

# ACTA MEDICINAE 4/2012 REVMATOLOGIE

## Kompletní literatura

- 2 **Revmatoidní artritida z pohledu klasifikačních kritérií ACR/EULAR 2010 a doporučení pro léčbu ČRS ČLS JEP**  
MUDr. Martin Klein Revmatologický ústav, Praha
- 2 **První head-to-head studie v biologické léčbě revmatoidní artridy**  
prof. Ing. Jaroslav Petr, CSc. Výzkumný ústav živočišné výroby, Praha
- 2 **Tocilizumab v léčbě revmatoidní artridy a systémové juvenilní idiopatické artridy**  
MUDr. Jiří Slíva, Ph.D. Ústavy farmakologie 2. a 3. LF UK, Praha
- 3 **Axiální spondylartritydy**  
prof. MUDr. Karel Pavelka, DrSc. Revmatologický ústav, Praha
- 3 **Současný pohled na psoriatickou artridu**  
MUDr. Jiří Štolfa Revmatologický ústav, Praha
- 4 **Stručný přehled terapie systémového lupus erythematoses**  
MUDr. Hana Ciferská, Ph.D. Revmatologický ústav, Praha
- 6 **Současné možnosti léčby osteoartrózy**  
MUDr. Marta Olejárová Revmatologický ústav, Praha
- 7 **Piascledine v léčbě osteoartrózy**  
prof. MUDr. Karel Pavelka, DrSc. Revmatologický ústav, Praha
- 8 **Novinka v léčbě bolesti: Iornoxikam**  
MUDr. Marek Hakl, Ph.D. Centrum pro léčbu bolesti ARK LF MU a FN u sv. Anny, Brno
- 8 **Využití ibuprofenu v léčbě bolesti u revmatologického pacienta**  
PharmDr. Lenka Součková, Ph.D. Anesteziologicko-resuscitační klinika, Mezinárodní centrum klinického výzkumu, Fakultní nemocnice u sv. Anny v Brně
- 8 **Lékový profil aceklofenaku**  
PharmDr. Lenka Součková, Ph.D. Anesteziologicko-resuscitační klinika, Mezinárodní centrum klinického výzkumu, Fakultní nemocnice u sv. Anny v Brně
- 9 **Racionální volba silných opioidů v léčbě chronických bolestí u revmatických onemocnění**  
MUDr. Olga Šléglová Revmatologický ústav, Praha
- 10 **Novinky v léčbě osteoporózy**  
MUDr. Eliška Stehlíková Revmatologický ústav, Praha
- 11 **Studie fáze III: Respimat® s tiotropiem významně snižuje exacerbace u astmatiků, u nichž přetrvávají příznaky i po léčbě IKS/LABA**
- 12 **Nesteroidní antirevmatika – současná praxe a novinky**  
MUDr. Šárka Forejtová Revmatologický ústav, Praha
- 12 **Metabolický syndrom – ano, či ne?**  
MUDr. Petr Sucharda, CSc. 3. interní klinika VFN a 1. LF UK, Praha
- 13 **Telomery, telomeráza a telomeropatie**  
prof. Ing. Jaroslav Petr, DrSc. Výzkumný ústav živočišné výroby, Praha

# Revmatoidní artritida z pohledu klasifikačních kritérií ACR/EULAR 2010 a doporučení pro léčbu ČRS ČLS JEP

MUDr. Martin Klein Revmatologický ústav, Praha

- 1 Aletaha, D. – Neogi, T. – Silman, A. J. – Funovits, J. – Felson, D. T. – Bingham, C. O. 3<sup>rd</sup>, et al.: 2010 rheumatoid arthritis classification criteria: an American College of Rheumatology/European League Against Rheumatism collaborative initiative. *Ann Rheum Dis*, 2010, 69, s. 1580–1588.
- 2 Baronnet, L. – Barnetche, T. – Kahn, V. – Lacoin, C. – Richez, C. – Schaeverbeke, T.: Incidence of tuberculosis in patients with rheumatoid arthritis. A systematic literature review. *Joint Bone Spine*, 2011, 78, s. 279–284.
- 3 Cantini, F. – Niccoli, L. – Nannini, C. – Cassarà, E. – Pasquetti, P. – Olivieri, I., et al.: Frequency and duration of clinical remission in patients with peripheral psoriatic arthritis requiring second-line drugs. *Rheumatology*, 2008, 47, s. 872–876.
- 4 Chimenti, M. S. – Graceffa, D. – Perricone, R.: Anti-TNF<sub>α</sub> discontinuation in rheumatoid and psoriatic arthritis: Is it possible after disease remission? *Autoimmunity Reviews*, 2011, s. 636–640.
- 5 Gaujoux-Viala, C. – Smolen, J. S. – Landewé, R. – Dougados, M. – Kvien, T. K. – Mola, E. M., et al.: Current evidence for the management of rheumatoid arthritis with synthetic disease-modifying antirheumatic drugs: a systematic literature review informing the EULAR recommendations for the management of rheumatoid arthritis. *Ann Rheum Dis*, 2010, 69, s. 1004–1009.
- 6 Gorter S. L. – Bijlsma, J. W. – Cutolo, M. – Gomez-Reino, J. – Kouloumas, M. – Smolen, J. S., et al.: Current evidence for the management of rheumatoid arthritis with glucocorticoids: a systematic literature review informing the EULAR recommendations for the management of rheumatoid arthritis. *Ann Rheum Dis*, 2010, 69, s. 1010–1014.
- 7 Nam, J. L. – Winthrop, K. L. – van Vollenhoven, R. F. – Pavelka, K. – Valesini, G. – Hensor, E. M., et al.: Current evidence for the management of rheumatoid arthritis with biological disease-modifying antirheumatic drugs: a systematic literature review informing the EULAR recommendations for the management of RA. *Ann Rheum Dis*, 2010, 69, s. 976–986. Erratum in: *Ann Rheum Dis*, 2011, 70, s. 1519.
- 8 Pavelka, K. – Vencovský, J.: Doporučení České revmatologické společnosti pro léčbu revmatoidní artritidy. *Čes revmatol*, 2010, 18, s. 182–191.
- 9 Resman-Targoff, B. H. – Cicero, M. P.: Arthritis: Recognising the Window of Opportunity and Treating to Target Goals.. *Am J Manag Care*, 2010, 16, s. 249–258.
- 10 Smolen, J. S. – Landewé, R. – Breedveld, F. C. – Dougados, M. – Emery, P. – Gaujoux-Viala, C., et al.: EULAR recommendations for the management of rheumatoid arthritis with synthetic and biological disease-modifying antirheumatic drugs. *Ann Rheum Dis*, 2010, 69, s. 964–975.
- 11 Šenolt, L.: Biologická léčba revmatoidní artritidy. *Postgraduální medicína*, 2011, 13, s. 526–530.
- 12 Vencovský, J., et al.: Bezpečnost biologické léčby – doporučení České revmatologické společnosti. *Čes revmatol*, 2009, 17, s. 146–160.

## První head-to-head studie v biologické léčbě revmatoidní artritidy

prof. Ing. Jaroslav Petr, CSc. Výzkumný ústav živočišné výroby, Praha

- 1 Gabay, C. – Emery, P. – van Vollenhoven, R. – Dikranian, A. – Alten, R. – Klearman, M. – Muselman, D. – Agarwal, S. – Green, J. – Kavanaugh, A.: Tocilizumab (TCZ) monotherapy is superior to adalimumab (ADA) monotherapy in reducing disease activity in patients with rheumatoid arthritis (RA): 24-week data from the phase 4 ADACTA trial. The European League Against Rheumatism Annual Congress, Berlín, Německo, abstrakt č. LB0003, 2012.

## Tocilizumab v léčbě revmatoidní artritidy a systémové juvenilní idiopatické artritidy

MUDr. Jiří Slíva, Ph.D. Ústavy farmakologie 2. a 3. LF UK, Praha

- 1 Houssiau, F. A. – Devogelaer, J. P. – Van, D. J., de Deuxchaisnes, C. N. – Van, S. J.: Interleukin-6 in synovial fluid and serum of patients with rheumatoid arthritis and other inflammatory arthritides. *Arthritis Rheum*, 1988, 31, s. 784–788.
- 2 Oldfield, V. – Dhillon, S. – Plosker, G. L.: Tocilizumab: a review of its use in the management of rheumatoid arthritis. *Drugs*, 2009, 69, s. 609–632.
- 3 Leffers, H. C. – Ostergaard, M. – Glintborg, B., et al.: Efficacy of abatacept and tocilizumab in patients with rheumatoid arthritis treated in clinical practice: results from the nationwide Danish DANBIO registry. *Ann Rheum Dis*, 2011, 70, s. 1216–1222.
- 4 Jones, G. – Sebba, A. – Gu, J., et al.: Comparison of tocilizumab monotherapy versus methotrexate monotherapy in patients with moderate to severe rheumatoid arthritis: the AMBITION study. *Ann Rheum Dis*, 2010, 69, s. 88–96.
- 5 Nishimoto, N. – Miyasaka, N. – Yamamoto, K. – Kawai, S. – Takeuchi, T. – Azuma, J.: Long-term safety and efficacy of tocilizumab, an anti-IL-6 receptor monoclonal antibody, in monotherapy, in patients with rheumatoid arthritis (the STREAM study): evidence of safety and efficacy in a 5-year extension study. *Ann Rheum Dis*, 2009, 68, s. 1580–1584.
- 6 Nishimoto, N. – Miyasaka, N. – Yamamoto, K., et al.: Study of active controlled tocilizumab monotherapy for rheumatoid arthritis patients with an inadequate response to methotrexate (SATORI): significant reduction in disease activity and serum vascular endothelial growth factor by IL-6 receptor inhibition therapy. *Mod Rheumatol*, 2009, 19, s. 12–19.
- 7 Nishimoto, N. – Hashimoto, J. – Miyasaka, N., et al.: Study of active controlled monotherapy used for rheumatoid arthritis, an IL-6 inhibitor (SAMURAI): evidence of clinical and radiographic benefit from an x ray reader-blinded randomised controlled trial of tocilizumab. *Ann Rheum Dis*, 2007, 66, s. 1162–1167.

- 8 Smolen, J. S. – Beaulieu, A. – Rubbert-Roth, A., et al.: Effect of interleukin-6 receptor inhibition with tocilizumab in patients with rheumatoid arthritis (OPTION study): a double-blind, placebo-controlled, randomised trial. *Lancet*, 2008, 371, s. 987–997.
- 9 Takeuchi, T. – Tanaka, Y. – Amano, K., et al.: Clinical, radiographic and functional effectiveness of tocilizumab for rheumatoid arthritis patients—REACTION 52-week study. *Rheumatology (Oxford)*, 2011, 50, s. 1908–1915.
- 10 Maini, R. N. – Taylor, P. C. – Szechinski, J., et al.: Double-blind randomized controlled clinical trial of the interleukin-6 receptor antagonist, tocilizumab, in European patients with rheumatoid arthritis who had an incomplete response to methotrexate. *Arthritis Rheum*, 2006, 54, s. 2817–2829.
- 11 Strand, V. – Burmester, G. R. – Ogale, S. – Devenport, J. – John, A. – Emery, P.: Improvements in health-related quality of life after treatment with tocilizumab in patients with rheumatoid arthritis refractory to tumour necrosis factor inhibitors: results from the 24-week randomized controlled RADIATE study. *Rheumatology (Oxford)*, 2012.
- 12 Yazici, Y. – Curtis, J. R. – Ince, A., et al.: Efficacy of tocilizumab in patients with moderate to severe active rheumatoid arthritis and a previous inadequate response to disease-modifying antirheumatic drugs: the ROSE study. *Ann Rheum Dis*, 2012, 71, s. 198–205.
- 13 Yokota, S. – Imagawa, T. – Mori, M., et al.: Efficacy and safety of tocilizumab in patients with systemic-onset juvenile idiopathic arthritis: a randomised, double-blind, placebo-controlled, withdrawal phase III trial. *Lancet*, 2008, 371, s. 998–1006.

