

ACTA MEDICINAE 7/2014 Revmatologie

Kompletní literatura

- 2 **Non-radiografická axiální spondyloartritida**
prof. MUDr. Karel Pavelka, DrSc. Revmatologický ústav, Praha
- 2 **Metotrexát v léčbě revmatoidní artridy**
MUDr. Radka Svobodová Revmatologický ústav, Praha
- 3 **Glukokortikoidy v terapii revmatoidní artridy**
MUDr. Hana Ciferská, Ph.D. | MUDr. Šárka Forejtová Revmatologický ústav, Praha
- 4 **Subkutánní tocilizumab v léčbě revmatoidní artridy**
MUDr. Heřman Mann Revmatologický ústav a Klinika revmatologie 1. LF UK, Praha
- 4 **Nové léky u psoriatické artridy**
MUDr. Jiří Štolfa Revmatologický ústav, Praha
- 4 **Primární plicní hypertenze u systémových onemocnění pojiva**
doc. MUDr. Radim Bečvář, CSc. Revmatologický ústav a Revmatologická klinika 1. LF UK, Praha
doc. MUDr. Pavel Jansa, Ph.D. II. interní klinika kardiologie a angiologie VFN a 1. LF UK, Praha
- 5 **Nová injekční forma Abataceptu (využití v praxi)**
MUDr. Liliana Šedová Revmatologický ústav, Praha
- 5 **Parametry kortikální kosti a jejich ovlivnění denosumabem**
MUDr. Jan Rosa Mediscan Praha 4-Chodov
- 6 **Etanercept – adherence k léčbě, setrvání na léčbě, data z registrů**
MUDr. David Suchý, Ph.D. FN Plzeň
- 6 **Glukokortikoidy indukovaná osteoporóza**
MUDr. Olga Růžičková Revmatologický ústav, Praha
- 8 **Pětiletá data golimumabu v léčbě psoriatické artridy**
MUDr. Jiří Štolfa Revmatologický ústav Praha
- 8 **Postavení stroncium ranelátu v léčbě osteoporózy**
MUDr. Olga Růžičková Revmatologický ústav, Praha
- 8 **Belimumab v indikaci systémový lupus erythematoses**
MUDr. Hana Ciferská, Ph.D. Revmatologický ústav, Praha
- 9 **Dna a kardiovaskulární riziko**
doc. MUDr. Petr Němec, Ph.D.
- 9 **Optimální dávka vitaminu D ve vztahu k sérovým koncentracím –25(OH)D**
MUDr. Kateřina Zegzulková Revmatologický ústav, Praha
- 10 **Možnosti diskontinuace a deeskalace biologických DMARDs u pacientů s RA**
MUDr. Jakub Závada, Ph.D. Revmatologický ústav, Praha

