Mycobacterium bovis Associated Aneurysm of the Common Iliac Artery After Bacillus Calmette-Guérin Intravesical Treatment for Urothelial Carcinoma

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Introduction

A 54-year-old man with a non-invasive urothelial carcinoma (T1N0M0) was scheduled for transurethral resection after a 2-year treatment with adjuvant Bacillus Calmette-Guérin (BCG) instillation therapy. During this period, the patient received antibiotic therapy (Rifampicin, Isoniazid, Ethambutol) for a suspected Mycobacterium bovis systemic infection with B symptoms and lymphadenopathy. A culture of Mycobacterium bovis BCG grew from the sputum of the patient. The preoperative computed tomography (CT) showed an aneurysm of the left common iliac artery with a diameter of approximately 3.5 cm (Figure 1) and a dissection of the right common iliac artery (Figure 2). These findings had not been documented in a previous CT scan done 8 months before. The clinical and imaging findings were consistent with those of a BCG-associated mycotic aneurysm. A xenopericardial graft replacement via midline laparotomy was performed two days after diagnosis without complications. A Ziehl-Neelson staining procedure and a polymerase chain reaction (IS6110 and M65 methods) were performed on an intraoperative tissue sample and confirmed the diagnosis. The patient could be discharged home a few days after the procedure with the same established preoperative antibiotic therapy. After consultation with the infectiologists in the domo, the patient was recommended to continue the antibiotic therapy for another 4 months.

Intravesical instillation of BCG is widely used for treating superficial, early-stage bladder cancer based on its immunomodulatory effects aimed at limiting cancer progression and preventing local recurrence (1). Although being considered safe, a few typical complications may occur, such as granulomatous hepatitis or pneumonia (0.5%), hematuria (1%),...
fever (2.9%) and, even more common, dysuria and pollachiuria. A very rare complication, described in fewer than 50 cases in the literature, consists of *Mycobacterium bovis*-associated aortitis with subsequent mycotic aneurysm [Higashi et al. (2)]. The localization in peripheral arteries, such as the carotid and the lower-limb arteries, appears even rarer.

Written informed consent for publication was obtained from the patient.

**Ethics**

**Informed Consent:** Written informed consent for publication was obtained from the patient.

**Peer-review:** Externally and internally peer-reviewed.

**Authorship Contributions**


**Conflict of Interest:** No conflict of interest was declared by the authors.

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**References**


**Figure 2.** Shows a dissection of the right common iliac artery