## Axiální spondylartritidy

prof. MUDr. Karel Pavelka, DrSc. Revmatologický ústav, Praha

- 1 Rudwaleit, M. – Van der Heide, D. – Landewe, R., et al.: Development of ASA criteria for axial spondylarthritis, validation of final section. *Ann Rheum Dis*, 2009, 68, s. 777–783.
- 2 Sieper, J. – van der Heide, D. – Landewe, R., et al.: New criteria for inflammatory back pain in patients with chronic back pain: a real patient exercise by experts from ASAS. *Ann Rheum Dis*, 2009, 68, s. 784–778.
- 3 Sieper, J. – Rudwaleit, M. – Baraliakos, X., et al.: The assessment of ASAS handbook: a guide to assess spondyloarthritis. *Ann Rheum Dis*, 2009, 68, s. ii1–ii44.
- 4 van der Linden, S. – Valkenburg, H. A. – Cats, A., et al.: Evaluation of diagnostic criteria for ankylosing spondylitis. A proposal for modification of the New York criteria. *Arthritis Rheum*, 1984, 27, s. 361–368.
- 5 Poddubnyy, D. – Rudwaleit, M. – Haibel, H., et al.: Rates and predictors of radiographic sacroiliitis progression over 2 years in patients with axial spondylarthritis. *Ann Rheum Dis*, 2011, 70, s. 1369–1374.
- 6 Rudwaleit, M. – Sieper, J.: Referral strategies for early diagnosis of axial spondylarthritis. *Nat Rev Rheumatol*, 2012, 8, s. 262–268.
- 7 Braun, J. – van der Berg, R. – Baraliakos, X., et al.: 2010 update of the ASAS/EULAR recommendations for the management of ankylosing spondylitis. *Ann Rheum Dis*, 2011, 70, s. 896–904.
- 8 Pavelka, K.: Doporučení České revmatologické společnosti pro léčbu ankylozující spondylitidy. *Čes revmatol*, 2012, 1, s. 4–11.
- 9 Garrett, S. – Jenkinson, T. – Kennedy, L. G., et al.: A new approach to define disease status on ankylosing spondylitis: the Bath Ankylosing Spondylitis Disease Activity Index. *J Rheumatol*, 1994, 21, s. 2286–2291.
- 10 van der Heide, D. – Dijkmans, D. – Geusens, P.: Ankylosing Spondylitis Study Group for the Evaluation of Recombinant Infliximab Study Group: Efficacy and safety of infliximab in patients with AS. *Arthritis Rheum*, 2005, 52, s. 582–591.
- 11 Braun, J. – Van der Horst-Bruinsma, I. E. – Huang, F., et al.: Clinical efficacy and safety of etanercept versus sulfasalazine on ankylosing spondylitis patients a randomized, double blind study (ASCEND) Trial. *Arthritis Rheum*, 2011, doi: 10.1002/art.30223.
- 12 Van der Heide, D. – Kivitz, A. – Schiff, H. M., et al.: Efficacy and safety of adalimumab in patients with ankylosing spondylitis: Results of a multicenter, randomized, double blind, placebo controlled trial. *Arthritis Rheum*, 2006, 54, s. 2136–2146.
- 13 Inman, R. D. – Davies, J. C. – Heide, D., et al.: Efficacy and safety of golimumab in patients with ankylosing spondylitis: results of a randomized, double blind, placebo controlled phase III trial. *Arthritis Rheum*, 2008, 58, s. 3402–3412.
- 14 Barkham, N. – Keen, H. I. – Coates, L. C., et al.: Clinical and imaging efficacy of infliximab in HLA B 27 posit. patients with magnetic imaging—determined early sacroiliitis. *Arthritis Rheum*, 2009, 60, s. 946–954.
- 15 Haibel, H. – Rudwaleit, M. – Listing, M., et al.: Efficacy of adalimumab in the treatment of axial spondylarthritis without radiographically defined sacroiliitis. *Arthritis Rheum*, 2008, 58, s. 1981–1991.

## Současný pohled na psoriatickou artritidu

MUDr. Jiří Štolfa Revmatologický ústav, Praha

- 1 Zias, J. – Mitchell, P.: Psoriatic arthritis in a fifth-century Judean Desert monastery. *Am J Phys Anthropol*, 1996, 101, s. 491–502.
- 2 Brockbank, J. – Gladman, D.: Diagnosis and management of psoriatic arthritis. *Drugs*, 2002, 62, s. 2447–2457.
- 3 Wright, V.: Rheumatism and psoriasis; a re-evaluation. *Am J Med*, 1959, 27, s. 454–462.
- 4 Blumberg, B. S. – Bunim, J. J. – Calkins, E. – Pirani, C. L. – Zvaifler, N. J.: ARA nomenclature and classification of arthritis and rheumatism (tentative). *Arthritis Rheum*, 1964, 26, s. 93–97.
- 5 McGonagle, D. – Lories, R. J. – Tan, A. L., et al.: The concept of a „synovio-enthesis complex“ and its implications for understanding joint inflammation and damage in psoriatic arthritis and beyond. *Arthritis Rheum*, 2007, 56, s. 2482–2491.
- 6 McGonagle, D. – Gibbon, W. – Emery, P.: Classification of inflammatory arthritis by enthesitis. *Lancet*, 1998, 352, s. 1137–1140.
- 7 Ribbens, C. – Martin y Porras, M. – Franchimont, N., et al.: Increased matrix metalloproteinase-3 serum levels in rheumatic diseases: relationship with synovitis and steroid treatment. *Ann Rheum Dis*, 2002, 61, s. 161–166.
- 8 van der Neude, D. – Cohen, S. B. – Sharp, J. T., et al.: The Rankl inhibitor denosumab reduces progression of the total sharp score and bone erosions in patients with rheumatoid arthritis: X-ray results at 12 months. *Ann Rheum Dis*, 2007, 66, s. 89.
- 9 Heiland, G. R. – Appel, H. – Poddubnyy, D. – Zwerina, J. – Hueber, A. – Haibel, H. – Baraliakos, X. – Listing, J. – Rudwaleit, M. – Schett, G. – Sieper, J.: High level of functional dickkopf-1 predicts protection from syndesmophyte formation in patients with ankylosing spondylitis. *Ann Rheum Dis*, 2012, 71 (4), s. 572–574. Epub 20. 12. 2011.
- 10 Proulx, S.T. – Kwok, E. – You, Z., et al.: Elucidating bone marrow edema and myelopoiesis in murine arthritis using contrast-enhanced

- magnetic resonance imaging. *Arthritis Rheum*, 2008, 58 (7), s. 2019–2029.
- 11 Ritchlin, C. – Haas-Smith, S. A. – Nicka, D., et al.: Patterns of cytokine production in psoriatic synovium. *J Rheumatol*, 1998, 25, s. 1544–1552.
  - 12 Gottlieb, A. B. – Mendelsohn, A. – Shen, Y. T., et al.: Randomized-placebo-controlled phase 2 study of ustekinumab, a human interleukin-12/23 monoclonal antibody in psoriatic arthritis. *Ann Rheum Dis*, 2008, s. 67–99.
  - 13 Wong, K. – Gladman, D. D. – Husted, J. – Long, J. A. – Farewell, J. T.: Mortality studies in psoriatic arthritis: results from a single outpatient clinic I. Causes and risk of death. *Arthritis Rheum*, 1997, 40, s. 1868–1872.
  - 14 Ali, Y. – Tom, B. D. – Schentag, C. T. – Farewell, V. T. – Gladman, D. D.: Improved survival in psoriatic arthritis with calendar time. *Arthritis Rheum*, 2007, 56, s. 2708–2714.
  - 15 Chandran, V. – Barrett, J. – Schentag, C. T., et al.: Axial psoriatic arthritis: update on a long-term prospective study. *J Rheumatol*, 2009, 36, s. 2744–2750.
  - 16 Gladman, D. D. – Ang, M. – Su, L. – Tom, B. D. – Schentag, C. T. – Farewell, V. T.: Cardiovascular morbidity in psoriatic arthritis. *Ann Rheum Dis*, 2009, 68, s. 1131–1135.
  - 17 Gelfand, J. M. – Neumann, A. L. – Shin, D. B., et al.: Risk of myocardial infarction in patients with psoriasis. *JAMA*, 2006, 296, s. 1735–1741.
  - 18 Gelfand, J. M. – Troxel, A. B. – Lewis, J. D., et al.: The risk of mortality in patients with psoriasis: results from a population based study. *Arch Dermatol*, 2007, 143, s. 1493–1499.
  - 19 Mallbris, L. – Akre, O. – Granath, F., et al.: Increased risk for cardiovascular mortality in psoriasis inpatients, but not in outpatients. *Eur J Epidemiol*, 2004, 19, s. 225–230.
  - 20 Eckel, R. H. – Grundy, S. M. – Zimmet, P. Z.: The metabolic syndrome. *Lancet*, 2005, 365, s. 1415–1428.
  - 21 Kimball, A. B. – Gladman, D. – Gelfand, J. M., et al.: National Psoriasis Foundation clinical consensus on psoriasis comorbidities and recommendations for screening. *J Am Acad Dermatol*, 2008, 58, s. 1031–1042.
  - 22 Sommer, D. M. – Jenisch, S. – Suchan, M. – Christophers, E. – Weichenthal, M.: Increased prevalence of the metabolic syndrome in patients with moderate to severe psoriasis. *Arch Dermatol Res*, 2006, 298, s. 321–328.
  - 23 Gisondi, P. – Tessari, G. – Conti, A., et al.: Prevalence of metabolic syndrome in patients with psoriasis: a hospital-based case-control study. *Br J Dermatol*, 2007, 157, s. 68–73.
  - 24 Tobin, A. M. – Veale, D. J. – Fitzgerald, O., et al.: Cardiovascular disease and risk factors in patients with psoriasis and psoriatic arthritis. *J Rheumatol*, 2010, 37, s. 1386–1394.
  - 25 Zeboulon, N. – Dougados, M. – Gossec, L.: Prevalence and characteristics of uveitis in the spondyloarthropathies: a systematic literature review. *Ann Rheum Dis*, 2008, 67 (7), s. 955–959. Epub 25. 10. 2007.
  - 26 Verbstein, C. N. – Wajda, A. – Blanchard, J. F.: The clustering of other chronic inflammatory diseases in inflammatory bowel disease: a population based study. *Gastroenterology*, 2005, 129, s. 827–836.
  - 27 Lees, C. W. – Satsangi, J.: Genetics of inflammatory bowel disease: implications for disease pathogenesis and natural history. *Expert Rev Gastroenterol Hepatol*, 2009, 3, s. 513–534.
  - 28 Wong Km Gladman, D. D. – Husted, J. – Long, J. A. – Farewell, J. T.: Mortality studies in psoriatic arthritis: results from a single outpatient clinic I. Causes and risk of death. *Arthritis Rheum*, 1997, 40, s. 1868–1872.
  - 29 Khraishi, M. – MacDonald, D. – Rampakakis, E., et al.: Prevalence of patient-reported comorbidities in early and established psoriatic arthritis cohort. *Clin Rheumatol*, 2011, 30 (7), s. 877–885.
  - 30 Moll, J. M. – Wright, V.: Psoriatic arthritis. *Semin Arthritis Rheum*, 1973, 3 (1), s. 55–78.
  - 31 Taylor, W. – Gladman, D. – Helliwell, P. – Marchesoni, A. – Mease, P. – Mielants, H.: Classification criteria for psoriatic arthritis: development of new criteria from a large international study. *Arthritis Rheum*, 2006, 54 (8), s. 2665–2673.
  - 32 Webové stránky GRAPPA ([www.grappanetwork.org](http://www.grappanetwork.org)).
  - 33 Helliwell, P. S.: Psoriasis Epidemiology Screening Tool (PEST): a report from the GRAPPA 2009 annual meeting. *J Rheumatol*, 2011, 38 (3), s. 551–552.
  - 34 Abrams, J. R. – Lebwohl, M. G. – Guzzo, C. A., et al.: CTLA-4Ig mediated blockade of T-cell costimulation in patients with psoriasis vulgaris. *J Clin Invest*, 1999, 103, s. 1243–1252.
  - 35 Kraan, M C. – van Kuijk, A. W. – Dinant, H. J., et al.: Alefacept treatment in psoriatic arthritis: reduction of the effector T cell population in peripheral blood and synovial tissue is associated with improvement of clinical signs of arthritis. *Arthritis Rheum*, 2002, 46, s. 2776–2784.
  - 36 Gottlieb, B. – Mendelsohn, A. – Shen, Y. T., et al.: Randomized-placebo-controlled phase 2 study of ustekinumab, a human interleukin-12/23 monoclonal antibody in psoriatic arthritis. *Ann Rheum Dis*, 2008, 67, s. 99.
  - 37 Gottlieb, A. B. – Mendelsohn, A. – Shen, Y. K. – Kavanaugh, A.: Phase – 2 study of ustekinumab, human IL-12/23 monoclonal antibody in psoriatic arthritis: ACR criteria component score response through week 36. *Program and abstracts of the American College of Rheumatology (ACR) 2008 Annual Scientific Meeting*, 24–29. 10. 2008, San Francisco, California, abstrakt 1102.
  - 38 Štolfa, J. – Vencovský, J. – Pavelka, K.: Doporučené postupy České revmatologické společnosti pro léčbu psoriatické artritidy. *Čes Revmatol*, 2012, 1, s. 13–18.
  - 39 Scarpa, R.: New insights into the concept of psoriatic disease. *J Rheumatol Suppl.*, 2012, 89, s. 4–6.
  - 40 Setty, A. R. – Curhan, G. – Choi, H. K.: Obesity, waist circumference, weight change, and the risk of psoriasis in women: Nurses' Health Study II. *Arch Intern Med*, 2007, 167 (15), s. 1670–1675.
  - 41 Reich, K.: The concept of psoriasis as a systemic inflammation: implications for disease management. *J Eur Acad Dermatol Venereol*, 2012, 26, dopl. 2, s. 3–11, doi: 10.1111/j.1468-3083.2011.04410.x.

