

Uncomplicated Pregnancy Following Oral Contraceptive-Induced Liver Hepatoma

JEROME H. CHECK, MD, LORRAINE C. KING, MD, and ABRAHAM E. RAKOFF, MD

A patient who used oral contraceptives who had had a partial hepatectomy for benign hepatic cell adenoma became pregnant 3 years after surgery. No diagnosed liver complications resulted during the pregnancy or the postpartum period.

HEPATOCELLULAR NEOPLASIA has been reported with increased frequency in women who are taking oral contraceptives.^{1,2} Since ethinyl estradiol and mestranol impair biliary secretion and decrease bile flow, it has been hypothesized that the consequent retention of these steroids may lead to hepatotoxicity with hyperplasia of the hepatocytes ensuing, thus leading to neoplastic formation.² When these benign neoplasms are detected, partial hepatectomy is not recommended because of heavy bleeding with resultant increased morbidity and mortality. The recommendation is to observe the lesion, avoid liver toxins, discontinue oral contraceptives, and prevent pregnancy as prophylaxis against liver rupture from the neoplasms.² However, almost 70% of these patients may have both infarction and hemorrhage at presentation, and over 25% may present with liver rupture, thus necessitating a partial hepatectomy.²

We present here another case of a liver adenoma in an oral contraceptive user who had a history of partial hepatectomy. She came to see us for primary infertility. Before even considering a fertility workup, it was necessary to decide whether we should advise against pregnancy. Although synthetic estrogens and/or progestins have been incriminated in liver tumor formation, it is not known whether naturally increased circulating estrogen and progesterone, as found in normal pregnancy, can initiate a recurrence of these lesions.^{2,3} We could not find a case in the literature of a pregnant patient with

liver adenoma who completed the pregnancy; thus we present a report of a patient who did deliver without any apparent adverse effects on the liver or recurrence of the nodules.

CASE REPORT

At age 28, MB was admitted to Albert Einstein Medical Center with the chief complaint of abdominal pain of 2 days' duration. She was not in any acute distress, and physical examination was negative except for moderate tenderness in the midepigastic area. Because of a history of previous duodenal ulcer disease, an upper gastrointestinal series was performed and revealed a large mass involving the fundus and body of the stomach, which initially was thought to be intrinsic but subsequently found to be extrinsic. Liver and spleen scans indicated a mass occupying the left lobe of the liver with hepatomegaly. Peritoneoscopy showed hepatomegaly with no definite evidence of a tumor of the stomach or liver, while the abdominal angiogram showed a vascular malformation of the liver or within the stomach wall. Exploratory laparotomy revealed a tumor of the left lobe. Partial hepatectomy was performed, and the pathology report was that of a benign hepatic cell adenoma. The patient had been taking Ovulen-21 for 8 years when the tumor was discovered.

The patient showed no signs of recurrence of the hepatic adenoma over the next 2 years; she then tried to become pregnant but was unsuccessful for 1 year. She consulted a gynecologic endocrinologist, who advised against pregnancy for fear of initiating recurrence of the hepatic tumor; she then consulted our group for a second opinion. The husband was found to have oligospermia and asthenozoospermia. This was treated with clomiphene citrate, 25 mg for 25 days each month. The wife had cervical stenosis and was dilated each month prior to ovulation. A pregnancy was achieved after 4 months of therapy. During the pregnancy there was no palpable enlargement of the liver, and liver function studies were normal; the patient delivered a normal full-term female by cesarean section, which was performed because of fetal distress. A postpartum liver scan showed no evidence of hepatic tumor.

DISCUSSION

After reviewing the literature, we felt that the synthetic estrogens (especially mestranol), rather than natu-

From the Division of Gynecologic Endocrinology and Infertility, Department of Obstetrics and Gynecology at Jefferson Medical College, Thomas Jefferson University Hospital, Philadelphia, Pennsylvania.

Submitted for publication June 9, 1977.

LIVER HEPATOMA

ral estrogens, were probably responsible for initiating the lesion.³ We would have felt more comfortable if we could have found a comparable case in which pregnancy in a patient with previous hepatic adenoma did not result in exacerbation or recurrence of the lesion. Nevertheless, the couple desired a baby, and based on review of the literature and discussion of possible complications with the couple, it was decided to pursue an infertility workup.

Partial hepatectomy carries a high morbidity and mortality because of severe bleeding.¹ If a benign nodule is identified, we do not recommend resection and would merely treat the patient conservatively following biopsy, with avoidance of any drugs known to cause cholestatic hepatitis or conditions that would stress the liver. Therefore, in this group, we would advise against pregnancy.

However, most of the patients have presented with acute abdominal pain and have undergone partial hepatectomies.^{2,4} In this group we certainly would recommend avoidance of contraceptives but question advising against something as vital to the family as birth of a child. Of course, one successful pregnancy and delivery without liver complications does not prove the safety of pregnancy in patients whose oral contraceptive-induced liver tumors have been resected; nevertheless, this case

may influence the recommendation by the obstetrician, internist, or surgeon and possibly be the deciding factor for the concerned patient. It is hoped that all other cases of pregnancy with liver tumor will be reported so that we can better answer the question whether future pregnancies are advisable in the patient who has had a resection of a hepatic cell adenoma.

REFERENCES

1. Nissen ED, Deryck RK: Liver tumors and oral contraceptives. *Obstet Gynecol* 46:400-407, 1975
2. Christopherson WM, Mays ET, Barrows GH: Liver tumors in women on contraceptive steroids. *Obstet Gynecol* 46:221-223, 1975
3. Edmondson HA, Henderson B, Benton B: Liver-cell adenomas associated with use of oral contraceptives. *N Engl J Med* 294:470-472, 1976
4. Stauffer JQ, Lapinski MW, Hondal MD, et al: Benign nodular hyperplasia of the liver and intrahepatic hemorrhage in young women on oral contraceptives. *Ann Intern Med* 83:301-305, 1975

Address reprint requests to
Jerome H. Check, MD
Jefferson Medical College
Room 300
1025 Walnut Street
Philadelphia, PA 19107

Accepted for publication July 19, 1977.