

Biannual summary of opportunistic mycoses and aerobic actinomycetes in New Zealand,
January - June 2006

Organism	No. of cases	Site	Clinical data
Filamentous fungi			
<i>Aspergillus fumigatus</i>	3	Bronchial washing (1)	DE+, bilateral sequential single lung transplantation for CF. Rx: ITR.
		Maxillary sinus (2)	AML, neutropenic, CT scan showed sinusitis involving the right ethmoid and maxillary sinuses. Surgical clearance of the sinuses was performed. DE: dichotomous branching hyphae seen. Rx: VOR. (1) DE+, type 2 diabetic presented with 5-year history of left sided sinus symptoms. Nasal obstruction and perceptions of foul smell in the left side of his nose had become particularly marked in the last six months with marked yellow-green discharge from this side of the nose. Rx: surgical clearing. Typical & albino variants of <i>A. fumigatus</i> were isolated from the material (1).
<i>Aspergillus glaucus</i>	1	Index finger tissue	Post-amputation.
<i>Bipolaris australensis</i>	1	Nasal mucosa	Allergic fungal sinusitis with fungus ball in maxillary sinus, DE+.
<i>Mucor ramosissimus</i>	1	Leg ulcers	Histology +, isolated from multiple sites. Admitted initially with a clinical diagnosis of shingles on leg. History of CORD and prednisone use to manage exacerbations around this time. Shingles lesions became secondarily infected. The possibility of some kind of contaminated dressing early on was considered as this has been reported in the literature. Rx: FCZ initially but changed to AmB and steroids discontinued and made a good recovery. No significant surgical debridement was performed
<i>Paecilomyces lilacinus</i>	1	Knee aspirate	Prepatellar bursitis.
<i>Rhinoclatidiella atrovirens</i>	1	Leg suture wound	DE-, trauma, multiple lacerations.
<i>Rhizopus microsporus</i>	1	Chest & lung aspirates & tissue	Diabetic, kidney transplant, immunosuppressed.
Yeasts			
<i>Candida albicans</i>	31	Blood culture (25)	ICU patient with subphrenic collection & large bowel adhesions (1), adenocarcinoma, post-Hartman's procedure. Anastomotic leak, drainage of pelvic abscess, repeatedly isolated (1), burns (1), lymphoma (1), Ca, oesophagectomy, leaking anastomosis post Ivor Lewis procedure, sepsis, empyema. Repeatedly isolated, sometimes with

Organism	No. of cases	Site	Clinical data
			Saccharomyces spp or <i>Staphylococcus</i> spp (1), AML, post chemotherapy, febrile (1), AML (1), ALL, line sepsis, multiple sets positive, disseminated candidiasis, endocarditis, fungus ball renal artery (1), oncology patient, line sepsis, yeast cells originally seen in Haematology differential (1), CF (2), PUO (1), endocarditis; also isolated with <i>C. glabrata</i> (1), uro-sepsis (2), biliary sepsis (1), afebrile, SOB (1), malignancy (4), NR (4).
		Breast aspirate (1)	DE+, unknown, recurrent breast infections.
		CAPD (2)	ESRF, peritonitis.
		Lymph node (1)	DE-ve, AML.
		Vitreous fluid (1)	IV drug abuser, endophthalmitis. Rx: topical steroids, FCZ and single dose intraocular AmB.
		Chest wall tissue (1)	Ivor Lewis oesophagogastrectomy 8-months prior complicated with a fistula track, which has now healed. Over the last three months the patient has been troubled with a non healing wound on the chest wall ?osteomyelitis .
<i>Candida dubliniensis</i>	3	Blood (1)	ALL.
		Catheter blood & CVL tip (1)	Line sepsis, commenced on FCZ. Developed respiratory failure and was admitted to ICU for respiratory support, requiring ventilation (including tracheostomy). AmB added to anti-fungal regimen, but acute renal decompensation so changed to caspofungin. Discharged home (1).
		Peritoneal drain fluid (1)	Recent cholecystectomy complicated by bile leak. Peritoneal collection at time of pigtail drain insertion.
<i>Candida glabrata</i>	3	Blood (2)	Passed away after gastric ulcer, perforation, MI, PE and <i>Candida</i> sepsis (1), NR (1).
		CVL tip (1)	ESRF. Line removed no specific antifungal treatment given. Patient doing well.
<i>Candida guilliermondii</i>	2	CAPD	DE+, CRF, on peritoneal dialysis (1), ESRF secondary to light chain nephropathy, hypertension and non-steroidal anti-inflammatory drugs. Rx: FCZ and requiring catheter removal (1).
<i>Candida parapsilosis</i>	18	Blood (12)	?Line sepsis, appendectomy 6-months ago, hospitalised for adhesions & perforated bowel. Line removed, no treatment, full recovery (1), ICU patient (1) disseminated

