# HEMOPERITONEUM IN A POSTMENOPAUSAL WOMAN

**Pedro A. Poma, MD**
Chicago, Illinois

As the number of postmenopausal women increases, physicians will have more opportunities to treat elderly women with gynecological complications. This case report describes a 76-year-old, obese, multiparous woman, known to have gallstones who presented with acute abdomen complaints and was admitted for observation. Treatment was delayed until significant blood loss was recognized. At laparotomy, a ruptured ovarian granulosa cell tumor was found. (*J Natl Med Assoc.* 1998;90:317-319.)

**Key words:** hemoperitoneum ◆ abdominal pain ◆ postmenopause

Worldwide, about 25 million women reach menopause every year. In 1990, there were 567 million postmenopausal women with an average age of 60. By 2030, it is estimated that 47 million women will become postmenopausal every year and that the number of menopausal and postmenopausal women will reach 1.2 billion.[1]

Physicians and other health-care workers must be familiar with the differences of common conditions on our elderly patients. The presentation of acute abdomen may vary in elderly women. Sometimes familiarity with our patient's condition may delay an early accurate diagnosis and appropriate treatment. This report describes the case of a woman with cholelithiasis admitted as an acute abdomen.

## CASE REPORT

A 76 year-old, para 2-0-0-2 presented complaining of right upper quadrant pain that radiated to the whole abdomen. She had anorexia, nausea, and diaphoresis. Her physician had treated her for arterial hypertension and gallbladder disease. Her last menses occurred 13 years before, when she had a hysterectomy and appendectomy at another institution.

The patient was 1.5 m tall and weighed 93.1 kg. Her body mass index was 41.3. Her blood pressure was 150/100 mm Hg, pulse was 104 beats per minute, and respirations were 24 breaths per minute. She was alert, oriented, and concerned about her condition. Her skin was pale, dry, and warm. She was afebrile.

On physical examination, her abdomen was large and distended, with diffuse tenderness, guarding, and rigidity. The rest of the examination was normal. Laboratory values were hemoglobin, 10.2 g/dL; white blood cell count, 21,000/cu mm; blood glucose, 308 mg/dL; and blood urea nitrogen, 29 mg/dL. Electrolytes were normal. A chest radiograph showed atherosclerotic changes of the aorta, but was otherwise normal. A radiograph of the abdomen showed normal bowel patterns, small pea-sized calcifications in the right upper quadrant, and degenerative arthritic changes of the dorsolumbar spine. Intravenous hydration was started. She was admitted for observation with the diagnosis of cholelithiasis. During the day, she did not vomit, but her urine output decreased. Twenty milligrams of intramuscular furosemide were administered, and a Foley catheter was placed.

By midnight, the urine output was minimal, and her hemoglobin was 8.3 g/dL, hematocrit was 24.1%,

From the Department of Obstetrics and Gynecology, Loyola University Chicago, Ravenswood Hospital Medical Center, Chicago, Illinois. Requests for reprints should be addressed to Dr Pedro A. Poma, 4550 N Winchester Ave, Chicago, IL 60640.

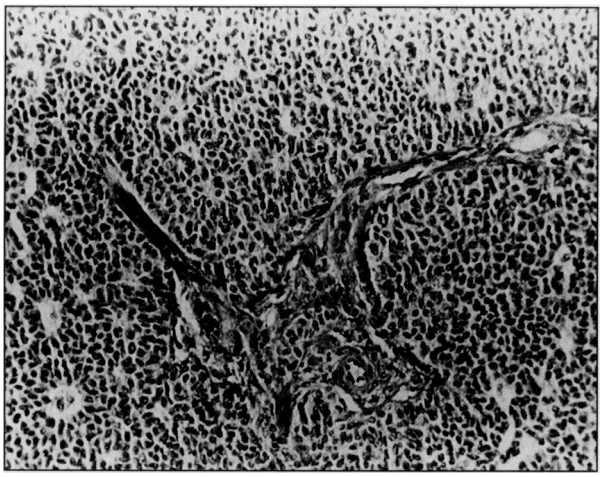

**Figure.**
Photomicrograph of an area showing microfollicular pattern of a granulosa cell tumor (original magnification ×400).

and white blood cell count was 25,000/cu mm. Antibiotics and blood transfusion were begun. A laparotomy revealed a ruptured left ovary, and a left oophorectomy was performed. Exploration of the hydropic gallbladder and common duct revealed two stones (one measured 1.8 cm and the other 1.6 cm). The stones were excised, and a drain was placed. The total estimated blood loss was 3000 mL. After six units of packed cells, her hemoglobin was 11.4 g/dL, her white blood cell count was 7100/cu mm, and her glucose was 618 mg/dL. Insulin was started. Later that day, her blood glucose was 236 mg/dL, blood urea nitrogen was 22 mg/dL, and creatinine was 1.5 mg/dL. She improved both clinically and chemically.

The pathology report noted a friable left ovary (10x9x3.6 cm) that was yellowish-brown in color with focal hemorrhage and clots. Microscopy revealed a diffuse type granulosa cell tumor with extensive necrosis and hemorrhage, and a microfollicular pattern (Figure). The patient continued to improve clinically. Her glycemia normalized. She was discharged home, and her postoperative care was uneventful. After 6 months, she was lost to follow-up.