## Stručný přehled terapie systémového lupus erythematoses

MUDr. Hana Ciferská, Ph.D. Revmatologický ústav, Praha

- 1 Hochberg, M. C., et al.: Updating the American College of Rheumatology revised criteria for the classification of systemic lupus erythematosus. *Arthritis Rheum*, 1997, 40 (9), s. 1725.
- 2 Dörner, T.: SLE in 2011: Deciphering the role of NETs and networks in SLE. *Nat Rev Rheumatol*, 2012, 10, 8 (2), s. 68–70.
- 3 Domsic, R. T. – Ramsey-Goldman, R. – Manzi, S.: Epidemiology and classification of systemic lupus erythematosus. In: Hochberg, M. C. – Silman, A. J. – Smolen, J. S. – Weinblatt, M. E. – Weissman, M. H. (eds.): *Rheumatology*. Philadelphia (PA), Mosby-Elsevier, 2008, s. 1211–1216.
- 4 Borchers, A. T. – Keen, C. L. – Gershwin, M. E.: Drug-induced lupus. *Ann N Y Acad Sci*, 2007, 1108, s. 166–182.
- 5 Wallace, D. J.: Improving the prognosis of SLE without prescribing lupus drugs and the primary care paradox. *Lupus*, 2008, 17, s. 91.
- 6 Ioannou, Y. – Isenberg, D. A.: Current concepts for the management of systemic lupus erythematosus in adults: a therapeutic challenge. *Postgrad Med J*, 2002, 78 (924), s. 599–606.
- 7 Bencivelli, W. – Vitali, C. – Isenberg, D. A., et al.: Disease activity in systemic lupus erythematosus: report of the Consensus Study Group of the European Workshop for Rheumatology Research. III. Development of a computerised clinical chart and its application to the comparison

- of different indices of disease activity. The European Consensus Study Group for Disease Activity in SLE. *Clin Exp Rheumatol*, 1992, 10 (5), s. 549–554.
- 8 Gladman, D. D. – Urowitz, M. B., et al.: The SLICC/ACR damage index: progress report and experience in the field. *Lupus*, 1999, 8, s. 632–637.
  - 9 Toloza, S. M. – Cole, D. E. – Gladman, D. D., et al.: Vitamin D insufficiency in a large female SLE cohort. *Lupus*, 2010, 19, s. 13.
  - 10 Hearth-Holmes, M. – Baethge, B. A. – Broadwell, L., et al.: Dietary treatment of hyperlipidemia in patients with systemic lupus erythematosus. *J Rheumatol*, 1995, 22, s. 450.
  - 11 Mosca, M. – Shoenfeld, Y. – Bombardieri, S.: Systemic lupus erythematosus: treatment. In: Bijlsma, J. W. J., et al.: *Eular compendium on rheumatic diseases*. BMJ, 2009, s. 269–280.
  - 12 Bertsias, G. – Ioannidis, J. P. A. – Boletis, J., et al.: EULAR recommendations for the management of systemic lupus erythematosus. Report of a Task Force of the EULAR standing committee for international clinical studies including therapeutics. *Ann Rheum Dis*, 2008, 67, s. 195–205.
  - 13 Lee, S. J. – Silverman, E. – Bargman, J. M.: The role of antimalarial agents in the treatment of SLE and lupus nephritis. *Nat Rev Nephrol*, 2011, 18, 7 (12), s. 718–29.
  - 14 Ruiz-Irastorza, G. – Ramos-Casals, M. – Brito-Zeron, P., et al.: Clinical efficacy and side effects of antimalarials in systemic lupus erythematosus: a systematic review. *Ann Rheum Dis*, 2010, 69 (1), s. 20–28.
  - 15 Parker, B. J. – Bruce, I. N.: High dose methylprednisolone therapy for the treatment of severe systemic lupus erythematosus. *Lupus*, 2007, 16 (6), s. 387–393.
  - 16 Badsha, H. – Kong, K. O. – Lian, T. Y., et al.: Low-dose pulse methylprednisolone for systemic lupus erythematosus flares is efficacious and has a decreased risk of infectious complications. *Lupus*, 2002, 11 (8), s. 508–513.
  - 17 Franchin, G. – Diamond, B.: Pulse steroids: how much is enough? *Autoimmun Rev*, 2006, 5 (2), s. 111–13.
  - 18 Wong, J. M. – Esdaile, J. M.: Methotrexate in systemic lupus erythematosus. *Lupus*, 2005, 14 (2), s. 101–105.
  - 19 Abu-Shakra, M. – Shoenfeld, Y.: Azathioprine therapy for patients with systemic lupus erythematosus. *Lupus*, 2001, 10 (3), s. 152–153.
  - 20 Contreras, G. – Tozman, E. – Nahar, N., et al.: Maintenance therapies for proliferative lupus nephritis: mycophenolate mofetil, azathioprine and intravenous cyclophosphamide. *Lupus*, 2005, 14 (dopl. 1), s. 33–38.
  - 21 Dall'Era, M. – Wofsy, D.: Systemic lupus erythematosus clinical trials – an interim analysis. *Nat Rev Rheumatol*, 2009, 5, s. 348.
  - 22 Furie, R. – Stohl, W. – Ginzler, E. M., et al.: Belimumab Study Group. Biologic activity and safety of belimumab, a neutralizing anti-B-lymphocyte stimulator (BLYS) monoclonal antibody: a phase I trial in patients with systemic lupus erythematosus. *Arthritis Res Ther*, 2008, 10 (5), s. 109.
  - 23 Chugh, P. K.: Lupus: novel therapies in clinical development. *Eur J Intern Med*, 2012, 23 (3), s. 212–218.
  - 24 Houssiau, F.: Thirty years of cyclophosphamide: assessing the evidence. *Lupus*, 2007, 16 (3), s. 212–216.
  - 25 Houssiau, F. A. – Vasconcelos, C. – D'Cruz, D., et al.: Immunosuppressive therapy in lupus nephritis: the Euro-Lupus Nephritis Trial, a randomized trial of low-dose versus high-dose intravenous cyclophosphamide. *Arthritis Rheum*, 2002, 46 (8), s. 2121–2131.
  - 26 Dall'Era, M.: Mycophenolate mofetil in the treatment of systemic lupus erythematosus. *Curr Opin Rheumatol*, 2011, 23 (5), s. 454–458.
  - 27 Furie, R. – Looney, R. J. – Rovin, B., et al.: Efficacy and safety of rituximab in subjects with active proliferative lupus nephritis (LN): results from the randomized, double-blind phase III Lunar study. *Arthritis Rheum*, 2009, 60 (dopl. 1), s. S429.
  - 28 Merrill, J. – Buyon, J. – Furie, R., et al.: Assessment of flares in lupus patients enrolled in a phase II/III study of rituximab (EXPLORER). *Lupus*, 2011, 20 (7), s. 709–716.
  - 29 Zandman-Goddard, G. – Levy, Y. – Shoenfeld, Y.: Intravenous immunoglobulin therapy and systemic lupus erythematosus. *Clin Rev Allergy Immunol*, 2005, 29 (3), s. 219–228.
  - 30 Euler, H. H. – Schroeder, J. O. – Harten, P., et al.: Treatment-free remission in severe systemic lupus erythematosus following synchronization of plasmapheresis with subsequent pulse cyclophosphamide. *Arthritis Rheum*, 1994, 37 (12), s. 1784–1794.
  - 31 Tyndall, A. – Saccardi, R.: Haematopoietic stem cell transplantation in the treatment of severe autoimmune disease: results from phase I/II studies, prospective randomized trials and future directions. *Clin Exp Immunol*, 2005, 141 (1), s. 1–9.
  - 32 Chou, C. T.: Alternative therapies: what role do they have in the management of lupus? *Lupus*, 2010, 19 (12), s. 1425–1429.
  - 33 Dall'Era, M. – Chakravarty, E. – Wallace, D., et al.: Reduced B lymphocyte and immunoglobulin levels after atacicept treatment in patients with systemic lupus erythematosus: results of a multicenter, phase Ib, double-blind, placebo-controlled, dose-escalating trial. *Arthritis Rheum*, 2007, 56, s. 4142.
  - 34 Dillon, S. R. – Harder, B. – Lewis, K. B., et al.: B-lymphocyte stimulator/a proliferation-inducing ligand heterotrimers are elevated in the sera of patients with autoimmune disease and are neutralized by atacicept and B-cell maturation antigen-immunoglobulin. *Arthritis Res Ther*, 2010, 12 (2), s. 48.
  - 35 Daridon, C. – Blassfeld, D. – Reiter, K. – Mei, H. E., et al.: Epratuzumab targeting of CD22 affects adhesion molecule expression and migration of B-cells in systemic lupus erythematosus. *Arthritis Res Ther*, 2010, 12 (6), s. 204.
  - 36 Dall'Era, M. – Wofsy, D.: Systemic lupus erythematosus clinical trials—an interim analysis. *Nat Rev Rheumatol*, 2009, 5, s. 348.
  - 37 Wallace, D. J. – Kalunian, K. C. – Petri, M. A., et al.: Epratuzumab demonstrates clinically meaningful improvements in patients with moderate to severe systemic lupus erythematosus (SLE): Results from the EMBLEM, a Phase IIb study. *Arthritis Rheum*, 2010, 62, s. S605.
  - 38 Merrill, J. T. – Burgos-Vargas, R. – Westhovens, R., et al.: The efficacy and safety of abatacept in patients with non-life-threatening manifestations of systemic lupus erythematosus: results of a twelve-month, multicenter, exploratory, phase IIb, randomized, double-blind, placebo-controlled trial. *Arthritis Rheum*, 2010, 62, s. 3077.
  - 39 Gourley, M. F. – Austin, H. A. 3<sup>rd</sup>, Scott, D., et al.: Methylprednisolone and cyclophosphamide, alone or in combination, in patients with lupus nephritis. A randomized, controlled trial. *Ann Intern Med*, 1996, 125, s. 549–557.
  - 40 Boumpas, D. T. – Austin, H. A. – Vaughn, E. M., et al.: Controlled trial of pulse methylprednisolone versus two regimens of pulse cyclophosphamide in severe lupus nephritis. *Lancet*, 1992, 340, s. 741–745.
  - 41 Bertsias, G. K. – Boumpas, D. T.: Pathogenesis, diagnosis and management of neuropsychiatric SLE manifestations. *Nat Rev Rheumatol*, 2010, 6, s. 358–367.

