EUROPEAN HEMATOLOGY ASSOCIATION
VIENNA, AUSTRIA, 11–14 JUNE

Invasive fungal infections underdiagnosed

Invasive fungal infections, including aspergillosis and mucormycosis, are increasing in incidence but underdiagnosis and late treatment reduce the chances of good outcomes in many patients, according to figures reported during a symposium at EHA 2015.

Invasive fungal infections typically occur in severely immunocompromised patients, and are common in patients with haematological malignancies, particularly those with severe and prolonged neutropenia and transplant recipients. 'We should have a high index of suspicion in these patients,' warned Professor Andrew Ullmann, Chief of the Division of Infectious Diseases, Universitätsklinikum Würzburg, Germany. Figures indicate there are around 19 000 cases of aspergillosis each year in the EU and approximately 800 cases of mucormycosis each year, with numbers increasing as growing numbers of patients have prolonged neutropenia and with greater use of immunosuppression and immune-modulating drugs.

Symptoms of aspergillosis are typically non-specific and include: fever, cough, sputum, pleuritic pain, haemoptysis and dyspnoea. Professor Ullmann reported that new guidelines for invasive aspergillosis, developed by the European Society of Clinical Microbiology and Infectious Diseases last year and due to be published soon, recommend voriconazole or liposomal amphotericin B for first-line treatment, based on available evidence.

An investigational broad-spectrum antifungal isavuconazole (currently being reviewed by the European Medicines Agency) is also given a strong recommendation (A) based on available evidence. He reported results from the phase 3 SECURE study in patients with invasive fungal disease caused by *Aspergillus* spp or other filamentous fungi showing similar clinical response and numerically lower all-cause mortality with isavuconazole than with voriconazole (18.6% *vs* 20.2%), with fewer drug-related adverse events (42% *vs* 60%).

Professor Andrew Ullmann, Chief, Division of Infectious Diseases, Universitätsklinikum Würzburg, Germany

Susan Mayor

Registry shows improved survival in CML

Survival in patients with chronic myeloid leukaemia (CML) has improved over the last few years with most patients now being diagnosed early and being offered evidence-based treatment, according to results from a European registry reported at the European Hematology Association congress.

The European LeukemiaNet web-based registry collected data on patients newly diagnosed with CML at participating centres in 20 countries. Data reported for 2904 adult CML patients showed that the majority (94%) were diagnosed early, in chronic phase disease, while 3.5% were diagnosed in accelerated phase and 2% in blastic phase disease.

Just over four in every five patients (81%) received imatinib as first-line therapy, in line with guidelines, while 12% were treated with nilotinib, 3% with dasatinib and 4% received treatment based on hydroxyurea.

The median time to first complete cytogenetic remission was 8 months for all patients. Patients with chromosomal abnormalities in Ph+ cells had longer time to complete remission than those without (10 months *vs* 8 months), as did patients treated with imatinib first line compared to second-generation tyrosine kinase inhibitors (8 months *vs* 5 months). The survival probability was 95% at 12 months and 92% at 24 months.

Reporting the findings, Verena Hoffmann, from the Ludwig-Maximilliams-Universität in Munich, Germany, said: 'Median time to complete cytogenetic remission in the population is comparable to that seen patients enrolled in randomized trials.' She concluded: 'Overall, the treatment of CML is very successful for patients diagnosed early.'

Susan Mayor

Haematological conditions cost €23 billion a year

Haematological conditions cost an estimated €23 billion each year across European countries, according to the first study to estimate the direct healthcare and societal costs associated with blood disorders.

Researchers from the Health Economics Research Centre at the University of Oxford estimated the economic burden of haematological conditions, including medical and non-medical care costs. They used national figures, published data and OECD health data to estimate costs for 2012.

Of the €23 billion cost of haematological diseases, just over two-thirds (68%) of the costs were attributed to health care. Within this, around one-third of costs were associated with hospitalization of patients with blood disorders and almost 20% with costs of medicines. Direct costs accounted for 40% of all cancer health-care costs and the morbidity was higher (14% *vs* 8% for all cancers).

Reporting the findings, Richéal Burns from the University of Oxford said: 'Blood cancers are associated with a high burden of illness and health-care costs compared to other cancers. Resource allocation should reflect this.'

Susan Mayor

Susan Mayor's attendance at the European Hematology Association was supported financially by Basilea.

