

Biannual summary of opportunistic mycoses and aerobic actinomycetes
in New Zealand, January-June 2012.

Organism	No. of cases	Site	Clinical data
Filamentous fungi			
<i>Alternaria alternata</i>	1	Tibial biopsy	Graze to leg in sewerage area, recurrent pre-tibial abscesses. Also isolated with <i>Mycobacterium massiliense</i> & <i>M. goodnae</i> .
<i>Arthrographis kalrae</i>	1	Blood	Ewing's sarcoma, febrile neutropenia. Rx LAmB → VOR.
<i>Aspergillus fumigatus</i>	4	Bronchial Washing (2)	AML. Presented acutely with neutropenic fevers, cough (minimally productive) and pleuritic chest pain. Sore throat and cough for 2 days associated with constant central sharp pleuritic chest pain, worse with coughing. Generalised body aches. HRCT showed multifocal consolidation with surrounding ground glass haze most consistent with fungal infection. Rx VOR (1), immunocompromised, BMT (1).
		Sputum (1)	Ewing's sarcoma, past history of <i>Aspergillus</i> chest infection. Rx VOR.
		Inner ear bone biopsy (1)	Malignant otitis externa, skull base erosion and fungal meningitis. Rx VOR.
<i>Aspergillus fumigatus</i> , <i>A. niger</i> & <i>Rhizopus microsporus</i>	1	Bronchial Washing	Post lung transplant. Pulmonary infiltrates. DE-ve, few colonies only isolated, settled on ITR.
<i>Aspergillus nidulans</i> & <i>Candida albicans</i>	1	Sputum	DE yeast cells seen. Chronic lung abscess, immunosuppressed.
<i>Coccidioides immitis</i>	1	CSF	American Samoan in NZ for a family reunion. One month history of headache, neck stiffness & chest pains. Headache was described as worse at night, whilst lying down. Afebrile at presentation. CT head severe hydrocephalus. Arizona, USA proven Coccidiomycosis Jan 2010 which was treated with 18 months of FCZ which had stopped recently.
<i>Curvularia lunata</i>	1	Maxillary sinus	NR.
<i>Fusarium solani</i>	2	Intraocular pus (1)	DE+ve. Presumed acanthamoeba keratitis, corneal scrape 6 weeks prior had grown a few colonies of <i>F. solani</i> on one plate but multiple samples (including a corneal biopsy) had remained negative. Eye enucleated & Rx VOR.
		Nostril swab (1)	DE-ve. Ethmoid sinusitis. Also isolated with <i>Penicillium spp</i> & <i>Candida albicans</i> .
<i>Neosartorya</i> species	1	Lateral ankle biopsy	Fractured ankle 6 months prior. Metalware involvement.

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<i>Phomopsis</i> species	1	Foot abscess	DE+ve. Chromomycosis. <i>Fonsecea pedrosoi</i> & <i>Phoma cruris-hominis</i> isolated previously in 2004.
<i>Rhizopus microsporus</i>	3	Middle meatal tissue (1)	DE+ve. Right nasal obstruction with septal deviation. Left middle meatal polyposis and fungal deposits with extensive maxillary sinus and anterior ethmoid fungal sinusitis.
		Sputum (1)	CLL, sepsis.
		Hand swab (1)	Hand caught in wood chipper with mid-distal metacarpal amputation.
<i>Schizophyllum commune</i>	1	Sphenoid sinus	Fungal hyphae seen in Microbiology & Histology PAS stains.
Yeasts			
<i>Candida albicans</i>	19	Blood culture (14)	Sigmoid colectomy, post-op bleeding requiring emergency laparotomies. Rx FCZ & CAS (1), elderly, urosepsis. Also isolated with <i>E. coli</i> . Rx FCZ (1), ICU patient post-abdominal surgery for gastric ulcer. Rx FCZ (1), multi-organ failure, patient deceased (1), hepatocellular Ca, peritonitis, patient deceased (1), 50% burns following gas stove explosion (1), renal Ca, abdominal sepsis (1), AAA rupture, patient deceased (1), DVT, puerperal sepsis (1), meningococcal sepsis with multi-organ failure. Invasive <i>Candida</i> infection (1), ischaemic bowel & perforation, line sepsis. Line removed & Rx FCZ (1), recurrent malignant thymoma, bronchiectasis (1), NR (2).
		Aortic graft (2)	Metastatic gallbladder adenocarcinoma presented in septic shock from biliary sepsis. 3-4 days of increasing jaundice followed by the development of fevers. Initially profoundly hypotensive and unwell. Bloods showed deranged LFTs and blood cultures grew 5 organisms. Rx FCZ (1), infected aorto-bifemoral graft. Patient deceased (1).
		Blood & Mitral Valve (1)	Rheumatic heart disease, endocarditis. MRI systemic multiple micro-emboli in finger and also the head. Rx AmB & 5FC. Mitral valve replaced.
		CAPD (1)	ESRF, diabetic.
		Elbow aspirate & biopsy (1)	Infected prosthesis.
<i>Candida dubliniensis</i>	1	Blood	Liver transplant May 2010. Gall