# Současné možnosti léčby osteoartrózy

MUDr. Marta Olejárová Revmatologický ústav, Praha

- 1 Jordan, K. M. – Arden, N. K. – Doherty, M. – Bannwarth, B. – Bijlsma, J. W. J. – Dieppe, P., et al.: EULAR recommendations 2003: an evidence based approach to the management of the knee osteoarthritis: Report of a task force of the Standing Committee for International Clinical Studies Including Therapeutic Trials (ESCISIT). *Ann Rheum Dis*, 2003, 62, s. 1145–1155.
- 2 Zhang, W. – Doherty, M. – Arden, N. – Bannwarth, B. – Bijlsma, J. W. – Gunther, K. P., et al.: EULAR evidence based recommendations for the management of hip osteoarthritis: report of a task force of the EULAR Standing Committee for International Clinical Studies Including Therapeutics (ESCISIT). *Ann Rheum Dis*, 2005, 64, s. 669–681.
- 3 Zhang, W. – Doherty, M. – Leeb, B. F. – Alekseeva, L. – Arden, N. K. – Bijlsma, J. W. et al.: EULAR evidence based recommendations for the management of hand osteoarthritis: report of a Task Force of the EULAR Standing Committee for International Clinical Studies Including Therapeutics (ESCISIT). *Ann Rheum Dis*, 2007, 66 (3), s. 377–388.
- 4 Zhang, W. – Moskowitz, R. W. – Nuki, G. – Abramson, S. – Altman, R. D. – Arden, N. et al.: OARSI recommendations for the management of hip and knee osteoarthritis, part I: critical appraisal of existing treatment guidelines and systematic review of current research evidence. *Osteoarthritis Cartilage*, 2007, 15 (9), s. 981–1000.
- 5 Zhang, W. – Moskowitz, R. W. – Nuki, G. – Abramson, S. – Altman, R. D. – Arden, N. et al.: OARSI recommendations for the management of hip and knee osteoarthritis, Part II: OARSI evidence-based, expert consensus guidelines. *Osteoarthritis Cartilage*, 2008, 16 (2), s. 137–162.
- 6 Zhang, W. – Nuki, G. – Moskowitz, R. W. – Abramson, S. – Altman, R. D. – Arden, N. K., et al.: OARSI recommendations for the management of hip and knee osteoarthritis: part III: Changes in evidence following systematic cumulative update of research published through January 2009. *Osteoarthritis Cartilage*, 2010, 18 (4), s. 476–499.
- 7 Hochberg, M. C. – Altman, R. D. – Toupin April, K. – Benkhalti, M. – Guyatt, G. – McGowan, J., et al.: American College of Rheumatology 2012 Recommendations for the use of nonpharmacologic and pharmacologic therapies in osteoarthritis of the hand, hip, and knee. *Arthritis Care Res*, 2012, 64, s. 465–474.
- 8 Pavelka, K.: Doporučení České revmatologické společnosti pro terapii osteoartrózy. *Čes Revmatol*, 2012, v tisku.
- 9 Sayers, S. P. – Gibson, K. – Cook, C. R.: Effect of high-speed power training on muscle performance, function, and pain in older adults with knee osteoarthritis: a pilot investigation. *Arthritis Care Res (Hoboken)*, 2012, 64 (1), s. 46–53.
- 10 Bliddal, H. – Leeds, A. R. – Stigsgaard, L. – Astrup, A. – Christensen, R.: Weight loss as treatment for knee osteoarthritis symptoms in obese patients: 1-year results from a randomised controlled trial. *Ann Rheum Dis*, 2011, 70 (10), s. 1798–1803.
- 11 Bennell, K. L. – Bowles, K. A. – Payne, C. – Cicuttini, F. – Williamson, E. – Forbes, A., et al.: Lateral wedge insoles for medial knee osteoarthritis: 12 month randomised controlled trial. *BMJ*, 2011, 342, s. d2912.
- 12 Denegar, C. R. – Schimizzi, M. E. – Dougherty, D. R. – Friedman, J. E. – Clark, J. E. – Comstock, B. A., et al.: Responses to superficial heating and cooling differ in men and women with knee osteoarthritis. *Physiother Theory Pract*, 2012, 28 (3), s. 198–205.
- 13 Pietrosimone, B. G. – Saliba, S. A. – Hart, J. M. – Hertel, J. – Kerrigan, D. C. – Ingersoll, C. D.: Effects of transcutaneous electrical nerve stimulation and therapeutic exercise on quadriceps activation in people with tibiofemoral osteoarthritis. *J Orthop Sports Phys Ther*, 2011, 41 (1), s. 4–12.
- 14 Atamaz, F. C. – Durmaz, B. – Baydar, M. – Demircioglu, O. Y. – Iyiyapiçi, A. – Kuran, B., et al.: Comparison of the efficacy of transcutaneous electrical nerve stimulation, interferential currents, and shortwave diathermy in knee osteoarthritis: a double-blind, randomized, controlled, multicenter study. *Arch Phys Med Rehabil*, 2012, 93 (5), s. 748–756.
- 15 Hsieh, R. L. – Lo, M. T. – Liao, W. C. – Lee, W. C.: Short-term effects of 890-nanometer radiation on pain, physical activity, and postural stability in patients with knee osteoarthritis: a double-blind, randomized, placebo-controlled study. *Arch Phys Med Rehabil*, 2012, 93 (5), s. 757–764.
- 16 Yang, P. F. – Li, D. – Zhang, S. M. – Wu, Q. – Tang, J. – Huang, L. K., et al.: Efficacy of ultrasound in the treatment of osteoarthritis of the knee. *Orthop Surg*, 2011, 3 (3), s. 181–187.
- 17 Ulus, Y. – Tander, B. – Akyol, Y. – Durmus, D. – Buyukakincak, O. – Gul, U., et al.: Therapeutic ultrasound versus sham ultrasound for the management of patients with knee osteoarthritis: a randomized double-blind controlled clinical study. *Int J Rheum Dis*, 2012, 15 (2), s. 197–206.
- 18 Loyola-Sánchez, A. – Richardson, J. A. – Beattie, K. A. – Otero-Fuentes, C. – Adachi, J. D. – MacIntyre, N. J.: Effect of low-intensity pulsed ultrasound on the cartilage repair in people with mild to moderate knee osteoarthritis: a double-blinded, randomized, placebo-controlled pilot study. *Arch Phys Med Rehabil*, 2012, 93 (1), s. 35–42.
- 19 Doherty, M. – Hawkey, C. – Goulder, M. – Gibb, I. – Hill, N. – Aspley, S. – Reader S.: A randomised controlled trial of ibuprofen, paracetamol or a combination tablet of ibuprofen/paracetamol in community-derived people with knee pain. *Ann Rheum Dis*, 2011, 70 (9), s. 1534–1541.
- 20 Schnitzer, T. J. – Dattani, I. D. – Seriolo, B. – Schneider, H. – Moore, A. – Tseng, L., et al.: A 13-week, multicenter, randomized, double-blind study of lumiracoxib in hip osteoarthritis. *Clin Rheumatol*, 2011, 30 (11), s. 1433–1446.
- 21 Pareek, A. – Gupta, A. K. – Chandurkar, N. B. – Sirsikar, A. D. – Ambade, R. E., et al.: Zaltoprofen, a noninferior alternative to diclofenac for the treatment of primary knee osteoarthritis - a comparative evaluation of efficacy and safety in a 4-week, multicentric, randomized, double-blind, double-dummy trial. *Expert Opin Pharmacother*, 2011, 12 (7), s. 1007–1015.
- 22 Conaghan, P. G. – O'Brien, C. M. – Wilson, M. – Schofield, J. P.: Transdermal buprenorphine plus oral paracetamol vs an oral codeine-paracetamol combination for osteoarthritis of hip and/or knee: a randomised trial. *Osteoarthritis Cartilage*, 2011, 19 (8), s. 930–938.
- 23 Friedmann, N. – Klutzaritz, V. – Webster, L.: Efficacy and safety of an extended-release one (Remoxy) formulation in patients with moderate to severe osteoarthritic pain. *J Opioid Manag*, 2011, 7 (3), s. 193–202.
- 24 Debbi, E. M. – Agar, G. – Fichman, G. – Ziv, Y. B. – Kardosh, R. – Halperin, N., et al.: Efficacy of methylsulfonylmethane supplementation on osteoarthritis of the knee: a randomised controlled study. *BMC Complement Altern Med*, 2011, 11, s. 50.
- 25 Notarnicola, A. – Tafuri, S. – Fusaro, L. – Moretti, L. – Pesce, V. – Moretti, B.: The „MESACA“ study: methylsulfonylmethane and boswellic acids in the treatment of gonarthrosis. *Adv Ther*, 2011, 28 (10), s. 894–906.
- 26 Clegg, D.: Effects of glucosamine, chondroitin sulfate and the two in combination in painful knee osteoarthritis. *New Eng J Med*, 2006, 354, s. 795–807.
- 27 Wildi, L. M. – Raynauld, J. P. – Martel-Pelletier, J. – Beaulieu, A. – Besette, L. – Morin, F., et al.: Chondroitin sulphate reduces both cartilage volume loss and bone marrow lesions in knee osteoarthritis patients starting as early as 6 months after initiation of therapy: a randomised, double-blind, placebo-controlled pilot study using MRI. *Ann Rheum Dis*, 2011, 70 (6), s. 982–989.
- 28 Pavelka, K. – Coste, P. – Géher, P. – Krejci, G.: Efficacy and safety of piacledine 300 versus chondroitin sulfate in a 6 months treatment plus 2 months observation in patients with osteoarthritis of the knee.

- Clin Rheumatol*, 2010, 29 (6), s. 659–670.
- 29 Singh, K. – Sharma, R. – Rai, J.: Diclofenac sodium in osteoarthritis knee. *Int J Rheum Dis*, 2012, 15 (1), s. 69–77.
- 30 Strand, V. – Baraf, H. S. – Lavin, P. T. – Lim, S. – Hosokawa, H.: A multicenter, randomized controlled trial comparing a single intra-articular injection of Gel-200, a new cross-linked formulation of hyaluronic acid, to phosphate buffered saline for treatment of osteoarthritis of the knee. *Osteoarthritis Cartilage*, 2012, 20 (5), s. 350–356.
- 31 Pavelka, K. – Uebelhart, D.: Efficacy evaluation of highly purified intra-articular hyaluronic acid (Sinovial) vs hylan G-F20 (Synvisc) in the treatment of symptomatic knee osteoarthritis. A double-blind, controlled, randomized, parallel-group non-inferiority study. *Osteoarthritis Cartilage*, 2011, 19 (11), s. 1294–1300.
- 32 Navarro-Sarabia, F. – Coronel, P. – Collantes, E. – Navarro, F. J. – de la Serna, A. R. – Naranjo, A., et al.: AMELIA study group. A 40-month multicentre, randomised placebo-controlled study to assess the efficacy and carry-over effect of repeated intra-articular injections of hyaluronic acid in knee osteoarthritis: the AMELIA project. *Ann Rheum Dis*, 2011, 70 (11), s. 1957–1962.
- 33 DeGroot, H. 3<sup>rd</sup> – Uzunishvili, S. – Weir, R. – Al-omari, A. – Gomes, B.: Intra-articular injection of hyaluronic acid is not superior to saline solution injection for ankle arthritis: a randomized, double-blind, placebo-controlled study. *J Bone Joint Surg Am*, 2012, 94 (1), s. 2–8.
- 34 Raynauld, J. P. – Buckland-Wright, C. – Ward, R. – Choquette, D. – Harraoui, B. – Martel-Pelletier, J., et al.: Safety and efficacy of long-term intraarticular steroid injections in osteoarthritis of the knee: a randomized, double-blind, placebo-controlled trial. *Arthritis Rheum*, 2003, 48 (2), s. 370–377.
- 35 Aran, S. – Malekzadeh, S. – Seifirad, S.: A double-blind randomized controlled trial appraising the symptom-modifying effects of colchicine on osteoarthritis of the knee. *Clin Exp Rheumatol*, 2011, 29 (3), s. 513–518.
- 36 Frakes, E. P. – Risser, R. C. – Ball, T. D. – Hochberg, M. C. – Wohlreich, M. M.: Duloxetine added to oral nonsteroidal anti-inflammatory drugs for treatment of knee pain due to osteoarthritis: results of a randomized, double-blind, placebo-controlled trial. *Curr Med Res Opin*, 2011, 27 (12), s. 2361–2372.
- 37 Verbruggen, G. – Wittoek, R. – Vander Cruyssen, B. – Elewaut, D.: Tumour necrosis factor blockade for the treatment of erosive osteoarthritis of the interphalangeal finger joints: a double blind, randomised trial on structure modification. *Ann Rheum Dis*, 2012, 71 (6), s. 891–898.
- 38 Schnitzer, T. J. – Lane, N. E. – Birbara, C. – Smith, M. D. – Simpson, S. L. – Brown, M. T.: Long-term open-label study of tanezumab for moderate to severe osteoarthritic knee pain. *Osteoarthritis Cartilage*, 2011, 19 (6), s. 639–646.
- 39 Nagashima, H. – Suzuki, M. – Araki, S. – Yamabe, T. – Muto, C.: Tanezumab Investigators. Preliminary assessment of the safety and efficacy of tanezumab in Japanese patients with moderate to severe osteoarthritis of the knee: a randomized, double-blind, dose-escalation, placebo-controlled study. *Osteoarthritis Cartilage*, 2011, 19 (12), s. 1405–1412.
- 40 Filardo, G. – Kon, E. – Buda, R. – Timoncini, A. – Di Martino, A. – Cennacci, A., et al.: Platelet-rich plasma intra-articular knee injections for the treatment of degenerative cartilage lesions and osteoarthritis. *Knee Surg Sports Traumatol Arthrosc*, 2011, 19 (4), s. 528–535.
- 41 Kon, E. – Mandelbaum, B. – Buda, R. – Filardo, G. – Delcogliano, M. – Timoncini, A., et al.: Platelet-rich plasma intra-articular injection versus hyaluronic acid viscosupplementation as treatments for cartilage pathology: from early degeneration to osteoarthritis. *Arthroscopy*, 2011, 27 (11), s. 1490–1501.
- 42 Spakova, T. – Rosocha, J. – Lacko, M. – Harvanova, D. – Gharaibeh, A.: Treatment of knee osteoarthritis with autologous platelet-rich plasma in comparison with hyaluronic acid. *Am J Phys Med Rehabil*, 2012, 91, s. 411–417.

