

Report of a Solitary Renal Aspergilloma in an AIDS patient: Nearly two year survival after successful treatment with nephrectomy

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Case presentation

Genitourinary Aspergillus is rare but has a high risk of death without surgical debridement. We report here successful treatment of a case of renal aspergilloma in an AIDS patient with nephrectomy and multi-antifungal therapy (MAT). We know of only 6 other cases in AIDS patients reported in the medical literature. Other involvement in our patient included an aspergillus prostatic abscess. We found 6 other cases reported involving the prostate, only one had HIV.

MM was a 33 yo gentleman with pan-resistant HIV, cd4<10, who presented in November 2003 with fevers, dysuria for almost 2 weeks with persistent pyuria despite 5 days of antibiotics.

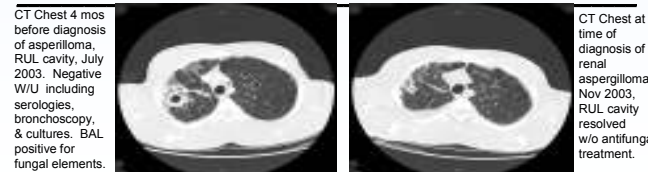
Imaging showed a large retroperitoneal abscess. CT-guided biopsy showed fungal elements. MAT with itraconazole, amphotericin and caspofungin (IAC) led to worsening abscess. Nephrectomy was difficult; photographs of gross pathology are impressive.

Salvage ARV therapy with enfuvirtide led to HIV PCR<400 within 4 weeks. Voriconazole was tried but resulted in undetectable levels because of ritonavir interaction. After 6 months of MAT, amphotericin and caspofungin were stopped. The abscess recurred within one month. IAC was restarted, and along with drainage, led to resolution of the retroperitoneal abscess.

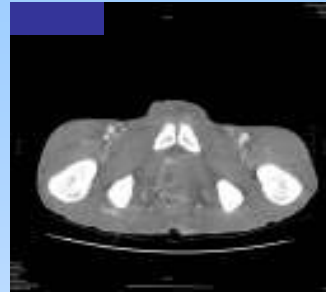
Six months later, amphotericin was stopped but itraconazole and caspofungin were continued. Again w/in one month of using <3 agents, re-imaging showed the abscess recurred, this time with multiple loculations. The largest loculation was drained. The patient declined multiple drains and MAT, & the loculations increased in number and size, with epidural extension and scalloped lesions of vertebrae T12-L1.

He died 23 months after nephrectomy from prolonged neutropenia and difficult to treat CMV encephalitis. He also had progressing & untreatable invasive squamous cell anal carcinoma. CD4 count never rose above 20, despite repeated HIV PCR's <400.

This case represents successful treatment of renal aspergilloma with nephrectomy & MAT, with meaningful quality of life until the last few months reported by the patient. Imaging throughout his course dramatically documents resolution and recurrence of the abscess.



CT Chest 4 mos before diagnosis of aspergilloma, RUL cavity, July 2003. Negative W/U including serologies, bronchoscopy, & cultures. BAL positive for fungal elements.



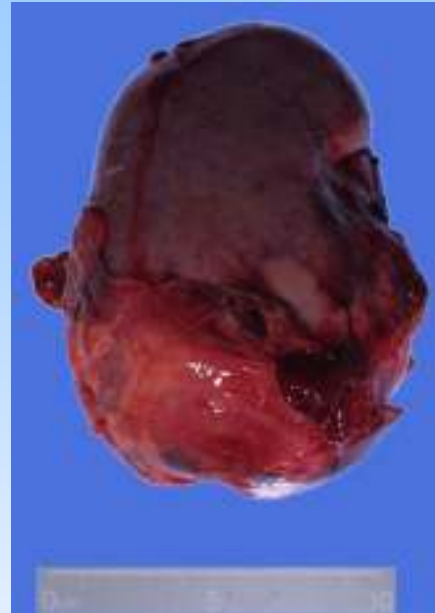
Prostate fluid collection, drained intra-operatively, stained positive fungal elements.



