostic aids. The Papanicolaou smear and the cervical biopsy aid in early diagnosis of cervical carcinoma. Bleeding is a common symptom of corpus carcinoma; and curettage, a relatively innocuous procedure, may be employed to make the diagnosis. In ovarian carcinoma, there are no early symptoms and no simple diagnostic tests available. It has been suggested that the employment of culdoscopy or culdotomy in suspected cases might make earlier diagnosis possible. Unfortunately, a cross section of the tumor usually is necessary, and often a diagnosis can be made only via microscopy. Papanicolaou smears of cul-de-sac washings would reveal only far-advanced tumors that were sloughing cells, and therefore would be of no value in early diagnosis.

Thus, in diagnosing ovarian carcinoma we are primarily dependent on our palpatory ability. A postmenopausal woman with an enlarged ovary, or a menstruating woman with a cyst larger than 5 cm. in diameter, presents no problem in therapeutic approach—operation is indicated. However, a menstruating woman with an enlarged ovary less than 5 cm. in diameter, presents a very difficult problem; we cannot and should not routinely subject such a woman to laparotomy. Instead we "follow" the cyst, waiting to see whether it will persist or will disappear. A certain percentage of those women will have carcinoma, and metastases well may occur during this interval of observation. MacFarlane and associates[4] in performing periodic routine pelvic examinations on 537 women over a 15-year period discovered six patients with ovarian carcinomas, of whom one is alive four and one-half years after therapy.

Early diagnosis. As mentioned previously, Munnel,[2] Pearse and Behrman[3] have been unable to find any correlation between duration of pretreatment

symptoms and length of survival. Pearse and Behrman[3] further have pointed out that when the diagnosis is made only after pathologic examination of excised specimens, survival rates are not necessarily improved—only 13 of 39 such patients survived five years.

Therapy

Present therapy consists of various combinations of surgery and irradiation—the treatment of choice being total hysterectomy and bilateral salpingo-oophorectomy followed by postoperative irradiation.

As previously stated, with present diagnostic efforts, 40 per cent of patients who come to operation are found to be inoperable. Extending the scope of surgery by performing radical or supraradical procedures will not materially increase the salvage in this disease since extrapelvic metastases often occur before demonstrable local spread (this tendency to metastasize early may in part be due to the peculiar blood supply of the ovaries).

All other available therapies fall into the palliative category. Omentectomy is a desirable routine procedure but is very unlikely to be curative. Radioactive gold and nitrogen mustard are helpful in selected cases, since they produce an adhesive peritonitis, thereby decreasing the rate of formation of ascites. Preoperative irradiation occasionally will make an inoperable lesion amenable to surgery.

Prophylactic Removal of Ovaries

Since the majority of cases of ovarian carcinoma occur after the age of 40 years, it has been suggested that any woman having a pelvic operation for benign disease after this age should have both ovaries removed. Since according to Randall[5] the incidence of ovarian carcinoma never exceeds 9 in 1000 women, and since in Allan and Hertig's[6] series only 22.6 per cent of women having ovarian carcinoma had been subjected to previous pelvic surgery, this approach seems unduly drastic and likely to reduce the rate of incidence only slightly. The ovaries, also, have been shown to have a function after the menopause; consequently the routine removal of them would seem unreasonable. Incidentally, since carcinoma is bilateral in 30 to 50 per cent of cases, the fallacy of unilateral oophorectomy as a prophylactic procedure becomes apparent.

CONCLUSION

It is apparent on the basis of the above discussion that increased awareness of symptoms and periodic pelvic examination performed on the asymptomatic patient will not make earlier diagnosis possible, since the diagnostic methods available to us are totally inadequate. Our therapeutic methods are likewise inadequate, since even with early diagnosis the rate of survival is not necessarily improved.

It has been suggested that the crux of the problem lies with an unfortunate anatomic location of the ovaries which allows them to undergo malignant

transformation without being observed. This concept suffers when applied to the breast and testicle. Both of these organs are admirably located for inspection, palpation, and seemingly early diagnosis, yet in spite of our efforts, survival rates for patients with carcinomas in these locations are notably poor. Were the ovaries located as are the testicles would the salvage rate be changed? We suspect that it would not.

It is apparent that our hope for the eventual control of ovarian carcinoma is very similar to that expressed by Doctor Dewees 129 years ago:

> But must we so humble the powers of the healing art, as to declare, we never shall be master of their [ovaries] diseases! Certainly not. Advances are constantly making towards at least the improvement, if not the perfection of the art; and we are now and then made acquainted with substances, which have a specific action upon certain tissues of the human body. The time may then arrive when we shall be in possession of a remedy whose agency shall be confined to the ovaries alone, or to similar organizations, if such there be, in other portions of the system. But until then, unfortunately, the victims to affections of these important parts, must remain contented with the solace which palliatives may afford.

References

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