## Piascledine v léčbě osteoartrózy

prof. MUDr. Karel Pavelka, DrSc. Revmatologický ústav, Praha

- 1 Pereira, D. – Peleteiro, B. – Araujo, J., et al.: The effect of osteoarthritis definition on prevalence and incidence estimates: a systematic review. *Osteoarthritis Cartilage*, 2011, 19, s. 1270–1285.
- 2 Bijlsma, J. W. – Berenbaum, F. – Lafeber, F. P.: Osteoarthritis: an update with relevance for clinical practise. *Lancet*, 2011, 377, s. 2115–2126.
- 3 Zhang, W. – Moskowitz, R. W. – Nuki, M. B., et al.: OARSI recommendations for the management of hip and knee osteoarthritis. Part II. OARSI evidence-based, expert consensus guidelines. *Osteoarthritis Cart*, 2008, 16, s. 1145–1155.
- 4 Boumediene, K. – Felisaz, N. – Bogdanowicz, P., et al.: Avocado/soya unsaponifiables enhance the expression of transforming growth factor  $\beta$ 1 and  $\beta$ 2 in cultured articular chondrocytes. *Arthritis Rheum*, 1999, 42, s. 148–156.
- 5 Henrotin, Y. E. – Deberg, M. A. – Crielard, J. M., et al.: Avocado/soya bean unsaponifiables prevent the inhibitory effect of osteoarthritis subchondral osteoblasts on aggrecan and type II collagen synthesis by chondrocytes. *J Rheumatol*, 2006, 33, s. 1668–1678.
- 6 Kawczak, C. E. – Frisbie, D. D. – McIlwraith, C. W., et al.: Evaluation of avocado and soya bean unsaponifiable extracts for treatment of horses with experimentally induced osteoarthritis. *Am J Vet Res* 2007, 68, s. 598–604.
- 7 Cake, M. A. – Read, R. A. – Guillou, B., et al.: Modification of the articular cartilage and subchondral bone pathology in an ovine meniscectomy model of osteoarthritis by avocado and soya unsaponifiables in the treatment of osteoarthritis (ASU). *Osteoarthritis Cartilage*, 2000, 8, s. 404–411.
- 8 Boileau, Ch. – Pelletier, J. M. – Caron, J., et al.: Protective effect of total fraction of ASU or the structural changes in experimental dog OA: inhibition of inducible nitric oxide synthase and matrix metaloproteases. *Arthritis Res Ther*, 2009, doi: 101186/ar2649.
- 9 Ernst, E.: Avocado-soybean unsaponifiables (ASU) for osteoarthritis—a systematic review. *Clin Rheumatol*, 2003, 22, s. 285–288.
- 10 Maheu, E. – Valat, J. P., et al.: Symtomatic efficacy of avocado/soya bean unsaponifiables in the treatment of the osteoarthritis of knee and hip: a prospective, randomized, double blind, placebo controlled, multicenter clinical trial with a six –months follow up demonstrative a persistent effect. *Arthritis Rheum*, 1998, 41, s. 81–91.
- 11 Appelboom, T. – Schuermans, J. – Verbruggen, G., et al.: Symptoms modifying effect of avocado (soyabean unsaponifiables / ASU) in knee osteoarthritis. *Scand J Rheumatol*, 2001, 30, s. 242–247.
- 12 Blotman, F. – Maheu, E. – Wulwik, A., et al.: Efficacities et tolerance des ASU dans la gonarthrose et de la coxarthrose symtomatiques. Essai prospectif, multicentrique, de trois mois, randomise, en double insu, controle versus placebo. *Rev Rhum Mal Osteartic*, 1997, 41, s. 81–91.
- 13 Pavelka, K. – Coste, P. – Geher, P., et al.: Efficacy and safety of piascledine 300 versus chondroitin sulfate in a 6 months plus 2 months observation in patients with osteoarthritis of the knee. *Clin Rheumatol*, 2010, 29, s. 659–670.
- 14 Christensen, P. – Bartels, E. M. – Astrup, A., et al.: Symptomatic efficacy of avocado-soybean unsaponifiables (ASU) in osteoarthritis (OA) patients: a meta-analysis of randomized controlled trials. *Osteoarthritis and Cartilage*, 2007, doi: 10.1016/j.joca.2007.10.003.

- 15 Lequesne, M. – Maheu, E. – Cadet, C., et al.: Structural effect of ASU on joint space loss in osteoarthritis of the hip. *Arthritis Care Res*, 2002, 47, s. 50–58.
- 16 Maheu, E. – Cadet, C. – Marty, M., et al.: Evaluation of the structure modifying effect of avocado-soybean unsaponifiables (ASU) in hip osteoarthritis. Results of ERADIAS study. A 3 year prospective, randomized, double blind, placebo controlled trial. *Osteoarthritis cartilage*, 2010, 18, (dopl. 2), s. 560.
- 17 Bjordal, J. M. – Klovning, A. – Ljungren, A. E., et al.: Short term efficacy of pharmaceutic interventions in osteoarthritis knee pain: a metaanalysis of randomised placebo controlled trials. *Eur J Pain*, 2007, 11, s. 125–138.
- 18 Latimer, N. – Lord, J. – Grant, R. L.: Cost effectiveness of COX-2 selective inhibitors and traditional NSAID alone or in combination with proton-pump inhibitor for people with osteoarthritis. *BMJ*, 2009, 399, s. 2538.

## Novinka v léčbě bolesti: lornoxikam

MUDr. Marek Hakl, Ph.D. Centrum pro léčbu bolesti ARK LF MU a FN u sv. Anny, Brno

- 1 Berg, J. – Fellier, H. – Christoph, T., et al.: The analgesic NSAID lornoxicam inhibits cyclooxygenase (COX)-1/-2, inducible nitric oxide synthase (iNOS), and the formation of interleukin (IL)-6 in vitro. *Inflamm Res*, 1999, 48, s. 369–379.
- 2 McCormack, K.: The spinal actions of nonsteroidal anti-inflammatory drugs and the dissociation between their anti-inflammatory and analgesic effects. *Drugs*, 1994, 47 (dopl. 5), s. 28–45.
- 3 Doležal, T.: Lornoxicam v léčbě akutní a chronické bolesti. *Farmakoterapie*, 2011, 4, s. 435–437.
- 4 Yakhno, N. – Guekht, A. – Skoromets, A., et al.: Analgesic efficacy and safety of lornoxicam quick-release formulation compared with diclofenac potassium: randomised, double-blind trial in acute low back pain. *Clin Drug Investig*, 2006, 26, s. 267–277.
- 5 Causo, I. – Montrone, F. – Bari, L., et al.: Lornoxicam versus diclofenac in rheumatoid arthritis: a double-blind, multicenter study. *Adv Ther*, 1994, 11, s. 132–138.
- 6 Bernstein, R. M. – Frenzel, W.: A comparative study of 2 dosage regimens of lornoxicam and a standard dosage of naproxen in patients with rheumatoid arthritis. *Eur J Clin Res*, 1995, 7, s. 259–273.
- 7 Kidd, B. – Frenzel, W.: A multicenter, randomized, double blind study comparing lornoxicam with diclofenac in osteoarthritis. *J Rheumatol*, 1996, 23, s. 1605–1611.

## Využití ibuprofenu v léčbě bolesti u revmatologického pacienta

PharmDr. Lenka Součková, Ph.D. Anesteziologicko-resuscitační klinika,

Mezinárodní centrum klinického výzkumu, Fakultní nemocnice u sv. Anny v Brně

- 1 Goncharov, N.: Osteoarthritis Etiology: Pain as a basis of local therapy. *World Journal of Medical Sciences*, 2011, 6 (3), s. 142–145.
- 2 <http://www.bolestkloubu.cz/>
- 3 Mišeková, D.: Nesteroidní protizánětlivé láky. In: Lincová, D. – Farghali, H.: Základní a aplikovaná farmakologie. Praha, Galén, 2002, s. 271–280.
- 4 Adams, E. H. – Breiner, S. – Cicero, T. J. – Geller, A. – Inciardi, J. A. – Schnoll, S. H. – Senay, E. C. – Woody, G. E.: A Comparison of the Abuse Liability of Tramadol, NSAIDs, and Hydrocodone in Patients with Chronic Pain. *Journal of Pain and Symptom Management*, 2006, 31 (5), s. 465–476.
- 5 Hakl, M.: Základní farmakoterapie bolesti. *Practicus*, 2012, 5, s. 35–38.
- 6 Conaghan, P. J. – Dickson, J. – Grant, R. L.: Care and management of osteoarthritis in adults: summary of NICE guidance. *BMJ*, 2008, 336 (7642), s. 502–503.
- 7 Chan, F. K. – Wong, V. W. – Suen, B. Y., et al.: Combination of a cyclooxygenase-2 inhibitor and a proton-pump inhibitor for prevention of recurrent ulcer bleeding in patients at very high risk: A double-blind, randomised trial. *Lancet*, 2007, 369 (9573), s. 1621–1626.
- 8 Haroutunian, S. – Drennan, D. A. – Lipman, A. G.: Topical NSAID Therapy for Musculoskeletal Pain. *Pain Medicine*, 2010, 11 (4), s. 535–549.
- 9 Gordon, D. B.: Topical NSAIDs provide effective relief of acute musculoskeletal pain compared to placebo, with no increase in risk of adverse effects. *Evid Based Nurs*, 2011, 14, s. 23–24.
- 10 Lin, J. – Zhang, W. – Jones, A. – Doherty, M.: Efficacy of topical non-steroidal anti-inflammatory drugs in the treatment of osteoarthritis: meta-analysis of randomised controlled trials. *BMJ*, 2004, 329 (7461), s. 324.
- 11 Mason, L. – Moore, R. A. – Edwards, J. A. – Derry, S. – McQuay, H. J.: Topical NSAIDs for acute pain: a meta-analysis. *BMC Family Practice*, 2004, 5, s. 10.
- 12 Mason, L. – Moore, R. A. – Edwards, J. A. – Derry, S. – McQuay, H. J.: Topical NSAIDs for chronic musculoskeletal pain: systematic review and meta-analysis. *BMC Musculoskeletal Disorders*, 2004, 5, s. 28.

## Lékový profil aceclofenaku

PharmDr. Lenka Součková, Ph.D. Anesteziologicko-resuscitační klinika,

Mezinárodní centrum klinického výzkumu, Fakultní nemocnice u sv. Anny v Brně

- 1 [http://www.lekopis.cz/Kap\\_6\\_1\\_Aceclofenac.htm](http://www.lekopis.cz/Kap_6_1_Aceclofenac.htm), vyhledáno 6. 9. 2012.
- 2 Hinz, B. – Rau, T. – Auge, D. – Werner, U. – Ramer, R. – Rietbrock, S. – Brune, K.: Aceclofenac spares cyclooxygenase 1 as a result of limited but sustained biotransformation to diclofenac. *Clin Pharmacol Ther*, 2003, 74 (3), s. 222–235.
- 3 Diaz-González, F. – Sánchez-Madrid, F.: Inhibition of leukocyte adhesion: an alternative mechanism of action for anti-inflammatory drugs. *Trends in Immunology*, 1998, (19) 4, s. 169–172.
- 4 Diaz, C. – Rodriguez de la Serna, A. – Geli, C., et al.: Efficacy and tolerability of Aceclofenac vs. Diclofenac in the treatment of knee Osteoarthritis. A multicenter study. *Eur J Rheumatol Inflamm*, 1996, 16, s. 17–22.
- 5 Perez-Busquier, M. – Carero, E. – Rodriguez, M., et al.: Comparison

- of Aceclofenac with Piroxicam in the treatment of Osteoarthritis. *Clin Rheumatol*, 1997, 16 (2), s. 154–159.
- 6 Kornasoff, D. – Frerick, H. – Bowdler, J., et al.: Aceclofenac is a well-tolerated alternative to Naproxen in the treatment of Osteoarthritis. *Clin Rheumatol*, 1997, 16 (1), s. 32–38.
  - 7 Pasero, G. – Marcolongo, R. – Serni, U., et al.: A multi-centre, double-blind comparative Study of the efficacy and safety of Aceclofenac and Diclofenac in the treatment of Rheumatoid Arthritis. *Curr Med Res Opin*, 1995, 13, s. 305–315.
  - 8 Kornasoff, D. – Maisenbacher, J. – Bowdler, J., et al.: The efficacy and tolerability of Aceclofenac compared to Indomethacin in patients with Rheumatoid Arthritis. *Rheumatol Int*, 1996, 15, s. 225–230.
  - 9 Martín-Mola, E. – Gijón-Baños, J. – Ansoleaga, J. J.: Aceclofenac in comparison to Ketoprofen in the treatment of Rheumatoid Arthritis. *Rheumatol Int*, 1995, 15, s. 111–116.
  - 10 Perez-Ruiz, F. – Alonso-Ruiz, A. – Ansoleaga, J. J.: Comparative study of the efficacy and safety of Aceclofenac and Tenoxicam in Rheumatoid Arthritis. *Clin Rheumatol*, 1996, 15 (5), s. 473–477.
  - 11 Pasero, G. – Ruju, G. – Marcolongo, R., et al.: Aceclofenac vs. Naproxen in the treatment of Ankylosing Spondylitis: a double-blind, controlled study. *Curr Ther Res Clin Exp*, 1994, 55, s. 833–842.
  - 12 Batlle-Gualda, E. – Figueroa, M. – Ivorra, J., et al.: The efficacy and tolerability of Aceclofenac in the treatment of patients with Ankylosing Spondylitis. A multicenter controlled clinical trial. *J Rheumatol*, 1996, 23 (7), s. 1200–1206, abstrakt.
  - 13 Villa Alcázar, L. F. – Álvarez de Buergo, M. – Rico Lenza, H., et al.: Aceclofenac is as safe and effective as Tenoxicam in the treatment of Ankylosing Spondylitis: a 3 month multicentre comparative trial. *J Rheumatol*, 1996, 27 (7), s. 1194–1199.
  - 14 Bubani, G.: The analgesic activity and tolerability of Aceclofenac in the treatment of Odontalgia. A double-blind placebo-controlled evaluation. *Clin Trials J*, 1988, 25, s. 244–253.
  - 15 Puigvert Torrent, A.: Dose–response study of the analgesic activity of Aceclofenac in Odontalgia following extraction of the third molar. *Drug Invest*, 1990, 2 (2), s. 132–136.
  - 16 Movilia, P. G.: Evaluation of the analgesic activity and tolerability of Aceclofenac in the treatment of post-episiotomy pain. *Drugs Exptl Clin Res*, 1989, 15 (1), s. 47–51.
  - 17 Letzel, H. – Megard, Y. – Simoneau, D. – Fortea, J. – Raber, A.: Double-blind, multicentre, randomized, single dose, three way crossover study to evaluate the efficacy and safety of Aceclofenac vs. Placebo and Naproxen in patients with Primary Dysmenorrhoea. In: *Pain Practice. Book of Abstracts. 3rd World Congress World Institute of Pain* (21.–25. 9. 2004, Barcelona, Španělsko). Devor, M. – Erdine, S. – Ruiz-López, R. (eds.): Blackwell Publishing, Barcelona, 2004, s. 282–283, abstrakt.
  - 18 Kornasoff, D. – Frerick, H. – Bowdler, J., et al.: Aceclofenac is a well-tolerated alternative to Naproxen in the treatment of Osteoarthritis. *Clin Rheumatol*, 1997, 16 (1), s. 32–38.
  - 19 Perez-Busquier, M. – Carero, E. – Rodriguez, M., et al.: Comparison of Aceclofenac with Piroxicam in the treatment of Osteoarthritis. *Clin Rheumatol*, 1997, 16 (2), s. 154–159.
  - 20 Perez-Ruiz, F. – Alonso-Ruiz, A. – Ansoleaga, J. J.: Comparative study of the efficacy and safety of Aceclofenac and Tenoxicam in Rheumatoid Arthritis. *Clin Rheumatol*, 1996, 15 (5), s. 473–477.
  - 21 Yanagawa, A. – Kudo, T. – Shimada, J., et al.: Endoscopic evaluation of Aceclofenac-induced gastroduodenal mucosal damage: a double-blind comparison with sodium Diclofenac and Placebo. *Jpn J Rheumatol*, 1998, 8, s. 249–259.
  - 22 Laporte, J. R. – Ibáñez, L. – Vidal X., et al.: Upper Gastro-Intestinal Bleeding associated with the use of NSAIDs New vs. Older Agents. *Drug Safety*, 2004, 27 (6), s. 411–420.
  - 23 Garcia, M. – Saracho, R. – Jaio, N. – Vrotsoukanari, K. – Aguirre, C.: Inadequate drug prescription and the rise in drug-induced acute tubulointerstitial nephritis incidence. *Clinical Kidney Journal*, 2010, (3) 6, s. 555–557.

