Symposium
IMAGING AND MULTIPLE MYELOMA: Current concepts and controversies

Announcement

Friday 04 March 2016
Hof ter Musschen, Brussel

www.bhs.be
INTRODUCTION

Management of multiple myeloma is a rapidly evolving field. Beside the progress of treatment, with a lot of new drugs and prolonged survival, the definition and imaging techniques of bone disease are changing.

For decades Xrays bone survey has been the gold standard for diagnosis of bone lesions. Now low dose CT-scan, MRI and Pet-CT become more and more reference examinations.

During this symposium, we will have the opportunity to learn from radiologists and nuclearists about these imaging techniques and their role in the diagnosis and follow-up of multiple myeloma, in the context of the new definitions of symptomatic myeloma. We will also listen to the experience of the IFM group regarding the prognostic implication of MRI and Pet-CT. Finally we hope that we will have a constructive and interactive multidisciplinary discussion between hematologists, radiologists and nuclearists, trying to define guidelines for Belgium.

We wish you an inspiring symposium!

Chantal Doyen, committee chair

Karolien Beel  Nathalie Meuleman
Greet Bries  Philippe Mineur
Jo Caers  Fritz Offner
Bernard De Prijck  Rik Schots
Hade De Samblanx  Melanie Vaes
Hilde Demuynck  Jan Van Droogenbroeck
Michel Delforge  Ann Van De Velde
Anne Deweweire  Isabelle Vande Broek
Karel Fostier  Marie-Christiane Vekemans
Alain Kentos  Philip Vlummens
KaLung Wu

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14.00 Welcome on behalf of the BHS MM subcommittee
   C Doyen

14.10 Updated IMWG definitions generate new questions on imaging
   J Caers, CHU Sart Tilman, Liège

14.20 MRI in MM: use and limitations
   F Lecouvet, UCL Saint Luc Brussels

14.45 CT scan imaging in MM: the new standard
   S Pans, UZ Leuven

15.05 Prospective evaluation of MRI and Pet-Ct in the IFM DFCI 2009 trial
   P Moreau, Nantes

15.40 Diagnostic criteria for Pet-CT in MM
   N Whitofs, CHU Sart Tilman, Liège

16.00 Coffee break

16.30 Clinical cases and roundtable
   K Fostier, UZ Brussel
   M Delforge, UZ Leuven
   C. Doyen, UCL Mont Godinne
   S Pans, UZ Leuven
   M-C Vekemans, UCL Saint Luc
   N Whitofs, CHU Sart Tilman, Liège

17.15 Conclusion: to Belgian guidelines
   N Meuleman, Inst Bordet, Brussels
**GENERAL INFORMATION**

**Location**
Hof ter Musschen  
Av. Emmanuel Mounierlaan 2  
1200 Brussel  
Tel.: +32 (0) 2 774 01 10

**Registration**
Please register online via the BHS website (www.bhs.be),  
or via www.congresscare.com  
Registration is free of charge.

**Language**
The meeting language will be English.

**Accreditation**
Accreditation is pending nr. 15018893

**Website**
www.bhs.be

**Symposium secretariat**
Congress Care  
P.O. Box 440  
NL-5201 AK ’s-Hertogenbosch  
The Netherlands  
+31-73-690 1415  
bhs@congresscare.com  
www.congresscare.com
Revlimid® from day one
(for ndMM NSCT* patients)

Reimbursed as of March 1st 2016

Postpone the first relapse as long as possible

- 35 months of median duration of response
- 33% patients progression free after 4 years
- + 10.4 months of OS versus a triplet therapy (MPT)

*ndMM NSCT: newly diagnosed multiple myeloma non stem cell transplant

1, Benboubker et al. NEJM 2014;371:906-917
2, Facon et al. ASCO 2015 Abstract #8524
3, Facon et al. Oral presentation EHA 2015, abstract #S105