Large Left renal fluid collection



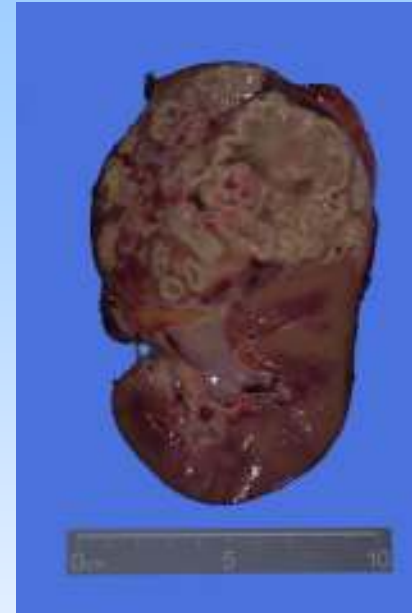
Renal Fluid collection communicates w/ retroperitoneal wall & ureter.



Left nephrectomy

Operative report:

Mass extended into pleural & retroperitoneal spaces. Unable to dissect Gerota's fascia 2/2 inflam process. Superior pole of kidney adhered.



Pathology report:

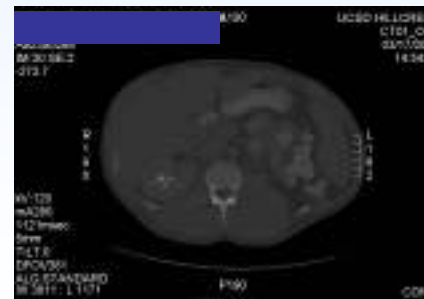
Kidney: 14.5 x 11 x 8.1 cm, 626 grams
Mass: 9.5 x 7.6 cm, diffuse area yellow discoloration superior pole
2 fragments of rib w/ no evidence of fungus



H&E: necrosis, no vascular thromboses, abscess abuts & invades kidney



GMS: fungal elements c/w aspergillus



Pellvic/Abd MRI May 2004, after 6 months MAT, abscess still resolved.

Conclusions

GU Aspergillus rare, ours is 2nd described case in HIV of renal & prostate. Pulmonary most likely route of initial aspergillus infection. Despite fully suppressed HIV for 23 months (HIV PCR<400), patient never immune reconstituted. Because of CD4<50 for years, he suffered another fatal OI—CMV encephalitis. CMV encephalitis unable to treat b/of renal insuf & neutropenia, precluding use of either foscarnet or gancyclovir. MAT (3 agents) led to two abscess-free periods of 6 mos each: w/ nephrectomy & MAT, the 1st time, w/ drainage & MAT, the 2nd time. Abscess recurred both times w/in one month of using less than 3 antifungal agents. Inadequate tests & little evidence exist to guide MAT in this setting. Serum galactomannan Ag test not available at time of initial diagnosis. Surgery was necessary part of treatment in this patient.

Literature Review

Renal Aspergillus

- > 20 cases in literature: 6 HIV (7 now)
- Klapholz 1991 Chest
- 2000 AIDS pts between 1985-89, 7 inv aspergillus, 6 IPA & 1 renal.
- Kummerle 1998 Int Urol
- 33 yo man AIDS, isolated renal abscess, cured w/ "purely conservative mycotic measures," HAART & normalization of CD4. No surgery.
- Lopez 1999 Actas Urol Esp
- Bilateral renal abscess Aspergillus fumigatus.
- Rey 1999 Eur J Clin Micro Inf Dis
- 29 yo man AIDS normal CD4, failed amphotericin followed by itraconazole, cured by nephrectomy, 3 month follow up reported.
- Blanco 2001 Actas Urol Esp 25(5):396-9.
- 1 case report renal abscess Aspergillus niger
- Mesquida 2002 XIV Intl AIDS Conf
- 46 yo man AIDS, cirrhosis, left renal abscess Aspergillus fumigatus. Surgery ruled out b/of patient's poor clinical condition. Developed renal artery mycotic aneurysm and DIC, and died.
- Manfredi 1998 Mycoses
- 9 cases of visceral Aspergillus since 1984 at single institution, Bologna, Italy. None isolated renal. One case w/ renal involvement, also involved lungs.
- Flechner & McAninch, J Urol, 1981

Prostatic Aspergillus

- 6 cases reported (7 now): 4 w/ isolated prostate
- Only one other with HIV.
- Hood 1998
- Single case w/AIDS→prostate + epididymo-orchitis