Non-radiografická axiální spondyloartritida

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

- 1 Rudwaleit, M. – van der Heijde, D. – Landewé, R., et al.: The development of Assessment of Spondyloarthritis international Society classification criteria for axial spondyloarthritis (part II): validation and final selection. *Ann Rheum Dis*, 2009, 68, s. 777–783.
- 2 van der Linden, S. – Valkenburg, H. A. – Cats, A.: Evaluation of diagnostic criteria for ankylosing spondylitis. A proposal for modification of the New York criteria. *Arthritis Rheum*, 1984, 27, s. 361–368.
- 3 Sieper, J. – Rudwaleit, M. – Baraliakos, X., et al.: The ASAS handbook: a guide to assess spondyloarthritis. *Ann Rheum Dis*, 2009, 68, s. ii–44.
- 4 Rudwaleit, M. – Sieper, J.: Referral strategies for early diagnosis of axial spondyloarthritis. *Nature Reviews*, 2012, 8, s. 262–269.
- 5 Poddubny, D. – Rudwaleit, M. – Haibel, H., et al.: Rates and predictors of radiographic sacroiliitis progression over 2 years in patients with axial spondyloarthritis. *Ann Rheum Dis*, 2011, 70, s. 1369–1374.
- 6 Sieper, J. – Srinivasan, S. – Zamani, O. – Mielants, H. – Choquette, D. – Pavelka, K. – Loft, A. G. – Géher, P. – Danda, D. – Reiblatt, T. – Cantini, F. – Ancuta, C. – Erdes, S. – Raffayová, H. – Keat, A. – Gaston, J. S. H. – Praprotnik, S. – Vastesaeger, N.: Comparison of two referral strategies for diagnosis of axial spondyloarthritis: the Recognising and Diagnosing Ankylosing Spondylitis Reliably (RADAR) study. *Ann Rheum Dis*, 2012, 72, s. 1621–1627.
- 7 Braun, J. – van den Berg, R. – Baraliakos, X. – Boehm, H. – Burgos-Vargas, R. – Collantes-Estevez, E. – Dafghirud, H. – Dijkmans, B. – Dougados, M. – Emery, P. – Geher, P. – Mammoudeh, M. – Inman, R. D. – Jongkees, M. – Khan, M. A. – Kiltz, U. – Kvien, T. K. – Leirisalo-Repo, M. – Maksymowich, W. P. – Olivieri, I. – Pavelka, K. – Sieper, J. – Stanisławska-Biernat, E. – Wendling, D. – Özgocmen, S. – van Drogen, C. – van Royen, B. J. – van der Heijde, D.: 2010 update of the ASAS/EULAR recommendations for the management of ankylosing spondylitis. *Ann Rheum Dis*, 2011, 70, s. 896–904.
- 8 Sieper, J. – Lenaerts, J. – Wollenhaupt, J., et al.: Efficacy and safety of infliximab plus naproxen versus naproxen alone in patients with early, active axial spondyloarthritis: results from the double-blind, placebo-controlled INFAST study, Part 1. 2013 as 10.1136/annrheumdis-2012-203201.
- 9 Song, I. H. – Weis, A. – Hermann, K. G. A., et al.: Similar response rates in patients with ankylosing spondylitis and non-radiographic axial spondyloarthritis after 1 year of treatment with etanercept: results from ESTHER trial. *Ann Rheum Dis*, 2013, 72, s. 823–826.
- 10 Sieper, J. – van der Heijde, D. – Dougados, M.: Efficacy and safety of adalimumab in patients with non-radiographic axial spondyloarthritis: results of a randomised, placebo controlled trial (ABILITY-1). *Ann Rheum Dis*, 2013, 72, s. 815–822.
- 11 Landewé, R. – Braun, J. – Deodhar, A., et al.: Efficacy of certolizumab pegol on signs and symptoms of axial spondyloarthritis including ankylosing spondylitis: 24-week results of a double-blind randomised placebo-controlled Phase 3 study. *Ann Rheum Dis*, 2013, publikováno online.
- 12 van der Heijde, D. – Lie, E. – Kvien, T. K., et al.: ASDAS, a highly discriminatory ASAS-endorsed disease activity score in patients with ankylosing spondylitis. *Ann Rheum Dis*, 2009, 68, s. 1811–1818.
- 13 Sieper, J. – van der Heijde, D. – Dougados, M., et al.: Efficacy and safety of adalimumab in patients with non-radiographic axial spondyloarthritis: results of a randomised placebo-controlled trial (ABILITY-1). *Ann Rheum Dis*, 2013, 72 (6), s. 815–822; doi: 10.1136/annrheumdis-2012-201766.
- 14 van der Heide, H. J. L. – van der Linden, H. M. J. – Huizinga, T. W. J. – Visser, L. G.: Haematogenous infection of a prosthetic joint. *Nederlandse tijdschrift voor geneeskunde*, 2013, 1, 157 (12); abstrakt A5448.
- 15 van der Heijde, D., et al.: Efficacy and safety of infliximab in patients with ankylosing spondylitis: results of a randomized, placebo-controlled trial (ASSER). *Arthritis Rheum*, 2005, 52, s. 582–591.
- 16 Davis, J. C., et al.: Sustained durability and tolerability of etanercept in ankylosing spondylitis for 96 weeks. *Ann Rheum Dis*, 2005, 64, s. 1557–1562.
- 17 Van der Heijde, D., 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.
- 18 Imman R. 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.