## DISCUSSION

A good medical history and physical examination remain the best guides for the diagnosis of acute abdomen. Patients with an acute abdomen commonly require surgical treatment. However, when caring for individuals ⩾65 years, physicians may find that elder persons may not be able to provide an accurate history.[2]

In the elderly, symptoms may vary more than in younger individuals, and many elderly have coexistent diseases and use multiple medications.[2] Their reaction to symptoms, the relative importance of the clinical findings, and the specific prevalence of diseases among the elderly differs from that found in younger patients.[3] Gastrointestinal conditions predominate among the causes of acute abdomen in the elderly. Cholelithiasis, small bowel obstruction, perforated viscous, ischemic bowel, appendicitis, large bowel obstruction, urinary tract infection, herniated bowel, abdominal aortic aneurysm, cancer, paraesophageal hernias, and gastric ulcers cause acute abdomen more commonly among the elderly than among younger persons.[3,4]

Furthermore, body temperature and commonly ordered laboratory tests (such as white blood cell count, serum aminotransferase, alkaline phosphatase, bilirubin, amylase, and lactate) cannot differentiate patients admitted for medical reasons from those admitted for surgical reasons. The clinical impression of the illness and the physician's clinical experience remain the most important tools.[4] Still, efficient use of ultrasound studies, computerized tomography (CT), endoscopy, and other contrasted radiologic studies may assist with the diagnosis.[5]

This patient described here was admitted with an acute abdomen, leukocytosis, hyperglycemia, and borderline or low hemoglobin. There was no evidence of bowel obstruction nor perforated viscous, and her urinalysis was normal. Although there was leukocytosis, there was no shift to the left. Her physician did not consider the decrease in urine output as important, despite hydration and diuretic use, until the hemoglobin drop became more obvious. The estimated intraperitoneal blood loss was 3000 mL. The blood was replaced. The attending physician had not considered pelvic causes of acute abdomen in a patient with a history of cholelithiasis, late menopause, and hysterectomy. Late menopause and a postmenopausal hysterectomy indicate that this patient continued to have persistant functional activity. The records of admission and the hysterectomy specimen were not available.

Gynecologic conditions still cause acute abdomen in women ⩾65 years. The resulting anoxia of an ovarian torsion causes severe abdominal pain. In postmenopausal women, ovarian masses large enough to suffer torsion must be considered malig-

nant until proven benign. In women of this age group, other pelvic pathology can cause septic complications, tubo-ovarian abscesses, and pyosalpinx.[6] Blood irritates the peritoneum greatly. Causes of hemoperitoneum may include ovarian bleeding due to anticoagulant therapy[7] or retrograde bleeding due to a stenotic cervix in women receiving hormonal therapy.[8]

Adult granulosa cell tumors represent 1% to 2% of all ovarian tumors. Because this tumor produces estrogen, these women demonstrated abnormal menstruation. They may suffer amenorrhea, or irregular and heavy vaginal bleeding.[9] In 5% to 25% of cases, there is evidence of endometrial hyperplasia and well-differentiated endometrial carcinoma.[9] These symptoms and findings often lead to hysterectomies. After menopause, elevated estrogen suppresses follicle-stimulating hormone, and these women often do not complain of vasomotor symptoms. Some tumors also may produce progesterone, and very few tumors, androgens. Some women may show androgenic effects.

Granulosa cell tumors occur at any age, are prone to rupture, and vary in size, although on average, these tumors measure 12 cm. They may be bilateral in 5% of cases.[9] Most women survive these tumors, with the survival rate ranging from 88% to 93%.[9] These tumors rarely metastasize.[9] However, tumor size, surgical stage and cellular atypia,[10] and rupture affect the prognosis.[9] Call-Exner bodies occur more commonly in tumors of women who remain free of metastasis 10 years.[10] A long follow-up study shows that these patients, have a 1.8 increased risk of developing cerebrovascular and cardiovascular disease compared with controls.[11]

## CONCLUSION

Recognizing that clinical and physical findings in elderly women may differ from women of reproductive age and that gynecological conditions can still produce complications after menopause, physicians may more readily manage their patients.

### Literature Cited

1. Hill K. The demography of menopause. Maturitas. 1996;23:113-127.

2. Kauvar DR. The geriatric acute abdomen. Clin Geriatr Med. 1993;9:547-548.

3. Adedeji OA, McAdam WA. Murphy's sign, acute cholecystitis and elderly people. J R Coll Surg Edinb. 1996;41:88-89.

4. Parker JS, Vukov LF, Wollan PC. Abdominal pain in the elderly: use of temperature and laboratory testing to screen surgical disease. Fam Med. 1996;28:193-197.

5. Cassina P, Rothlin M, Largadier F. Efficacy of basic surgical diagnosis in acute abdominal pain. Chirurg. 1996;67:254-260.

6. Burnett LS. Gynecological causes of acute abdomen. Surg Clin North Am. 1988;68:385-398.

7. Peters WA, Thiagarajah S, Thornton WN. Ovarian hemorrhage in patient receiving anticoagulant therapy. J Reprod Med. 1979;22:82-84.

8. Rabinovici J, Frenkel Y, Goldwasser B, Menczer J, Serr DM. Acute abdominal condition caused by retrograde bleeding in a postmenopausal patient on estrogen-progesterone therapy. Am J Obstet Gynecol. 1985;153:677-678.

9. Young RH, Scully RE. Sex cord-stromal, steroid cell and other ovarian tumors with endocrine, paraendocrine, and paraneoplasic functional tumor manifestations. In: Kurman RJ, ed. Blanstein's Pathology of the Female Genital Tract. 4th ed. New York, NY: Spring Verlag; 1994:783-798.

10. Miller BE, Barron BA, Wan JY, Delmore JE, Silva EG, Gershenson DM. Prognostic factors in adult granulosa cell tumor of the ovary. Cancer. 1997;79:1951-1955

11. Bjorkholm E. Granulosa cell tumors: a comparison of survival in patients and matched controls. Am J Obstet Gynecol. 1980;138:329-331.