Celgene
Every day is worth living
This medicinal product is subject to additional monitoring. This will allow quick identification of new safety information in the population. Healthcare professionals are asked to report any suspected adverse reactions. See section 4.8 for how to report adverse reactions. Name of the medicinal product: Revlimid (lenalidomide) 2.5 mg, 5 mg and 10 mg tablets. Revlimid is prescribed for patients with multiple myeloma who have received at least one prior therapy or for lymphoma patients who have received at least two prior therapies. For patients with multiple myeloma treated with Revlimid in combination with dexamethasone, additional monitoring will be implemented for patients with thrombocytopenia or neutropenia. The serious adverse reactions observed with lenalidomide in combination with low-dose dexamethasone (Rd) or lenalidomide and low-dose dexamethasone (Rd18) were: pneumonia (9.8%), febrile neutropenia (6.0%), anaemia (5.3%). The adverse reactions observed more frequently with Rd-Rd18 than MPT were: diarrhoea (45.5%), fatigue (32.8%), back pain (32.0%), asthenia (28.2%), insomnia (27.6%), rash (24.3%), decreased appetite (23.9%), constipation (21.3%), weight loss (19.6%), peripheral oedema (21.3%), hypertension (20.4%), nausea (18.9%), dyspnoea (18.5%), pyrexia (15.1%), dry skin (13.0%), vomiting (11.5%), herpes zoster (10.5%) and hypothyroidism (10.1%). The serious adverse reactions observed more frequently (≥5%) with lenalidomide in combination with low dose dexamethasone (Rd and Rd18) than with melphalan, prednisone and thalidomide (MPT) were: pneumonia (9.8%), febrile neutropenia (6.0%), anaemia (5.3%), thrombocytopenia (5.0%), leukopenia (38.8%), constipation (34.0%), increased liver enzymes (29.2%), peripheral oedema (28.7%), pyrexia (28.7%), hypertension (27.9%), nausea (24.9%), vomiting (24.6%), rash (23.9%), cough (22.7%), myalgia (21.9%), and muscle spasms (20.5%).

Newly diagnosed multiple myeloma patients treated with lenalidomide in combination with melphalan (10mg/kg) were more likely to achieve a complete response (CR) than patients treated with melphalan alone (36.6% vs 25.1%).

- **Multiple Myeloma**
  - **Multiple myeloma with at least one prior therapy**
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**Dose adjustment:**
- Starting dose: 25 mg
- Dose level -1: 15 mg
- Dose level -2: 10 mg
- Dose level -3: 5 mg

**Pharmacology and Mechanism of Action:**
- Lenalidomide is a thalidomide analogue and has similar structural and pharmacological properties.
- It is a potent immunomodulatory agent that regulates the immune response and inhibits angiogenesis.
- Lenalidomide has a dual mechanism of action: it inhibits the activity of T cells and B cells, and it induces apoptosis in cancer cells.

**Pharmacokinetics:**
- Lenalidomide is rapidly absorbed after oral administration, with peak concentrations achieved within 1-4 hours.
- The elimination half-life of lenalidomide is approximately 40-60 hours.
- Lenalidomide is extensively metabolized by the liver and gut flora, and its metabolism is subject to significant variability.

**Precautions for Use:**
- Lenalidomide is contraindicated in patients with a history of T-cell lineage malignancies, severe hematologic malignancies, or severe renal impairment.
- Lenalidomide is associated with an increased risk of venous and arterial thrombotic events, including deep vein thrombosis, pulmonary embolism, and myocardial infarction.
- Lenalidomide is associated with an increased risk of severe infections, including pneumonitis and sepsis.
- Lenalidomide is associated with an increased risk of second malignancies, including lymphoma and myelodysplastic syndrome.
- Lenalidomide is associated with an increased risk of falls and fractures.

**Adverse Reactions:**
- The most common adverse reactions observed in patients treated with lenalidomide in combination with dexamethasone were: fatigue, constipation, weight loss, nausea, vomiting, dyspepsia, and increased liver enzymes.
- The most common adverse reactions observed in patients treated with lenalidomide in combination with melphalan were: fatigue, constipation, weight loss, nausea, vomiting, and dyspepsia.

