Unusual Semi-Spheric Perivesical Calcification after Pelvic Radiotherapy

Michael Froehner Oliver W. Hakenberg Andreas Manseck
Sven Oehlschlaeger Manfred P. Wirth

Department of Urology, University Clinic 'Carl Gustav Carus', Technical University of Dresden, Germany

Key Words

Calcification · Bladder · Pelvic · Radiotherapy

Abstract

An uncommon case with semi-spheric perivesical calcification after pelvic radiotherapy is reported and the possible pathogenesis of this phenomenon is discussed.

showed bladder contrast 1 cm apart from these calcified structures (fig. 1B). Voiding cystourethrography revealed a bilateral vesicoureteral reflux and long distal ureteral stenoses (fig. 2). A moderate radiation cystitis, a right-sided golf hole orifice and a marked bladder trabeculation were seen on cystoscopy. Urodynamics disclosed a hypertonic detrusor with instability and a high urinary residual volume. Frequent clean intermittent catheterization was recommended.

Discussion

Bladder wall calcification has been reported due to various causes such as bilharziosis, neoplasms, encrustation cystitis, tuberculosis, amyloidosis, cyclophosphamide, BCG, mitomycin C and photodynamic therapy [2–6]. There are sparse reports on induction by radiotherapy [1, 2]. We identified only one similar case with radiation-induced vesical and paravesical calcifications [1]. In a second case, the post-irradiation bladder wall calcification was caused by concomitant alkaline encrusting cystitis and disappeared after irrigation of the bladder with an acid solution [7]. In the current case, calcification seemed to affect only the perivesical space. The semi-spheric shape of the calcification might be caused by impression of the dystrophic perivesical soft tissues by the chronically distended bladder.

Introduction

Bladder wall calcification after pelvic radiotherapy is an uncommon phenomenon [1]. We report on a case with semi-spheric intrapelvic calcification probably involving the perivesical connective tissue rather than the detrusor muscle.

Case Report

A 63-year-old woman presented with post-renal acute renal failure due to chronic urine retention 27 years after Wertheim's radical hysterectomy with neoadjuvant and adjuvant radiotherapy for uterine cervix carcinoma. Abdominal plain X-ray films demonstrated a calciform intrapelvic calcification (fig. 1A). Intravenous urography

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Michael Froehner, MD
Department of Urology, Universitätsklinikum «Carl Gustav Carus»
Technical University of Dresden, Fetscherstrasse 74
D-01307 Dresden (Germany)
Tel. +49 351 4582447, Fax +49 351 4584333

Fig. 1. A Semi-spheric perivesical calcification, abdominal plain X-ray. **B** Intravenous pyelography demonstrating a bladder contrast about 1 cm from the califications (arrows).

Fig. 2. Bilateral vesicoureteral reflux and long distal ureteral stenoses (voiding cystourethrography).

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