More than half of breast cancer patients develop diastolic dysfunction after anthracycline-based chemotherapy

Patients who undergo treatment with anthracycline-based chemotherapy for breast cancer are at risk of developing diastolic dysfunction (Serrano et al, 2015). Within 12 months of completing anthracycline treatment, 57% of breast cancer patients had changes on their echocardiograms consistent with diastolic dysfunction.

Despite the benefits of anthracyclines, cardiotoxicity remains the main limitation of anthracycline-based chemotherapy. To gain a better understanding of cardiovascular side effects in breast cancer patients, Dr José M Serrano, of Hospital Universitario de Fuenlabrada in Madrid, Spain, and colleagues examined cardiac function in 100 patients with breast cancer who were treated with anthracycline-based chemotherapy alone or anthracycline plus trastuzumab. All patients underwent an echocardiogram before and at the end of treatment, and up to 12 months after the last dose of chemotherapy.

Dr José M Serrano, Cardiologist and Staff Physician in the Cardiology Department, Hospital Universitario de Fuenlabrada, Madrid, Spain

Among 85 evaluable patients who were treated with anthracyclines, 49 (57%) developed diastolic dysfunction during the 12-month follow up. Of these, 36 patients (73%) had diastolic dysfunction that persisted through the final follow up. Diastolic dysfunction reversed by the end of the study in the remaining 13 patients. 'Our findings show that diastolic dysfunction is common after anthracycline-based chemotherapy, particularly in older patients and those with higher body mass index,' Dr Serrano said. 'By understanding the risk factors for anthracycline cardiotoxicity, we may be able to identify which breast cancer patients may benefit from more intensive monitoring programmes.'

Serrano JM, González I, Del Castillo S et al (2015) Diastolic dysfunction following anthracycline-based chemotherapy in breast cancer patients: incidence and predictors. *Oncologist* (doi: 10.1634/theoncologist.2014-0500)

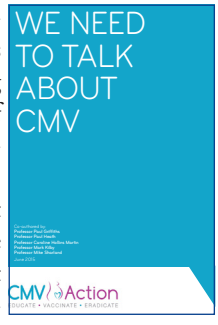
Call for increased awareness of cytomegalovirus infection

A new report *We Need to Talk About CMV* (www.cmvaction.org.uk/talk-about-cmv) is calling for urgent action to reduce the number of infections occurring in pregnancy caused by cytomegalovirus, the UK's leading preventable cause of hearing loss in children.

Two or three babies born each day are affected by cytomegalovirus infection – equivalent to almost 1000 babies every year. Cytomegalovirus can cause stillbirth, miscarriage and disabilities and is the leading preventable cause of hearing loss in children.

Around three out of every five people in the UK can expect to catch cytomegalovirus at some point in their lives, yet research has shown that only around one in three adult women of child-bearing age has even heard of it.

'While cytomegalovirus rarely poses problems for an otherwise healthy child or adult, the consequences of infection with this virus during pregnancy can be devastating for the unborn child', said Professor Paul Griffiths, Professor of Virology at University College London, and contributor to the report.



He continued: 'there is a substantial body of evidence available that shows that we can effectively reduce the risk of transmission with really simple steps.'

Osteoporosis of the wrist linked with heart disease

High-resolution peripheral quantitative computed tomography captures aspects of bone geometry and volumetric bone mineral density and offers the ability to measure bone microarchitecture, but data relating measures from this technique in patients with ischaemic heart disease are lacking.

Paccou et al (2015) report an analysis from the Hertfordshire Cohort Study, which studied associations between measures from high-resolution peripheral quantitative computed tomography of distal radius and distal tibia in 350 participants (184 men, 166 women) aged 71.5–80.5 years with or without ischaemic heart disease.

Cortical volumetric bone mineral density was lower ($P<0.001$) and cortical thickness was not different ($P=0.519$), whereas cortical porosity at the distal radius was higher ($P=0.016$) in those with ischaemic heart disease.

Adjustment for confounders did not affect the relationship described for cortical volumetric bone mineral density, but differences in cortical porosity were attenuated.

Only cortical volumetric bone mineral density was lower at the distal radius in men with ischaemic heart disease with and without adjustment for confounders, whereas no statistical differences were found in women, although patterns of differences were similar in both sexes.

There was no association between ischaemic heart disease and parameters at the distal tibia in men or women.

Paccou J, Edwards MH, Ward KA et al (2015) Ischemic heart disease is associated with lower cortical volumetric bone mineral density of distal radius. *Osteoporos Int* **26**(7): 1893–901 (doi: 10.1007/s00198-015-3132-z)