## Racionální volba silných opioidů v léčbě chronických bolestí u revmatických onemocnění

MUDr. Olga Šléglová Revmatologický ústav, Praha

- 1 Doležal, T. – Hakl, M. – Kozák, J. – Kršiak, M. – Lejčko, J. – Skála, B. – Sláma, O. – Ševčík, P. – Orlický, J.: Metodické pokyny pro farmakoterapii bolesti. *Bolest*, 2009, 12 (dopl. 2), s. 4–27.
- 2 Doležal, T. – Hakl, M.: Racionální volba silných opioidů – farmakologický a klinický pohled. *Farmakoterapie*, 2011, 7 (dopl.), s. 37–41.
- 3 American Pain Society: *Guideline for the management of pain in osteoarthritis, rheumatoid arthritis and juvenile arthritis*, 2. vydání, 2002.
- 4 Rokyta, R. – Kršiak, M. – Kozák, J.: *Bolest*. Tigis, Praha, 2006.
- 5 McMahon, S. – Koltzenburg, M.: *Wall and Melzack's Texbook of Pain*. Elsevier, London, 2006.
- 6 Hakl, M., et al.: *Léčba bolesti*. Mladá fronta, Praha, 2011.
- 7 Caldwell, J. C. – Rapoport, R. J. – Davis, J. C., et al.: Efficacy and safety of a once daily morphine formulation in chronic moderate—to severe osteoarthritis pain: results from a randomized placebo-controlled, double blind trial and an open-label extension trial. *J Pain*, 2002, 23, s. 278–291.
- 8 Pavelka, K. – Loet, X. L. – Bjorneboe, O., et al.: Benefits of transdermal fentanyl in patients with rheumatoid arthritis or with osteoarthritis of the knee or hip: an open-label study to asses pain control. *Curr Med Res and Opinion*, 2004, 20, s. 1967–1977.
- 9 Roth, S. H. – Fleischman, R. M. – Burch, F. X., et al.: Around the clock controlled relase oxycodone therapy for osteoarthritis—related pain: placebo controlled trial and longterm evaluation. *Arch Intern Med*, 2000, 160, s. 853–860.
- 10 Kalso, E. – Edwards, J. E. – Moore, R. A., et al.: Opioids in chronic non-cancer pain: systematic review of efficacy and safety. *Pain*, 2004, 112, s. 372–380.
- 11 Furian, A. D. – Sandoval, J. A. – Mailis-Gagnon, A. – Tnula, E.: Opioids for noncancer pain: meta-analysis of effectiveness and side effects. *CMAJ*, 2006, 174 (11), doi: 10.1503.
- 12 Allan, L. – Hays, H. – Jensen, N. H., et al.: Randomimised crossover trial of transdermal fentanyl and sustained release oral morphine for treating chronic non-cancer pain. *Br Med J*, 2001, 322, s. 1154–1158.
- 13 Caldwell, J. C. – Halle, M. E. – Boyd, R. E., et al.: Treatment of osteoarthritis pain with controlled release oxycodone or fixed combination oxycodone plus acetaminophen added to nonsteroidal antiinflammatory drugs: a double blind, randomized, multicenter, placebo controlled trial. *J Rheumatol*, 1999, 26, s. 862–869.
- 14 Herrero-Beaumont, G. – Bjorneboe, O. – Richard, U.: Transdermal fentanyl for the treatment of pain cause by rheumatoid arthritis. *Rheumatol Int*, 2004, 24 (6), s. 325–332.
- 15 Opavský, J.: *Bolest v ambulantní praxi*. Maxdorf, Praha, 2011.

# Novinky v léčbě osteoporózy

MUDr. Eliška Stehlíková Revmatologický ústav, Praha

- 1 Blahoš, J.: Léčba osteoporózy. *Postgrad Med CZ*, 2002, 2, s. 211–215.
- 2 Eastell, R. – Watts, N. B. – Kelly, J. S.: Osteoporosis: consider the outcomes. *Medscape: CME circle*. Dostupné na: [www.medscape.com](http://www.medscape.com), 2001.
- 3 World Health Organisation WHO: *Prevention and management of osteoporosis. Report of WHO Scientific Group WHO Technical Report Series*, 2003, č. 921.
- 4 Štěpán, J. – Záhora, R. – Poláková, L., et al.: Prevalence osteoporózy v České republice. (Prevalence of osteoporosis in the Czech Republic). *Cas Lek Cesk*, 1998, 137, s. 237–239.
- 5 Broulík, P.: Příčiny a rizikové faktory osteoporózy. *Postgrad Med CZ*, 2002, 2, s. 179–181.
- 6 Broulík, P.: *Osteoporóza a její léčba*. Praha, Maxdorf Jessenius, 2009, s. 11–12.
- 7 Broulík, P.: *Osteoporóza a její léčba*. Praha, Maxdorf Jessenius, 2009, s. 18–20.
- 8 Michalská, D.: Nové poznatky v léčbě osteoporózy. *Interní med*, 2009, 11 (11), s. 498–502.
- 9 Cooper, A., et al.: Treatment persistence with once-monthly ibandronate and patient support vs. once-weekly alendronate: results from the PERSIST study. *Int J Clin Pract*, 2006, 60, s. 896–905.
- 10 Lewiecki, E. M., et al.: Adherence to and gastrointestinal tolerability of monthly oral or quarterly intravenous ibandronate therapy in women with previous intolerance to oral bisphosphonates: A 12-month, open-label, prospective evaluation. *Clin Therapeutics*, 2008, 30 (4), s. 605–620.
- 11 Earnshaw, S. R., et al.: Cost-effectiveness of bisphosphonate therapies for women with postmenopausal osteoporosis: implications of improved persistence with less frequently administered oral bisphosphonates. *Curr Med Res Opin*, 2007, 23 (10), s. 2517–2529.
- 12 Harris, S. T., et al.: Risk of fracture in women treated with monthly oral ibandronate or weekly bisphosphonates: The eValuation of IBandronate Efficacy (VIBE) database fracture study. *Bone*, 2009, 44, s. 758–765.
- 13 Di Munno, O. – Delle, A.: Efficacy of ibandronate: a long term confirmation. *Clin Case Miner Bone Metab*, 2010, 7, s. 23–26.
- 14 Sambrook, P. – Cranney, A. – Adachi, J. D.: Risk reduction of non-vertebral fractures with intravenous ibandronate: post-hoc analysis from DIVA. *Curr Med Res Opin*, 2010, 26, s. 599–604.
- 15 Khosla, S.: Minireview: the OPG/RANKL/RANK system. *Endocrinology*, 2001, 142, s. 5050–5055.
- 16 Kostenuik, P. J. – Shalhoub, V.: Osteoprotegerin: a physiological and pharmacological inhibitor of bone resorption. *Curr Pharm Des*, 2001, 7, s. 613–635.
- 17 Kostenuik, P. J.: Osteoprotegerin and RANKL regulate bone resorption, density, geometry and strength. *Curr Opin Pharmacol*, 2005, 5, s. 618–625.
- 18 Lacey, D. L. – Timms, E. – Tan, H. L., et al.: Osteoprotegerin ligand is a cytokine that regulates osteoclast differentiation and activation. *Cell*, 1998, 93, s. 165–176.
- 19 Štěpán, J.: Osteoprotegerin a denosumab v patofyziologii a farmakoterapii postmenopauzální osteoporózy. *Farmakoterapie*, reprint, supplementum revmatologie a osteologie, 2010, 6, s. 58–64.
- 20 Woo, K. M. – Choi, Y. – Ko, S. H., et al.: Osteoprotegerin is present on the membrane of osteoclasts isolated from mouse long bones. *Exp Mol Med*, 2002, 34 (5), s. 347–352.
- 21 Glass, D. A. – Bialek, P. – Ahn, J. D., et al.: Canonical Wnt signaling in differentiated osteoblasts controls osteoclast differentiation. *Developmental Cell*, 2005, 8 (5), s. 751–764.
- 22 Dougal, W. – Chaisson, M.: Monoclonal antibody targeting RANKL as a therapy for cancer-induced bone diseases. *Clin Calcium*, 2006, 16, s. 627–635.
- 23 Hamdy, N. A.: Osteoprotegerin as a potential therapy for osteoporosis. *Curr Osteoporos Rep*, 2005, 3, s. 121–125.
- 24 Abrahamsen, B. – Teng, A. Y.: Technology evaluation: denosumab, Amgen. *Curr Opin Mol Ther*, 2005, 7, s. 604–610.
- 25 Lewiecki, E. M.: RANK ligand inhibition with denosumab for the management of osteoporosis. *Expert Opin Biol Ther*, 2006, 6, s. 1041–1050.
- 26 McClung, M. R.: Inhibition of RANKL as a treatment for osteoporosis: preclinical and early clinical studies. *Curr Osteoporos Rep*, 2006, 4, s. 28–33.
- 27 Rosa, J.: Lékové profily, Teriparatid. *Remedia*, 2008, 18, s. 338–344.
- 28 Lindsay, R. – Cosman, F. – Zhou, H., et al.: A novel tetracycline labeling schedule for longitudinal evaluation short-term effects of anabolic therapy with a single iliac crest bone biopsy: early actions of teriparatide. *J Bone Miner Res*, 2006, 21, s. 366–373.
- 29 Compston, J.: Skeletal actions of intermittent parathyroid hormone: Effects on bone remodeling and structure. *Bone*, 2007, 40, s. 1447–1452.
- 30 Štěpán, J.: Osteoporóza: koho, kdy a jak léčit? *Časopis lékařů českých*, 2009, 148 (1), s. 25–33.
- 31 Cranney, A. – Tuqwell, P. – Zytaruk, N. – Robinson, V. – Weaver, B., et al.: Meta-analysis of calcitonin for the treatment of postmenopausal osteoporosis. *Endocrine Rev*, 2002, 23, s. 540–551.
- 32 Chesnut, C. H. – Majumdar, S. – Newitt, D. C., et al.: Effects of salmon calcitonin on trabecular microarchitecture as determined by magnetic resonance imaging: results from the QUEST study. *J Bone Miner Res*, 2005, 20 (9), s. 1548–1561. Epub 27. 4. 2005.
- 33 Chesnut, C. H. – Silverman, S. – Andriano, K., et al.: A randomized trial of nasal spray salmon calcitonin in postmenopausal women with established osteoporosis. The Prevent Recurrence Of Osteoporotic Fractures study. *Am J Med*, 2000, 109, s. 267–327.
- 34 Munoz-Torres, M. – Alonso, G. – Raya, M. P.: Calcitonin therapy in osteoporosis. *Treat Endocrinol*, 2004, 3, s. 117–132.
- 35 Tavares, F. X. – Boncek, V. – Deaton, D. N., et al.: Acute effects of calcitonin nasal spray on serum C-telopeptide of type 1 collagen (CTX) levels in elderly osteopenic women with increased bone turnover. *Calcif Tissue Int*, 2004, 75 (6), s. 477–481. Epub 16. 9. 2004.
- 36 Tanko, L. B. – Bagger, Y. Z. – Alexandersen, P., et al.: Safety and efficacy of a novel salmon calcitonin (sCT) technology-based oral formulation in healthy postmenopausal women: acute and 3-month effects on biomarkers of bone turnover. *J Bone Miner Res*, 2004, 19, s. 1531–1538.
- 37 Fujita, Y. – Nakata, K. – Yasui, N., et al.: Novel mutations of cathepsin K gene in patients with pycnodysostosis and their characterization. *J Clin Endocrinol Metab*, 2000, 85, s. 425–431.
- 38 Fuller, K. – Kirstein, B. – Chambers, T. J.: The regulation and enzymatic basis of bone resorption by human osteoclasts. *Clin Sci (Lond)*, 2007. Epub před tiskem 23. 1. 2007.
- 39 Miller, L. R. – Shewchuk, L. M. – Wells-Knecht, K., et al.: Design of potent, selective, and orally bioavailable inhibitors of cysteine protease cathepsin K. *J Med Chem*, 2004, 47, s. 588–599.
- 40 Bone, H. G. – McClung, M. – Verbruggen, N., et al.: A randomized double-blind, placebo-controlled study of a cathepsin K inhibitor in the treatment of postmenopausal women with low BMD: one year results. *J Bone Miner Res*, 2007, 22n (dopl. 1), s. S37.
- 41 Wallis, K. – Walters, J. R. – Forbes, A.: Review article: glucagon-like peptide 2 – current applications and future directions. *Aliment Pharmacol Ther*, 2007, 25, s. 365–372.
- 42 Henriksen, D. B. – Alexandersen, P. – Byrjalsen, I., et al.: Reduction of nocturnal rise in bone resorption by subcutaneous GLP-2. *Bone*, 2004, 34, s. 140–147.
- 43 Henriksen, D. B. – Alexandersen, P. – Hartmann, B., et al.: GLP-2 Administration Attenuates Nocturnal Bone Resorption in Postmenopausal Women: A 14-Day Study. *J Bone Miner Res*, 2005, 20 (dopl. 1), s. CO 30.
- 47 Warmington, K. – Ominsky, M. – Bolon, B., et al.: Sclerostin