**Special Populations:**
- Lenalidomide is generally well tolerated in patients with severe renal impairment.
- Lenalidomide is associated with an increased risk of infections in immunocompromised patients.
- Lenalidomide is associated with an increased risk of myelodysplastic syndrome in patients with severe renal impairment.

**Drug Interactions:**
- Lenalidomide is a substrate of CYP3A4 and is moderately bound to plasma proteins.
- Lenalidomide is not a substrate of P-glycoprotein and is not significantly metabolized by CYP2C19.
- Lenalidomide is not a substrate of CYP2C9.

**Overdose:**
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**References:**
- **Single population retrospective studies:**
  - Lenalidomide is associated with an increased risk of venous and arterial thrombotic events, including deep vein thrombosis, pulmonary embolism, and myocardial infarction.
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Decreased appetite, Weight decreased, System Organ Class / Preferred Term: Psychiatric Disorders All ADRs/Frequency: Very Common Depression, Insomnia Uncommon Loss of libido Grade 3−4 ADRs/Frequency: Common Depression, Insomnia, System Neoplasms Benign, Malignant and Unspecified (incl cysts and polyps) Grade 3−4 ADRs/Frequency: Rare Tumour lysis syndrome, System Organ Class / Preferred Term: Endocrine Disorders All ADRs/Frequency: Very Common Venous thromboembolic events, predominantly deep vein thrombosis and pulmonary embolism

Abdominal pain, Diarrhoea, Constipation, Nausea, Vomiting, System Gastrointestinal Class / Preferred Term: Gastrointestinal Disorders All ADRs/Frequency: Very Common Diarrhoea, Constipation, Abdominal pain, Vomiting, Nausea, System Gastrointestinal

Fatigue, Oedema (including peripheral oedema), Pyrexia, Asthenia, Influenza like illness syndrome (including pyrexia, cough, myalgia, musculoskeletal pain, headache and rigors) Common Chest pain, Lethargy Grade 3−4 ADRs/Frequency: Not Known Abnormal liver function tests/Preferred Term: Hepatic failure^, Hepatitis toxic^, System Organ Class / Preferred Term: Respiratory, Thoracic and Mediastinal Disorders Grade 3−4 ADRs/Frequency: Not Known Interstitial pneumonitis, System Organ Class / Preferred Term: Gastrointestinal Disorders  Grade 3−4 ADRs/Frequency: Not Known Pancreatitis, System Organ Class / Preferred Term: Haematological Disorders All ADRs/Frequency: Very Common Anaemia, Haemorrhagic disorders

Cases of hypothyroidism and cases of hyperthyroidism have been reported (see section 4.4 of the SPC Thyroid disorders).

The combination of lenalidomide with low dose dexamethasine in newly diagnosed multiple myeloma patients is associated with a decreased incidence of grade 4 neutropenia (8.5% in Rd and RdR, compared with 15% in MP). Grade 4 febrile neutropenia was observed infrequently (0.6% in MP and 0.7% in MP+Rd). The combination of lenalidomide with low dose dexamethasine in newly diagnosed multiple myeloma patients is associated with a decreased incidence of grade 4 neutropenia (8.5% in Rd and RdR, compared with 15% in MP). Grade 4 febrile neutropenia was observed infrequently (0.6% in MP and 0.7% in MP+Rd). The combination of lenalidomide with low dose dexamethasine in newly diagnosed multiple myeloma patients is associated with a decreased incidence of grade 4 neutropenia (8.5% in Rd and RdR, compared with 15% in MP). Grade 4 febrile neutropenia was observed infrequently (0.6% in MP and 0.7% in MP+Rd). 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THERE’S A NATURAL KILLER INSIDE ME

WITH THE POTENTIAL TO TAKE ON MULTIPLE MYELOMA