

Case of severe fungal infection  
from Helsinki University Central  
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NSMM 251012

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# Previously

- 45 year old female
- Chronic schizophrenia, hypertension
- No allergies
- Non-smoker

# The story begins

- Dec 2010 started backache and bonepains
- Easy bruising since end of Feb 2011
- Fever and increased backache in Mar 2011 and patient came to hospital
- Patient was anemic Hb 65g/l, thrombopenic platelets  $6 \times 10^9/l$ , CRP 51mg/l and *E. coli* –sepsis → keftriaxone
- Blasts in peripheral blood

# Mar 2011

- Patient was diagnosed with AML/M2, t(8;21),cKIT+
- Ultrasonography and MRI of liver showed an unspecified lesion in segment 4 (diameter 4.6 cm) and in segment 7 (0.5 cm)
- CVC was inserted
- Induction treatment IAT (idarubicin-cytarabine-tioguanine for 9 days) started in 100311: remission.

# Mar-Apr 2011

- During cytopenia urinary infection (*Enterococcus faecium*), HSV -infection in mouth.
- Fever, all blood cultures negative.
- Fluconazole prophylaxis until neutrophils  $>0.5 \times 10^9/l$ .
- CT-scan during cytopenia showed swelling in jejunum walls, lymphadenopathy in mesenterium
- After cytopenia liver-MRI showed that the lesion in segment 4 was smaller than before, (max diameter 3.7 cm) and the lesion in segment 7 was unchanged.

# Apr-May 2011

- Liver was biopsied, PAD: benign nodular hypertrophy.
- First consolidation treatment in Apr 2011
- During cytopenia *Klebsiella pneumoniae* and later *Staphylococcus epidermidis* recovered from blood cultures  
→keftriaxone+tobramycin, later meropenem+tobramycin+vancomycin treatment; fluconazole prophylaxis.

