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CASE REPORT/CAS CLINIQUE

Prostatic and renal aspergillosis due to *Aspergillus fumigatus* in a patient receiving alemtuzumab for chronic lymphocytic leukaemia



Infection fongique prostatique et rénale à Aspergillus fumigatus chez un patient traité par alemtuzumab pour une leucémie lymphoïde chronique

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KEYWORDS

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Summary

Objective. – Treatment of chronic lymphocytic leukaemia (CLL) is rapidly evolving, with emerging new drugs. Alemtuzumab is a monoclonal antibody recognizing CD52 antigen approved in the treatment of relapsing-refractory CLL. A frequent side effect is the immunosuppression and patients treated with alemtuzumab risk to develop fungal infections such as aspergillosis. **Patient and methods.** – This case report is about a patient who developed an uncommon localization of aspergillosis: prostatic and renal, after a treatment by alemtuzumab monotherapy. During the week 8 of alemtuzumab, the patient presented fever, urinary frequency and urologic symptoms. Persistence of fever with common antibiotherapy led to realize a tomography that showed prostatic and renal abscess (70 mm and 29 mm). It was decided to realize a prostatic biopsy.

Results. – Histological findings showed suppurative abscess with ischemic necrosis and fungal proliferation, with branched fungal hyphae. Direct examination was negative. Culture on Sabouraud's agar revealed a mould identified as *Aspergillus fumigatus*. The organism was

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MOTS CLÉS

Leucémie ;
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 Rein

susceptible to voriconazole (MIC: voriconazole 0,25ug/mL).

Conclusion. — Because of the main side effect of alemtuzumab is immunosuppression, we have to research fungal infections such as *Aspergillosis*, particularly in patients with fever resistant to common antibiotherapy.

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Résumé

Objectif. — L'alemtuzumab est un anticorps monoclonal anti-CD52, indiqué dans le traitement des rechutes et des formes réfractaires de leucémie lymphoïde chronique. Un effet secondaire fréquent de cet anticorps est l'immunosuppression, et le risque de développer des infections fongiques, particulièrement à *Aspergillus fumigatus*.

Patients et méthodes. — Un patient de 68 ans, traité par alemtuzumab a développé à la 8^e semaine de traitement une aspergillose prostatique et rénale, accompagnée de fièvre et dysurie. Devant la persistance de la symptomatologie, il a été réalisé une tomодensitométrie thoraco-abdomino-pelvienne qui mettait en évidence un abcès prostatique de 70 mm associé à un abcès du rein droit de 29 mm. Il a été réalisé une biopsie prostatique.

Résultats. — L'examen anatomopathologique a mis en évidence un abcès suppuré avec des lésions ischémiques, nécrotiques, ainsi qu'une prolifération fongique évocatrice d'aspergillose, confirmée par la mise en culture sur milieu de Sabouraud qui a révélé la présence d'*A. fumigatus* sensible au voriconazole (CMI : 0.25 µg/mL).

Conclusion. — Parce qu'un effet secondaire fréquent de l'alemtuzumab est l'immunosuppression, il faut penser à prévenir et surveiller la survenue d'une infection aspergillaire, tout particulièrement chez des patients avec fièvre résistante à une antibiothérapie probabiliste.

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Introduction

Treatment of chronic lymphocytic leukaemia (CLL) is rapidly evolving, with emerging new drugs and new therapeutic associations. Alemtuzumab is a monoclonal antibody recognizing CD52 antigen, whose action is mainly mediated by ADCC (Antibody Dependant Cell Mediated Cytotoxicity) but also by complement activation and induction of apoptosis. Alemtuzumab is approved in the treatment of relapsing–refractory CLL [2]. A frequent side effect is immunosuppression, and the risk to develop fungal infections such as *Aspergillosis* [12]. We report the first case, to our knowledge, of a prostatic aspergillosis after a treatment by alemtuzumab. Usually, pulmonary aspergillosis is the most common complication.

Case report

We report the case of a 68-year-old man who received for a chronic lymphocytic leukaemia a first line R-FC therapy (rituximab fludarabine and cyclophosphamide) for three cures and in a second line R-Chop (rituximab cyclophosphamide doxorubicine and prednisone) for two cures. But the disease increased and the patient received a new line treatment by alemtuzumab monotherapy. This agent is usually given with antifungal and antiviral prophylaxis to prevent pneumocystosis [10]. The patient received prophylactic treatment with trimethoprim/sulfamethoxazole three times a week and valaciclovir 500 mg twice a day but no antifungal agent. The patient presented during the week 8 of alemtuzumab therapy, fever, urinary frequency and painful burning sensations. He had a past medical history of hypertension, hypercholesterolemia, appendectomy and meniscectomy.

He received a first line of antibiotics by fluoroquinolone (ciprofloxacin: 500 mg twice a day). Cytobacteriological examination of the urine shows leucocyturia but no germs at bacteriological examination. Renal echography described a renal right abscess measuring 29 mm. The persistence of fever and urologic symptoms led to realize a cerebral, sinus, thoracic and abdominal and pelvic computed tomography (CT). It showed a prostatic abscess measuring 70 mm (Fig. 1), and a right renal abscess measuring 29 mm (Fig. 2). No abnormality was described at cerebral, sinus and thoracic CT. It was decided to start intravenous antibiotherapy with ceftazidime and amikacine. The general aggravation led to realize a prostatic biopsy 7 days later. Histological examination pointed out a suppurative abscess with ischemic necrosis and fungal proliferation, with septate branched hyphae. Culture on Sabouraud's agar grew *A. fumigatus*, susceptible

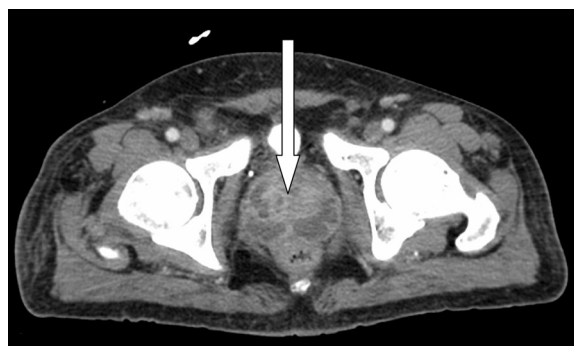


Figure 1 Pelvic tomography with injection of contrast. Pointer shows prostatic abscess (70 mm) due to *Aspergillus fumigatus*.

Scanner abdomino pelvien avec injection. Les flèches révèlent un abcès prostatique (70 mm) à *Aspergillus fumigatus*.

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