- monoclonal antibody treatment of osteoporotic rats completely reverses one year of ovariectomy-induced systemic bone loss. *J Bone Miner Res*, 2005, 20 (dopl. 1), s. S22.
- 45 **Pathi, D. – Stouch, B. – Jang, G., et al.:** Antiklerostin antibody increases markers of bone formation in healthy postmenopausal women. *J Bone Miner Res*, 2007, 22, s. S37.
- 46 **Palička, V. – Živný, P. – Pavlíková, L.:** Léčba postmenopauzální osteoporózy – novinky v principech i postupech. *Medicína po promoci*, 2009, 10, s. 81–87.
- 47 **Cummings, S. – Zanchetta, J. – McClung, M., et al.:** The effect of twice – yearly denosumab on fracture risk in women with osteoporosis. *Osteoporos Int*, 2009, 20 (dopl. 1), s. 16.
- 48 **Body, J. J. – Gaich, G. A. – Scheele, W. H., et al.:** A randomized double-blind trial to compare the efficacy of teriparatide recombinant human parathyroid hormone (1–34) with alendronate in postmenopausal women with osteoporosis. *J Clin Endocrinol Metab*, 2002, 87, s. 4528–4535.
- 49 **Prince, R. – Sipos, A. – Hossain, A., et al.:** Sustained nonvertebral fragility fracture risk reduction after discontinuation of teriparatide treatment. *J Bone Miner Res*, 2005, 20, s. 1507–1513.
- 50 **Stoch, S. A. – Wagner, J. A.:** Cathepsin K inhibitors: a novel target for osteoporosis therapy. *Clin Pharmacol Ther*, 2008, 83, s. 172–176.
- 51 **Haderslev, K. V. – Jeppesen, P. B. – Hartmann, B., et al.:** Short-term administration of glucagon-like peptide-2. Effects on bone mineral density and markers of bone turnover in short-bowel patients with no colon. *Scand J Gastroenterol*, 2002, 37, s. 392–398.
- 52 **Henriksen, D. B. – Andersen, P. – Hartmann, B. – Adrian, C. L. – Byrjalsen, I. – Bone, H. G. – Holst, J. J. – Christiansen, C.:** Four-month treatment with GLP-2 significantly increases hip BMD: a randomized, placebo-controlled, dose-ranging study in postmenopausal women with low BMD. *Bone*, 2009, 45 (5), s. 833–842. Epub 22. 7. 2009.
- 53 **Delmas, P. D. – Adami, S. – Strugala, C., et al.:** Intravenous ibandronate injections in postmenopausal women with osteoporosis: one-year results from the dosing intravenous administration study. *Arthritis Rheum*, 2006, 54, s. 1838–1846.
- 54 **Eisman, J. A. – Civitelli, R. – Adami, S., et al.:** Efficacy and tolerability of intravenous ibandronate injection in postmenopausal osteoporosis: 2 years results from DIVA study. *J Rheumatol*, 2008, 38, s. 488–497.
- 55 **Bianchi, G., et al.:** Long-term administration of quarterly IV ibandronate is effective and well tolerated in postmenopausal osteoporosis: 5-year data from the DIVA study long-term extension. *Osteoporosis Int*, 2011, 6. října, publikováno před tiskem.
- 56 **Black, D. M. – Delmas, P. D. – Eastell, R., et al.:** Once-yearly zoledronic acid for treatment of postmenopausal osteoporosis. *N Engl J Med*, 2007, 356, s. 1809–1822.
- 57 **Lyles, K. W. – Colón-Emeric, C. S. – Magazine, J. S., et al.:** Zoledronic acid and clinical fractures and mortality after hip fracture. *N Engl J Med*, 2007, 357, s. 1799–1809.
- 58 **Horák, P. – Skácelová, M.:** Terapie osteoporózy bisfosfonáty. *Postgrad Med*, 2011, 7. Dostupné na: <http://zdravi.e15.cz/clanek/postgradualní-medicina/terapie-osteoporózy-bisfosfonaty-461280>.
- 59 **Kutílek, Š.:** Stroncium-ranelát – nové terapeutické možnosti v léčbě osteoporózy. *Postgrad Med*, 2005, 7/4, s. 391–396.
- 60 **Meunier, P. J. – Roux, C. – Seeman, E. – Ortolani, S. – Badurski, J. E., et al.:** The effects of stroncium ranelate on the risk of vertebral fractures in women with postmenopausal osteoporosis. *N Engl J Med*, 2004, 350, s. 459–468.
- 61 **Ronkin, S. – Clarke, L. – Boudes, P., et al.:** TSE-424, a novel tissue selective estrogen, reduce biochemical indices of bone metabolism in a dose related fashion. *J Bone Miner Res*, 2001, 16 (S1), s. S413.

## Studie fáze III: Respimat® s tiotropiem významně sniže exacerbace u astmatiků, u nichž přetrvávají příznaky i po léčbě IKS/LABA

- 1 **Kerstjens, H. A. M. – Dahl, R. – Beck, E., et al.:** Tiotropium reduces asthma exacerbations in asthmatic patients with persistent airflow obstruction uncontrolled despite treatment in accordance with guidelines. *ERS*, 2012, abstrakt.
- 2 **Kerstjens, H. A. M. – Paggiaro, P. L. – Vandewalker, M. L., et al.:** Tiotropium provides sustained bronchodilation in asthmatics with persistent airflow obstruction uncontrolled despite treatment in accordance with guidelines. *ERS*, 2012, abstrakt.
- 3 **Stanford, R. H. – Gilsean, A. W. – Ziemiczki, R., et al.:** Predictors of uncontrolled asthma in adult and pediatric patients: analysis of the Asthma Control Characteristics and Prevalence Survey Studies (ACCESS). *J Asthma*, 2010, 47 (3), s. 257–262.
- 4 Global Initiative for Asthma (GINA). <http://www.ginasthma.org/Questions-and-answers/q-a-general-information-about-asthma.html>, vyhledáno 19. 6. 2012.
- 5 World Health Organization. WHO factsheet 206: bronchial asthma. Available at: [www.who.int/mediacentre/factsheets/fs206/en](http://www.who.int/mediacentre/factsheets/fs206/en), vyhledáno 19. 6. 2012.
- 6 European Federation of Allergy and Airway Diseases Patients Association. <http://www.efanet.org/asthma/index.html>, vyhledáno 19. 6. 2012.
- 7 <http://www.ginasthma.org/pdf/GINABurdenReport.pdf>, publikováno v roce 2003, vyhledáno 19. 6. 2012.
- 8 **Rabe, K. F. – Adachi, M. – Lai, C. K., et al.:** Worldwide severity and control of asthma in children and adults: the global asthma insights and reality surveys. *J Allergy Clin Immunol*, 2004, 114 (1), s. 40–47.
- 9 **Chajd, R.:** Aerosol Plumes: Slow and Steady Wins The Race. *J Aerosol Med*, 2005, 18 (3), s. 261–263.
- 10 **Hochrainer, D. – Hölz, H.:** Comparison of Aerosol Velocity and Spray Duration of Respimat® Soft Mist™ Inhaler and Pressurized Metered Dose Inhalers. *J Aerosol Med*, 2005, 18 (3), s. 273–282.
- 11 **Freytag, F. – Foliech, W. – Wolf, K.:** New soft mist inhaler is effective and easy to use in patients with asthma and COPD. *Eur Respir J*, 2005, 26 (dopl. 49), s. 338.
- 12 **Brand, P. – Hederer, B. – Austen, G., et al.:** Higher Lung Deposition with Respimat® Soft Mist™ Inhaler than HFA-MDI in COPD Patients with Poor Technique. *Int J Chronic Obstruct Pulm Dis*, 2008, 3 (4), s. 763–770.
- 13 **Brand, P., et al.:** Respimat® Soft Mist™ inhaler preferred to Diskus® by Patients with COPD and /or Asthma. *J Aerosol Med*, 2007, 20 (2), s. 165.
- 14 **Hodder, R. – Price, D.:** Patient Preference for Inhaler Devices in Chronic Obstructive Pulmonary Disease: Experience with Respimat® Soft Mist™ Inhaler. *Int J Chronic Obstruct Pulm Dis*, 2009, 4, s. 381–390.
- 15 **Hodder, R. – Reese, P. R. – Slaton, T.:** Asthma Patients Prefer Respimat® Soft Mist™ Inhaler to Turbohaler. *Int J Chronic Obstruct Pulm Dis*, 2009, 4, s. 225–232.
- 16 **Schuermann, W. – Schmidtmann, S. – Moroni, P., et al.:** Respimat® Soft Mist™ Inhaler versus hydrofluoroalkane metered dose inhaler: patient preference and satisfaction. *Treatm Respir Med*, 2005, 4, s. 53–61.