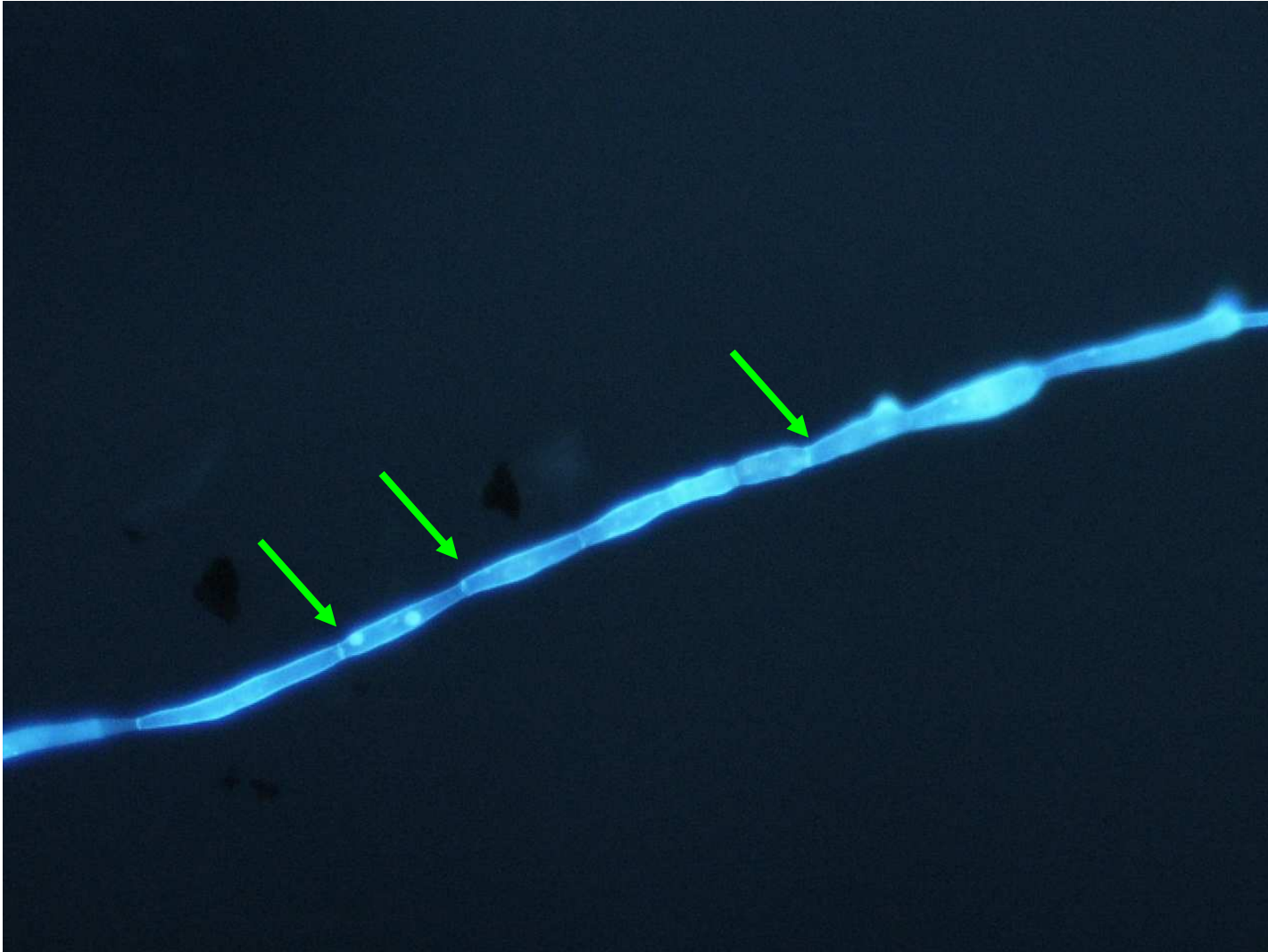
# June 2011

- Second consolidation started in 050611.
- 10 days later she was cytopenic, fluconazole prophylaxis
- During fever *Streptococcus viridans* recovered from blood cultures
- 4 days later an infected tear between toes 4 and 5 in right foot; microscopic examination shows fungal elements, culture yields *Stenotrophomonas maltophilia*.
- 2 days later she has high fever and the tear between toes progresses to a deep suppurative wound

# Jun-Jul 2011

- *Fusarium oxysporum* recovered from blood cultures during 5 consecutive days
- Skin lesions in trunk, faces, arms and feet: ad 3-4cm in diameter nodules, which later developed central necrosis
- Jul 2011 blisters in the mouth, HSV+ → valaciclovir
- CT-scan: nodules in lungs, liver and spleen, consistent with fungal infection, the primary liver lesion not visible
- Filgrastim (G-CSF) neutrophils  $\uparrow 1.77 \times 10^9/l$





# Jun-Jul 2011 continued

- Antibiotic treatment:

keftriaxone-tobramycin 150611-210611

meropenem-vancomycin 210611-230611

meropenem-tigecyclin 230611-120711

micafungin 230611-270611

voriconazole 270611→

liposomal-amphotericin B 040711-140711

# Jul-Aug 2011

- Patient was well at home, but developed a high fever and diarrhea → admitted to hospital in 240711
- Fever continued and new tender tumour in left breast → biopsy reveals fungal hyphae
- All blood, urine and stool cultures negative
- Repeated CT scans in Aug 2011: nodules in lungs remain unchanged, but nodules in liver and spleen have grown bigger.
- AML in remission; patient is not neutropenic