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			bladder abscesses & blocked bile ducts → PTC. Rx LAmB, then FCZ.
<i>Candida glabrata</i> complex	9	Blood (8)	Urosepsis. Rx FCZ (1), perforated diverticular disease (1), PUO (1), line sepsis (1), colonic Ca, line <i>in-situ</i> (1), NR (3).
		CAPD (1)	ESRF, also grew <i>P. mirabilis</i> , <i>E. coli</i> & <i>Bacillus</i> species from multiple bags & Tenckhoff catheter tip (1), ESRF 2° to hypertensive nephrosclerosis (1).
<i>Candida krusei</i>	1	Blood	NR.
<i>Candida lusitanae</i>	1	Blood	Recurrent papillar Ca, on palliative care.
<i>Candida parapsilosis</i> complex	10	Blood (4)	ALL, Rx FCZ (1), AML, neutropenic, line sepsis. Rx FCZ (1), fever, intestinal failure on TPN (1), line sepsis (1).
		Blood & Mitral Mass (1)	ESRF (unknown cause) on haemodialysis, tunnelled line infection (infected thrombus or vegetation) that potentially involves the tricuspid valve. Removed surgically & Rx FCZ.
		CAPD (3)	ESRF (2), diabetic with ESRF (1).
		Deep hip joint swab (1)	Persistent ooze THJR surgical wound site. Also isolated with <i>Pseudomonas</i> spp, <i>Enterococcus faecium</i> , <i>Enterococcus faecalis</i> & <i>Staphylococcus aureus</i> . Multiple washouts.
		Knee joint aspirate (1)	TKJR, Rx FCZ.
<i>Candida tropicalis</i>	4	Blood (3)	Self immolation, 40% burns, Candidaemia (1), febrile/unwell (1), Addison's disease, type I diabetes, multiple sclerosis (1).
		CAPD (1)	Diabetic with ESRF, cardiac arrest, deceased.
<i>Cryptococcus neoformans</i>		CSF & lung aspirate (1)	Multiple cryptococcomas.
<i>Exophiala dermatidis</i>	1	Palm tissue	DE-ve. NR.
<i>Prototheca wickerhamii</i> NOTE: achloric alga	1	Elbow aspirate	NR.
<i>Rhodotorula mucaliginosa</i>	1	Blood	Short gut syndrome (on home TPN). Line sepsis. Rx LAmB & line removal.
<i>Saccharomyces cerevisiae</i>	2	Blood (1)	Oesophago-jejunostomy, line sepsis Rx FCZ
		Pleura tissue (1)	DE+ve. Perforated oesophagus.
<i>Pneumocystis jiroveci</i> (<i>carinii</i>)	12	Bronchial Washing (8)	Breast Ca undergoing chemo, CXR interstitial ground glass appearance (1), Tb, diabetic, autoimmune hepatitis, deceased (1), antisynthetase syndrome (1), rheumatoid arthritis, renal impairment (1), rheumatoid arthritis

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			(2), end stage liver failure, 2 ^o to autoimmune hepatitis, coeliac disease (1), NR (1).
		Sputum / Induced sputum (4)	HIV+ve (1), ICU patient (1), ESRF, renal transplant, lymphoma (1), rheumatoid arthritis & Sjogrens syndrome (1)
Aerobic Actinomycetes			
<i>Gordonia bronchialis</i>	1	Breast	Granulomatous mastitis.
<i>Gordonia terrae</i>	1	Blood	NCD. Identified by 16S sequencing.
<i>Nocardia farcinica</i>	1	Wound	DE+ve. Lesion upper back.
<i>Nocardia nova</i>		Sputum	DE+ve. Ca lung (1), DE+ve, type 2 diabetes, metastatic lung Ca (1), immunocompromised, previous MAI infection. New changes to CXR (1), ?NTM (1), COPD with LUL infiltrate. DE-ve. Also isolated with <i>Aspergillus fumigatus</i> (1), chest infection. DE+ve. Patient deceased (1), DE+ve. Ca lung (1), NR (2)
<i>N. otidis-cavarium</i>	1	Sputum	DE+ve. Chesty cough.
<i>Nocardia paucivorans</i>	1	Finger	NR
<i>Nocardia yamanashienis</i>	1	Pus Iliac crest cavity	DE+ve. History of extensive botryomycosis. Multiple previous debridement & extensive skin grafts.
<i>Rhodococcus</i> species	1	CAPD	ESRF on CAPD.

KEY:

5FC	5-flucytosine	HRCT	High resolution CT scan
AAA	Aortic abdomen aneurysm	ICU	Intensive Care Unit
ALL	Acute lymphoblastic leukaemia	ITR	Itraconazole
AML	Acute myeloid leukaemia	LAmB	Liposomal Amphotericin B
BMT	Bone marrow transplant	LFT	Liver function test
Ca	Carcinoma	LUL	Left upper lobe
CAPD	Continuous ambulatory peritoneal dialysis	MAI	<i>Mycobacterium avium-intracellulare</i>
CAS	Casposungin	MRI	Magnetic resonance image
CLL	Chronic lymphoblastic leukaemia	NR	Clinical data not received
COPD	Chronic obstructive pulmonary disease	PAS	Periodic Acid Schiff
CSF	Cerebrospinal fluid	PTC	Percutaneous transhepatic cholangiography
CT	Computerised tomography	PUO	Pyrexia of unknown origin
CXR	Chest x-ray	THJR	Total hip joint replacement
DE	Direct examination	TKJR	Total knee joint replacement
DVT	Deep vein thrombosis	TPN	Total parenteral nutrition
ESRF	End stage renal failure	Rx	Treatment
FCZ	Fluconazole	VOR	Voriconazole

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