

# Prostate Cancer Associated with Hemorrhagic Cyst: Findings on Transrectal Doppler Sonography

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Cysts in the region of the prostate are common and may present as either intraprostatic or periprostatic. However, a hemorrhagic cyst in this area is unusual. A 62-year-old man was transferred to our hospital for elevated serum prostate-specific antigen (502 ng/mL). A digital rectal examination revealed a non-tendered fluctuation over the prostate, masquerading as an abscess-like lesion. The urine was sterile. Transrectal sonography revealed a cystic lesion over the apical portion of the prostate. On color and power Doppler appearance, mildly increased vascularity but asymmetric distribution was found. With the patient's consent, about 20 mL of sterile, non-coagulant, dark, bloody fluid was aspirated under sonographic guidance. After aspiration, the prostate outline returned to a near normal but existed as an echoheterogeneous entity. Bilateral sextant biopsy was simply performed thereafter and pathology showed adenocarcinoma from each core (Gleason score, 4+5/10). Hormonal therapy was administered because of multiple bony metastases. However a cyst in this area is unusual. We herein report a newly diagnosed prostrate cancer associated with a hemorrhagic cyst which was masquerading as a abscess-like lesion. The Doppler transrectal sonographic appearance of this particular case of prostate cancer is also described.

KEY WORDS — cyst, hemorrhage, prostate neoplasm, transrectal ultrasound

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### Introduction

Cysts in the region of the prostate are common and may present as either intraprostatic or periprostatic [1]. However, a hemorrhagic cyst in this area is unusual. Herein we have described a Doppler transrectal ultrasonographic (TRUS) appearance of a hemorrhagic cyst in a newly diagnosed prostate cancer, and have reviewed the literature.

#### Case Report

A 62-year-old man was transferred to our hospital for elevated serum prostate-specific antigen (502 ng/mL). Medical history revealed neither a recent febrile condition nor other systemic complaints other than voiding problems. Digital rectal examination (DRE) revealed a non-tendered fluctuation over the prostate without any local heat which was masquerading as

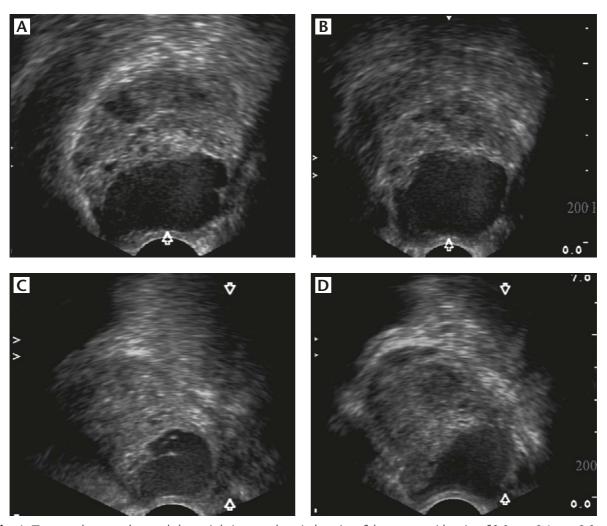


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**Fig. 1.** Transrectal sonography revealed a cystic lesion over the apical portion of the prostate with a size of  $2.0 \text{ cm} \times 3.1 \text{ cm} \times 3.9 \text{ cm}$ . (A) mid-transverse view. (B) Apical-transverse view. (C) Right sagittal view. (D) Left sagittal view. There was a low echoic content within the cyst and several scattered hypoechoic lesions in solid portion of the prostate.

an abscess-like lesion. The patient's urine was sterile. TRUS revealed a cystic lesion over the apical portion of the prostate measuring 2.0 cm × 3.1 cm × 3.9 cm (Fig. 1). There was a low echoic content within the cyst and several scattered hypoechoic lesions in the solid portion of the prostate. In addition, each zone was not clearly distinguished. On color and power Doppler appearance, mildly increased vascularity but asymmetric distribution was found (Fig. 2). Doppler spectral analysis showed similar values of peak systolic and resistive indexes from four sites, including capsular, urethral branches and the margin of the hemorrhagic cyst (Fig. 3). With the patient's consent, about 20 mL of sterile, noncoagulant, dark, bloody fluid was aspirated under

sonographic guidance. After aspiration, the prostate outline returned to near normal but existed as an echo-heterogeneous entity (Fig. 4). Bilateral sextant biopsy was simply performed thereafter and pathology showed adenocarcinoma from each core (Gleason score, 4+5/10).

#### Discussion

A decade ago the hypoechoic lesion within the peripheral zone was conventionally thought to be the classical presentation of prostate cancer under TRUS examination [2]. In order to detect early prostate cancer, systematic random biopsy has become

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