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Short Communication

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[Contamination of a water bottle warmer in neonatal Intensive care unit and Klebsiella Pneumoniae ESBL + outbreak: cases series](#)

Infections caused by extended-spectrum β -lactamases (ESBLs)-producing bacteria in particular Klebsiella Pneumoniae (KPE+), are on a constant rise and are a noted cause of outbreaks in neonatal intensive care units (NICUs). In the NICU of Policlinico di Foggia, an outbreak of infections in 2018 brought to the start of a serial check of presence and favorable conditions associated with KPE+ diffusion. The outbreak was controlled by improving basic hygiene measures such as hand washing, the use of disposable gloves and gowns, and removing a potential environmental contamination source such as the water bottle warmer.

Research Article

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[Boron neutron capture therapy for the treatment of lung cancer and assessment of dose received by organs at risk](#)

Recent studies on boron neutron capture therapy (BNCT) have focused on investigating the appropriate neutron sources based on accelerators for neutron production, such as ${}^7\text{Li}(p,n){}^7\text{Be}$. The therapeutic abilities of BNCT have been studied for the possible treatment of lung cancer using thermal and epithermal neutron beams. For neutron transport, the Monte Carlo N-particle transport code was used, and doses in the organs of different Oak Ridge National Laboratory phantoms were evaluated. The right lung was meshed with voxels to obtain depth-dose distributions using 1 eV, 10 eV, 100 eV, 1 keV, 5 keV, 8 keV and 10 keV energy sources. These results suggest that BNCT with an epithermal neutron beam can be used to treat lung cancer. By evaluating the biological dose rate and dose-depth distribution curves in healthy tissues and tumors by simulating a lung phantom, the quantities in the phantom were also evaluated. Our calculations show that with increasing boron concentration applied to the tumor, the dose is increased and the 100 eV energy source has the greatest effect on the tumor dose.

Review Article

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[Identification, characterization of candida species isolated from cases of vulvovaginal candidiasis along with their antifungal susceptibility by vitek-2 system](#)

One of the most severe threats to world health is the Candida species. Many non-Candida species are the major cause of vulvovaginal candidiasis (VVC). During the development of VVC, the host environment and Candida vaginal colonization are assumed to be out of balance, and this might be owing to physiological or non-physiological changes. Host-related and behavioral risks have been connected to VVC. Novel antifungal medications with particular molecular targets may be developed with the use of molecular tools in epidemiological research and the study of resistant Candida species. Using the Vitek-2 Antifungal Susceptibility System, this review will explain the many approaches used to identify and characterize Candida species isolated from vulvovaginal candidiasis patients.

Case Report

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[Post-operative agranulocytosis caused by intravenous cefazolin: A case report with a discussion of the pathogenesis](#)

A case of post-operative agranulocytosis which occurred in a 66-year-old woman following surgery for endometrial carcinoma is reported. The agranulocytosis had a rapid onset, being detected on the first post-operative day. The causative agent, cefazolin was given to the patient intraoperatively. The agranulocytosis persisted until the 22nd postoperative day. A bone marrow biopsy performed on post-operative day four showed a left-shifted myeloid maturation pattern but not a maturation arrest. The pathogenesis of drug-induced neutropenia/agranulocytosis is discussed. It is postulated that reversible binding of cefazolin to albumin accounts for the prolonged duration of agranulocytosis.

Case Report

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[The identification of the true nature of pseudofungus structures as polyurethane catheter fragments](#)

Pseudofungus structures in lymph node tissues have been reported on multiple occasions. Despite a variety of investigative tests including histochemical special stains and energy dispersive spectral analysis, the underlying nature and origin of these pseudofungus structures has never been clearly defined. The most common hypothesis suggests that they represent collagen fibers that become coated with iron and calcium. Herein, evidence is given that the pseudofungus structures identified in the lymph node tissues represent fragments of polyurethane catheters. The evidence includes both a comparison of these pseudofungus structures to fragments of polyurethane well documented in the literature and a comparison of polyurethane catheter scrapings to the pseudofungus structures identified in the literature. In both of these comparisons, the morphology of the polyurethane fragments are identical to the pseudofungus structures. This is the first definitive report identifying polyurethane catheter fragments as representing the true nature and etiology of pseudofungus structures in lymph node tissues.

Research Article

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[Immune-mediated neuropathy related to bortezomib in a patient with multiple myeloma](#)

Treatment options in multiple myeloma (MM) based on novel agents are often limited by dose-related neurotoxicity. Bortezomib, a highly active reversible proteasome inhibitor, frequently causes peripheral neuropathy (PN). Bortezomib-induced PN (BIPN) is characterized by a length-dependent, sensory, axonal polyneuropathy (PNP) with predominant small fiber-affected. Following dose reduction or drug discontinuation, BIPN resolves within 3-4 months in the majority of patients. The pathophysiological mechanisms of BIPN are unclear. Rare cases of a severe demyelinating or mixed BIPN with prominent motor involvement have been attributed to autoimmune or inflammatory reactions. A case report, including nerve pathology, is presented of a 59-year-old man with stage III IgG-? MM who was treated with bortezomib on the occurrence of progressive disease. After the fourth cycle, he developed a painful distal symmetric sensory PNP followed by gait instability and muscle weakness increasing over 3 months despite early cessation of bortezomib.

Neurological examination revealed a distal flaccid tetraparesis mainly of the lower limbs with sensory loss and severe ataxia, electrophysiological features of a mixed axonal-demyelinating PNP, and pathomorphological evidence of neuritis. Steroid treatment was initiated, and partial recovery of the neurological symptoms within 6 months was observed. While a neurotoxic effect may explain the initial distal sensory disturbances, the worsening of neurological dysfunction after bortezomib withdrawal and the clinical pattern with steroid-responsive muscle weakness predominantly of the legs are consistent with an immune-mediated mechanism. This is in line with the sural nerve biopsy findings. Toxic BIPN followed by an immune-mediated BIPN in the same patient has not been reported before.