# Aug 2011

- antibiotic treatment:

voriconazole→

liposomal amphotericine B 250711-170811

meropenem 240711-050811

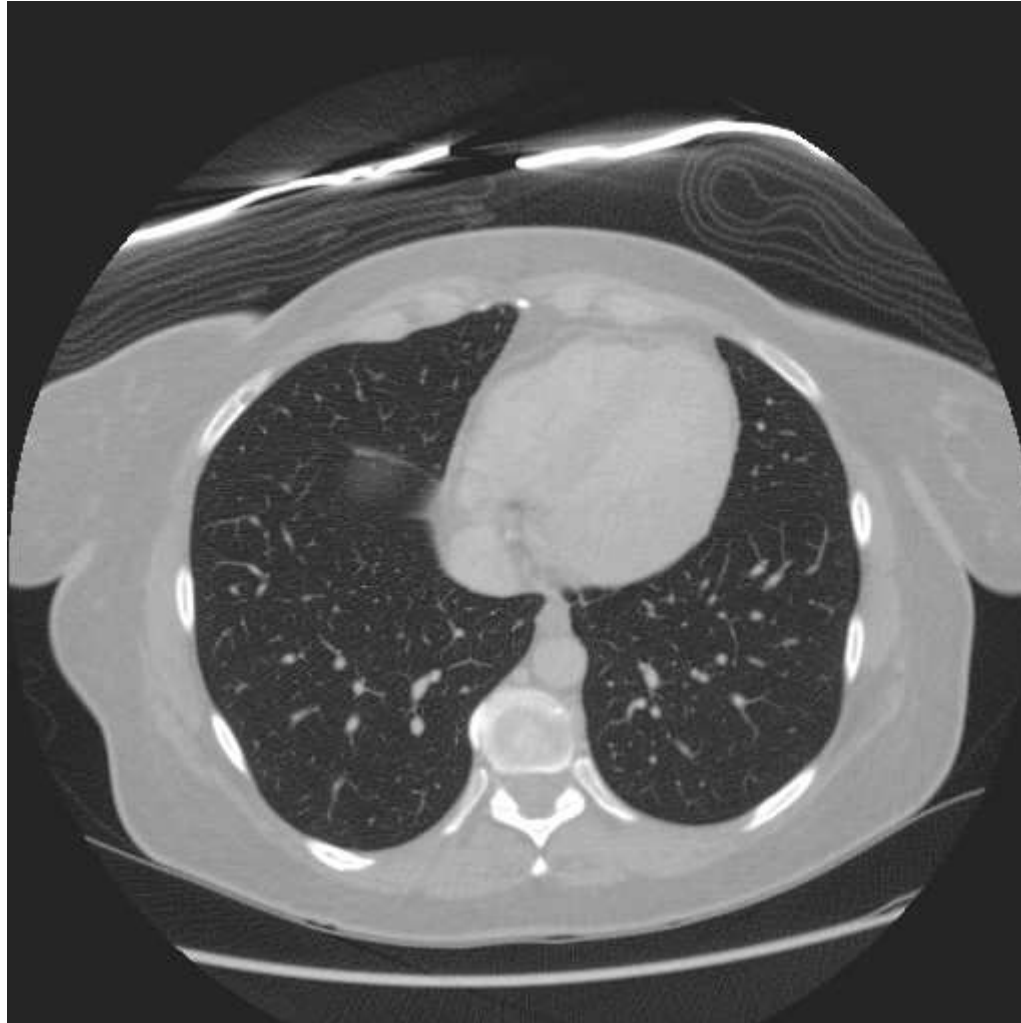
piperacillin-tazobactam 050811-170811

amoxicillin-clavulanic acid 150811-260811

# Sep-Dec 2011

- New small tense skin nodules appears → biopsy in Oct 2011: microscopy and culture negative,
- Biopsy in Dec 2011: microscopy shows fungal hyphae, culture negative.
- Mild fever and intermittent dry cough
- Oct 2011 CT-scan: liver lesions have grown markedly →  
voriconazole →  
liposomal amphotericine B 0610 → (since 1711 not in weekends)

Nov  
2011



Nov  
2011



# Dec 2011-Jul 2012

- CT-scans controlled in Dec 2011 and Feb 2012: nodules in lungs, liver and spleen unchanged
- No fever, skin lesions disappearing  
liposomal amphotericine B stopped 1302  
voriconazole →
- Jul 2011 CT-scan: nodules in lungs have lessened and disappeared, lesions in liver and spleen remained the same as before
- voriconazole continues, next CT scheduled in Nov 2012.



Thank you!