Organism	No. of cases	Site	Clinical data
			peritoneal mucinous adenocarcinoma of the appendix, line sepsis. Rx: FCZ (1), CF, line sepsis. Also isolated with <i>C. lusitaniae</i> . Rx: FCZ & portacath removed (1), AML (1), malignancy (2), renal failure on haemodialysis (2) endocarditis (1), diabetes mellitus, malignancy, endocarditis (1), NR (1).
		CAPD (6)	Peritonitis, DE+, also isolated with <i>E. faecalis</i> (1) ESRF, peritonitis (3), ESRF. Type II diabetes mellitus, Rx: fluconazole and replacement of tenckhoff catheter. Patients subsequent health complicated by 6 episodes of peritonitis (<i>S. aureus</i>) (1), ESRF, peritonitis. Condition failed to improve despite initiation of oral FCZ. Patient deceased (1).
		Corneal scrape (1)	Contact lens wearer.
<i>Candida tropicalis</i>	2	Blood (1)	Malignancy.
		CAPD (1)	DE+, renal failure, peritonitis.
<i>Cryptococcus gattii</i>	1	BW and CSF	Recent trip to North Australia.
<i>Cryptococcus neoformans</i>	5	CSF (4)	DE-, serology +, NR (1), DE +, HIV-, headache for about 1 month with vomiting. LA = 1:256 (1), DE+, HIV+ (1), SLE (1).
		Blood (1)	HIV+.
<i>Malassezia furfur</i>	1	CAPD	DE+, renal failure.
<i>Saccharomyces cerevisiae</i>	1	CAPD	DE-, renal failure.
<i>Pneumocystis jirovecii</i> (<i>carinii</i>)	12	BW/BAL (6)	Oncology patient, prolonged immunosuppression, respiratory distress (1), RA on methotrexate with neutropenia (1), post lung transplant (1), lymphoma (1), HIV+, pneumonia (1), NR (1).
		Sputum/tracheal aspirate (5)	Metastatic breast Ca, neutropenic with fever (1), HIV+ (1), Ca lung. HRCT shows ground glass appearance (1), HIV+ (1), NR (1).
		Induced sputum (1)	Lymphoma.
Aerobic Actinomycetes			
<i>Gordona bronchialis</i>	1	Knee	TKR revision.
<i>Nocardia asteroides</i> complex	1	Sputum	CORD, not responding to treatment, isolated 3x (1).
<i>Nocardia brasiliensis</i>	1	Hand	Abscess.
<i>Nocardia cyriacigeorgica</i>	2	Sputum (1)	DE+, CF.
		Main stem bronchus biopsy (1)	Granulomatous inflammation with extensive cartilaginous destruction. Rx: COT.
<i>Nocardia farcinica</i>	3	Brain abscess (1)	DE+. Previous bowel Ca, dysphasia, weakness and ?seizure activity. Head CT revealed ischaemic changes, MRI showed a lobulated ring enhancing

Organism	No. of cases	Site	Clinical data
			mass of the left parietal lobe measuring 2 x 1.5 x 1.5cm. Abscess drained. Rx: COT.
		Chest & thigh abscess (1)	NR.
		Knee aspirate (1)	DE+, Hodgkin's lymphoma
<i>Nocardia nova</i>	3	Sputum (2)	NHL, recent high fevers, coughing up thick dark sputum, DE+ (1), chest infection, possible TB (1).
		Foot abscess(1)	Osteomyelitis.
<i>Tsakamurella</i> species - identified by 16S sequencing.	1	Induced sputa	Multiple isolations. Presented with multiple small calcific foci within the right upper lobe; residual calcification within non-enlarged right hilar and subcarinal nodes; mild cylindrical bronchiectasis, small airways disease affecting 25% to 50% of lung volume.

KEY:

ALL	Acute lymphoblastic leukaemia	FNA	Fine needle aspirate
AmB	Amphotericin B	HIV	Human immunodeficiency virus
AML	Acute myeloid leukaemia	HRCT	High resolution CT scan
BAL	Bronchoalveolar lavage	ICU	Intensive care unit
BW	Bronchial washing	ITR	Itraconazole
Ca	Carcinoma	IV	Intravenous
CAPD	Continuous ambulatory peritoneal dialysis	LA	Latex agglutination
CF	Cystic fibrosis	MI	Myocardial infarction
CORD	Chronic obstructive respiratory disease	MRI	Magnetic resonance image
COT	Cotrimoxazole	PE	Pulmonary embolus
CRF	Chronic renal failure	PUO	Pyrexia of unknown origin
CSF	Cerebrospinal fluid	NR	Clinical data not received
CT	Computerised tomography	RA	Rheumatoid arthritis
CVL	Central venous line	Rx	Treatment
CXR	Chest x-ray	SLE	Systemic lupus erythematosus
DE	Direct examination	SOB	Shortness of breath
ESRF	End stage renal failure	TB	Tuberculosis
FCZ	Fluconazole	VOR	Voriconazole

Collated by Karen Rogers, Mycology Reference Laboratory, Microbiology Department, LabPlus, Auckland City Hospital.