Metotrexát v léčbě revmatoidní artritidy

MUDr. Radka Svobodová Revmatologický ústav, Praha

- 1 Weinblatt, M. E. – Coblyn, J. S. – Fox, D. A., et al.: Efficacy of low-dose methotrexate in rheumatoid arthritis. *N Engl J Med*, 1985, 312, s. 818–822.
- 2 Williams, H. J. – Willkens, R. F. – Samuelson, C. O. Jr., et al.: Comparison of low-dose oral pulse methotrexate and placebo in the treatment of rheumatoid arthritis. A controlled clinical trial. *Arthritis rheum*, 1985, 28, s. 721–730.
- 3 Kay, J. – Matteson, E. L. – Dasgupta, B., et al.: Golimumab in patients with active rheumatoid arthritis despite treatment with methotrexate: a randomized, double-blind, placebo-controlled, dose-ranging study. *Arthritis Rheum*, 2008, 58 (4), s. 964–975.
- 4 Malgarini, R. B. – Pimpinella G.: Etanercept and methotrexate in rheumatoid arthritis. *Lancet*, 2004, 22, 363 (9422), s. 1733.
- 5 Emery, P. – Breedveld, F. C. – Hall, S., et al.: Comparison of methotrexate monotherapy with a combination of methotrexate and etanercept in active, early, moderate to severe rheumatoid arthritis (COMET): a randomised, double-blind, parallel treatment trial. *Lancet*, 2008, 2, 372 (9636), s. 375–382.
- 6 Chatzidionysiou, K. – Lie E. – Nasonov, E., et al.: Effectiveness of disease-modifying antirheumatic drug co-therapy with methotrexate and leflunomide in rituximab-treated rheumatoid arthritis patients: results of a 1-year follow-up study from the CERERRA collaboration. *Ann Rheum Dis*, 2012, 71 (3), s. 374–377.
- 7 Visser, K. – Katchamart, W. – Loza, E., et al.: Multinational evidence-based recommendations for the use of methotrexate in rheumatic disorders with a focus on rheumatoid arthritis: integrating systematic literature research and expert opinion of a broad international panel of rheumatologists in the 3E Initiative. *Ann Rheum Dis*, 2009, 68 (7), s. 1086–1093.
- 8 Visser, K. – van der Heijde, D.: Optimal dosage and route of administration of methotrexate in rheumatoid arthritis: a systematic review of the literature. *Ann Rheum Dis*, 2009, 68 (7), s. 1094–1099.
- 9 Cipriani, P. – Ruscitti, P. – Carubbi, F., et al.: Methotrexate in rheumatoid arthritis: optimizing therapy among different formulations. Current and emerging paradigms. *Clin Ther*, 2014, 1, 36 (3), s. 427–435.
- 10 Braun, J. – Kästner, P. – Flaxenberg, P., et al.: Comparison of the clinical efficacy and safety of subcutaneous versus oral administration of methotrexate in patients with active rheumatoid arthritis: results of a six-month, multicenter, randomized, double-blind, controlled, phase IV trial. *Arthritis Rheum*, 2008, 58 (1), s. 73–81.
- 11 Yazici, Y. – Bata, Y.: Parenteral methotrexate for the treatment of rheumatoid arthritis. *Bull Hosp Jt Dis*, 2013, 71, dopl. 1, s. 46–48.
- 12 Islam, M. S. – Haq, S. A. – Islam, M. N., et al.: Comparative efficacy of subcutaneous versus oral methotrexate in active rheumatoid arthritis. *Myrmensingh Med J*, 2013, 22 (3), s. 483–488.
- 13 Bakker, M. F. – Jacobs, J. W. – Welsing, P. M., et al.: Are switches from oral to subcutaneous methotrexate or addition of cyclosporin to methotrexate useful steps in a tight control treatment strategy for rheumatoid arthritis? A post hoc analysis of the CAMERA study. *Ann Rheum Dis*, 2010, 69 (10), s. 1849–1852.
- 14 Kremer, J. M. – Davies, J. M. – Rynes, R. I., et al.: Every-other-week methotrexate in patients with rheumatoid arthritis. A double-blind, placebo-controlled prospective study. *Arthritis Rheum*, 1995, 38 (5), s. 601–607.