# Nesteroidní antirevmatika – současná praxe a novinky

MUDr. Šárka Forejtová Revmatologický ústav, Praha

- 1 Laine, L.: Nonsteroidal anti-inflammatory drug gastropathy. *Gastrointest Endosc Clin N Am*, 1996, 6, s. 489–504.
- 2 Langman, M. J. – Weil, J. – Wainwright, P. – Lawson, D. H. – Rawlings, M. D. – Logan, R. F., et al.: Risk of bleeding peptic ulcer associated with individual nonsteroidal antiinflammatory drugs. *Lancet*, 1994, 343, s. 1075–1078.
- 3 Singh, H. – Triadafilopoulos, G.: Epidemiology of NSA – induced GI complications. *J Rhematol*, 1999, 26, s. 18–24.
- 4 Vonkeman, H. E. – van der Laar, M. A.: Nonsteroidal anti-inflammatory drugs: adverse effects and their prevention. *Semin Arthritis Rheum*, 2010, 39, s. 294–312.
- 5 Hernández-Díaz, S. – Varas-Lorenzo, C. – Rodríguez, L. A. G.: Non-Steroidal Antiinflammatory Drugs and the Risk of Acute Myocardial Infarction. *Basic & Clinical Pharmacology & Toxicology*, 2006, 98, s. 266–274.
- 6 McGettigan, P. – Henry, D.: Cardiovascular risk and inhibition of cyclooxygenase: a systematic review of the observational studies of selective and nonselective inhibitors of cyclooxygenase 2. *JAMA*, 2006, 296, s. 1633–1644.
- 7 Salvo, F. – Fourrier-Réglát, A. – Bazin, F., et al.: Cardiovascular and gastrointestinal safety of NSAIDs: a systemic review of meta-analyses of randomized clinical trials. *Clinical Pharmacology & Therapeutics*, 2011, 89 (6), s. 855–866.
- 8 Singh, G. – Vadhwkar, S. – Mithal, A., et al.: A new safety warning: decreased gastroprotection is associated with an increase of serious ulcer complication in elderly users of NSAIDs. *Arthritis Rheum*, 2007, 56 (dopl.), s. 287.
- 9 Scott, P. A. – Kingley, P. H. – Smith, C. M. – Choy, E. H. – Scott, L. D.: Non-steroidal anti-inflammatory drugs and myocardial infarction: comparative systemic review of evidence from observational studies and randomised controlled trials. *Ann Rheum Dis*, 2007, 66, s. 1296–1304.
- 10 Rainsford, K. D.: Anti-inflammatory drugs in the 21<sup>st</sup> century. *Subcell Biochem*, 2007, 42, s. 3–27.
- 11 Rahme, E. – Nejdar, H.: Risks and benefits of COX-2 inhibitors vs non-selective NSAIDs: does their cardiovascular risk exceed their gastrointestinal benefit? A retrospective cohort study. *Rheumatology*, 2007, 46, s. 435–438.
- 12 Rahme, E. – Roussy, J. P. – Lafrance, J. P., et al.: Use of nonsteroidal antiinflammatory drugs: is there a change in patient risk profile after withdrawal od rofecoxib? *J Rheumatol*, 2011, 35, s. 195–202.
- 13 Chan, A. T. – Manson, J. E. – Albert, C. M., et al.: Nonsteroidal anti-inflammatory drugs, acetaminophen, and the risk of cardiovascular events. *Circulation*, 2006, 113, s. 1578–1587.
- 14 Singh, G. – Fort, J. G. – Goldstein, J. L., et al.: Celecoxib versus naproxen and diclofenac in osteoarthritis patients: SUCCESS-1 study. *Am J Med*, 2006, 119, s. 255–266.
- 15 Goldstein, J. L. – Eisen, G. M. – Lewis, B. – Gralnek, I. M. – Zlotnick, S. – Fort, J. G.: Video capsule endoscopy to prospectively assess small bowel injury with celecoxib, naproxen plus omeprazole, and placebo. *Clin Gastroenterol Hepatol*, 2005, 3 (2), s. 133–141.
- 16 Chan, F. K. – Lanas, A. – Scheiman, J., et al.: Celecoxib versus omeprazole and diclofenac in patients with osteoarthritis and rheumatoid arthritis (CONDOR): a randomised trial. *Lancet*, 2010, 376 (9736), s. 173–179.
- 17 Dieppe, P. A. – Lohmander, L. S.: Pathogenesis and management of pain in osteoarthritis. *Lancet*, 2005, 365, s. 965–973.
- 18 Jordan, K. M. – Arden, N. – Doherty, M., et al.: EULAR Recommendation 2003: an evidence based approach to the management of knee osteoarthritis: Report of a Task Force of the Standing Committee for International Clinical Studies including Therapeutic Trials (ESCISIT). *Ann Rheum Dis*, 2003, 62, s. 1145–1155.
- 19 Zhang, W. – Doherty, M. – Arden, N., et al.: EULAR evidence based recommendation for the management of hip osteoarthritis: Report of a Task Force of the EULAR Standing Committee for International Clinical Studies including Therapeutic (ESCISIT). *Ann Rheum Dis*, 2005, 64, s. 669–681.
- 20 Zhang, W. – Doherty, M. – Leeb, B. F., et al.: EULAR evidence based recommendation for the management of hand osteoarthritis: Report of a Task Force of the EULAR Standing Committee for International Clinical Studies including Therapeutic (ESCISIT). *Ann Rheum Dis*, 2007, 66, s. 377–388.
- 21 Rashad, S. – Revell, P. – Hemingway, A. – Low, F. – Rainsford, K. – Walker, F.: Effect of non-steroidal anti-inflammatory drugs on the course of osteoarthritis. *Lancet*, 1989, 2, s. 519–522.
- 22 Huskisson, E. C. – Berry, H. – Gishen, P. – Jubb, R. W. – Whitehead, J.: Effects of antiinflammatory drugs on the progression of osteoarthritis of the knee. LINK Study Group. Longitudinal Investigation of Non-steroidal Antiinflammatory Drugs in Knee Osteoarthritis. *J Rheumatol*, 1995, 22, s. 1941–1946.
- 23 Pavelka, K.: A comparison of the therapeutic efficacy of diclofenac in osteoarthritis: a systemic review of randomised controlled trials. *Current Medical Research & Opinion*, 2012, 28 (1), s. 163–175.
- 24 Wanders, A. – Heijde, D. – Landewe, R. – Behier, J. M. – Calin, A. – Olivieri, I. – Zeidler, H. – Dougados, M.: Nonsteroidal antiinflammatory drugs reduce radiographic progression in patients with ankylosing spondylitis: a randomized clinical trial. *Arthritis Rheum*, 2005, 52 (6), s. 1756–1765.
- 25 Song, I. H. – Poddubnyy, A. – Rudwaleit, M. – Sieper, J.: Benefits and risks of ankylosing spondylitis treatment with nonsteroidal antiinflammatory drugs. *Arthritis Rheum*, 2008, 56, s. 929–938.
- 26 Peters, M. J. L. – Symmons, D. P. M. – McCarey, D., et al.: EULAR evidence-based recommendation for cardiovascular risk management in patients with rheumatoid arthritis and other forms of inflammatory arthritis. *Ann Rheum Dis*, 2010, 69, s. 325–331.
- 27 Strand, V.: Are COX-2 inhibitors preferable to non-selective non-steroidal anti-inflammatory drugs in patients with risk of cardiovascular events taking low-dose aspirin? *Lancet*, 2008, 370, s. 2138–2151.
- 28 Shah, S. – Mehta, V.: Controversies and advances in nonsteroidal anti-inflammatory drug (NSAID) analgesia in chronic pain management. *Postgrad Med J*, 2012, 88, s. 73–78.

## Metabolický syndrom – ano, či ne?

MUDr. Petr Sucharda, CSc. 3. interní klinika VFN a 1. LF UK, Praha

- 1 Olefsky, J. – Reaven, G. M. – Farquhar, J. W.: Effects of weight reduction on obesity. Studies of lipid and carbohydrate metabolism in normal and hyperlipoproteinemic subjects. *J Clin Invest*, 1974, 53, s. 64–76.
- 2 Reaven, G. M.: Role of insulin resistance in human disease. Banting Lecture 1988. *Diabetes*, 1988, 37, s. 1595–1607.
- 3 Reaven, G. M.: The insulin resistance syndrome. *Curr Atheroscler Rep*, 2003, 5, s. 364–371.
- 4 Herberg, L. – Bergmann, M. – Hennigs, U. – Major, E. – Gries, F. A.: Influence of diet on the metabolic syndrome of obesity. *Isr J Med Sci*, 1972, 8, s. 822–823.

- 5 Ferrannini, E. – Haffner, S. M. – Mitchell, B. D. – Stern, M. P.: Hyperinsulinaemia: the key feature of a cardiovascular and metabolic syndrome. *Diabetologia*, 1991, 34, s. 416–422.
- 6 Enzi, G. – Busetto, L. – Inelmen, E. M. – Coin, A. – Sergi, G.: Historical perspective: visceral obesity and related comorbidity in Joannes Baptista Morgagni's 'De sedibus et causis morborum per anatomem indagata'. *Int J Obes Relat Metab Disord*, 2003, 27, s. 534–535.
- 7 Kylin, E.: Studien über das Hypertonie-Hyperglykämie-Hyperurikämiesyndrom. *Zentralblatt für Innere Medizin*, 1923, 44, s. 105–127.
- 8 Vague, J.: The degree of masculine differentiation of obesities: a factor determining predisposition to diabetes, atherosclerosis, gout, and uric calculous disease. *Am J Clin Nutr*, 1956, 4, s. 20–34.
- 9 Kaplan, N. M.: The deadly quartet. Upper-body obesity, glucose intolerance, hypertriglyceridemia, and hypertension. *Arch Intern Med*, 1989, 149, s. 1514–1520.
- 10 Ashwell, M. – Cole, T. J. – Dixon, A. K.: Obesity: new insight into the anthropometric classification of fat distribution shown by computed tomography. *Br Med J*, 1985, 290, s. 1692–1694.
- 11 Executive summary of the third report of The National Cholesterol Education Program (NCEP) Expert Panel on detection, evaluation, and treatment of high blood cholesterol in adults (Adult Treatment Panel III). *JAMA*, 2001, 285, s. 2486–2497.
- 12 Alberti, K. G. – Eckel, R. H. – Grundy, S. M. – Zimmet, P. Z. – Cleeman, J. L. – Donato, K. A. – Fruchart, J. C. – James, W. P. – Loria, C. M. – Smith, S. C. Jr. – International Diabetes Federation Task Force on Epidemiology and Prevention – National Heart, Lung, and Blood Institute – American Heart Association – World Heart Federation – International Atherosclerosis Society – International Association for the Study of Obesity: Harmonizing the metabolic syndrome: a joint interim statement of the International Diabetes Federation Task Force on Epidemiology and Prevention; National Heart, Lung, and Blood Institute; American Heart Association; World Heart Federation; International Atherosclerosis Society; and International Association for the Study of Obesity. *Circulation*, 2009, 120, s. 1640–1645.
- 13 Ford, E. S. – Li, C. – Zhao, G.: Prevalence and correlates of metabolic syndrome based on a harmonious definition among adults in the US. *J Diabetes*, 2010, 2, s. 180–193.
- 14 Mokáň, M. – Galajda, P. – Príšovská, D. – Tomášková, V. – Šutarík, L. – Bokovská, A. – Kručinská, L. – Rusnáková, G.: Prevalence of diabetes mellitus and metabolic syndrome in Slovakia. *Diabetes Res Clin Pract*, 2008, 81, s. 238–242.
- 15 Reaven, G.: The metabolic syndrome or the insulin resistance syndrome? Different names, different concepts, and different goals. *Endocrinol Metab Clin North Am*, 2004, 33, s. 283–303.
- 16 Reaven, G. M.: The metabolic syndrome: is this diagnosis necessary? *Am J Clin Nutr*, 2006, 83, 1237–1247.
- 17 Oda, E.: Metabolic syndrome: its history, mechanisms, and limitations. *Acta Diabetol*, 2012, 49, s. 89–95.
- 18 Hanefeld, M. – Koehler, C. – Gallo, S. – Benke, I. – Ott, P.: Impact of the individual components of the metabolic syndrome and their different combinations on the prevalence of atherosclerotic vascular disease in type 2 diabetes: the Diabetes in Germany (DIG) study. *Cardiovasc Diabetol*, 2007, 6, s. 13.
- 19 Guize, L. – Thomas, F. – Pannier, B. – Bean, K. – Jegou, B. – Benetos, A.: All-cause mortality associated with specific combinations of the metabolic syndrome according to recent definitions. *Diabetes Care*, 2007, 30, s. 2381–2387.
- 20 Rodriguez-Colon, S. M. – Mo, J. – Duan, Y. – Liu, J. – Caulfield, J. E. – Jin, X. – Liao, D.: Metabolic syndrome clusters and the risk of incident stroke: the atherosclerosis risk in communities (ARIC) study. *Stroke*, 2009, 40, s. 200–205.
- 21 Simons, L. A. – Simons, J. – Friedlander, Y. – McCallum, J.: Is prediction of cardiovascular disease and all-cause mortality genuinely driven by the metabolic syndrome, and independently from its component variables? The Dubbo Study. *Heart Lung Circul*, 2011, 20, s. 214–219.
- 22 Wang, X. – Li, Z. – Liu, Y. – Lv, X. – Yang, W.: Effects of pistachios on body weight in Chinese subjects with metabolic syndrome. *Nutr J*, 2012, 11, s. 20.
- 23 Reaven, G. M.: The metabolic syndrome: requiescat in pace. *Clin Chem*, 2005, 51, s. 931–938.

## Telomery, telomeráza a telomeropatie

prof. Ing. Jaroslav Petr, DrSc. Výzkumný ústav živočišné výroby, Praha

- 1 Blackburn, E. H. – Greider, C. W. – Szostak, J. W.: Telomeres and telomerase: the path from maize, Tetrahymena and yeast to human cancer and aging. *Nature Medicine*, 2006, 12, s. 1133–1138.
- 2 Calado, R. T. – Young, N. S.: Telomere diseases. *New England Journal of Medicine*, 2009, 361, s. 2353–2365.
- 3 Alter, B. P. – Giri, N. – Savage, S. A. – Rosenberg, P. S.: Cancer in dyskeratosis congenital. *Blood*, 2009, 113, s. 6549–6557.
- 4 Scheinberg, P. – Cooper, J. N. – Sloand, E. M. – Wu, C. O. – Calado, R. T. – Young, N. S.: Association of telomere length of peripheral blood leukocytes with hematopoietic relapse, malignant transformation, and survival in severe aplastic anemia. *Journal of American Medical Association*, 2010, 304, s. 1358–1364.
- 5 Calado, R. T. – Regal, J. A. – Hills, M. – Yewdell, W. T. – Dalmazzo, L. F. – Zago, M. A. – Lansdorp, P. M. – Hogge, D. – Chanock, S. J. – Estey, E. H. – Falcão, R. P. – Young, N. S.: Constitutional hypomorphic telomerase mutations in patients with acute myeloid leukemia. *Proceedings of the National Academy of Sciences*, 2009, 106, s. 1187–1192.
- 6 Yamaguchi, Y. – Calado, R. T. – Ly, H. – Kajigaya, S. – Baerlocher, G. M. – Chanock, S. J. – Lansdorp, P. M. – Young, N. S.: Mutations in TERT, the Gene for Telomerase Reverse Transcriptase, in Aplastic Anemia. *New England Journal of Medicine*, 2005, 352, s. 1413–1424.
- 7 Cawthon, R. M. – Smith, K. R. – O'Brien, E. – Sivatchenko, A. – Kerber, R. A.: Association between telomere length in blood and mortality in people aged 60 years or older. *Lancet*, 2003, 361, s. 393–395.
- 8 Njajou, O. T. – Blackburn, E. H. – Newman, A. B. – Wu, S.-H. – Li, R. – Simonsick, E. M. – Harris, T. M. – Cummings, S. R. – Cawthon, R. M.: Association between telomere length, specific causes of death, and years of healthy life in health, aging, and body composition, a population-based cohort study. *Journal of Gerontology, Series A, Biological Sciences and Medical Sciences*, 2009, 64A, s. 860–864.