- 15 Luis, M. – Pacheco-Tena, C. – Cazarín-Barrientos, J., et al.: Comparison of two schedules for administering oral low-dose methotrexate (weekly versus every-other-week) in patients with rheumatoid arthritis in remission: a twenty-four week, single blind, randomized study. *Arthritis Rheum*, 1999, 42 (10), s. 2160–2165.
- 16 Braun, J. – Kästner, P. – Flaxenberg, P., et al.: Comparison of the clinical efficacy and safety of subcutaneous versus oral administration of methotrexate in patients with active rheumatoid arthritis: results of a six-month, multicenter, randomized, double-blind, controlled, phase IV trial. *Arthritis Rheum*, 2008, 58 (1), s. 73–81.
- 17 Dalrymple, J. M. – Stamp, L. K. – O'Donnell, J. L., et al.: Pharmacokinetics of oral methotrexate in patients with rheumatoid arthritis. *Arthritis Rheum*, 2008, 58 (11), s. 3299–3308.
- 18 Romao et al.: Old drugs, old problems: where do we stand in prediction of rheumatoid arthritis responsiveness to methotrexate and other synthetic DMARDs? *BMC Medicine*, 2013, 11, s. 17.
- 19 Kremer, J. M. – Phelps, C. T.: Long-term prospective study of the use of methotrexate in the treatment of rheumatoid arthritis—update after mean of 90 months. *Arthritis Rheum*, 1992, 35, s. 138–145.
- 20 Kremer, J. M.: The mechanism of action of methotrexate in rheumatoid arthritis: the search continues. *J Rheumatol*, 1997, 21, s. 1–5.
- 21 Cronstein, B. N. – Merrill, J. T.: Mechanism of the effects of methotrexate. *Bull Rheum Dis*, 1996, 45, s. 6–8.
- 22 Furst, D.: The rationale use of methotrexate in rheumatoid arthritis and other rheumatic diseases. *Br J Rheumatol*, 1997, 36, s. 1196–1204.
- 23 Johnson, C. A. – Russel, A. S. – Kovithavongs, J., et al.: Measures of immunologic and inflammatory responses in vitro in rheumatoid arthritis patients treated with methotrexate. *J Rheumatol*, 1986, 13, s. 294–296.
- 24 Lebbe, C. – Beyler, C. H. – Gerber, N.: Intraindividual variability of the bioavailability of low dose methotrexate after oral administration in RA. *Ann Rheum Dis*, 1994, 53, s. 475–477.
- 25 Andersen, P. A. – West, S. G. – O'Dell, J. R., et al.: Weekly pulse methotrexate in rheumatoid arthritis. Clinical and immunologic effects in randomized, double-blind study. *Ann Intern Med*, 1985, 103, s. 489–496.
- 26 Weinblatt, M. E. – Coblyn, J. S. – Fox, D. A., et al.: Efficacy of low-dose methotrexate in rheumatoid arthritis. *N Engl J Med*, 1985, 312, s. 818–822.
- 27 Thompson, R. N. – Watts, C. – Edelman, J., et al.: A controlled two-centre trial of parenteral methotrexate therapy for refractory rheumatoid arthritis. *J Rheumatol*, 1984, 11, s. 760–763.
- 28 Williams, H. J. – Willkens, R. F. – Samuelson, C. O. Jr., et al.: Comparison of low-dose oral pulse methotrexate and placebo in the treatment of rheumatoid arthritis. A controlled clinical trial. *Arthritis Rheum*, 1985, 28, s. 721–730.
- 29 Kremer, J. M.: Safety, efficacy and mortality in a long-term cohort of patients with rheumatoid arthritis taking methotrexate: follow up after a mean of 13.3 years. *Arthritis Rheum*, 1997, 40, s. 984–985.
- 30 Weinblatt, M. E. – Kaplan, M. – Germain, B. F., et al.: Methotrexate in rheumatoid arthritis: a five-year prospective multicentre study. *Arthritis Rheum*, 1994, 37, s. 1492–1498.
- 31 Wluka, A. – Buchbinder, R. – Mylvaganam, A., et al.: Longterm methotrexate use in rheumatoid arthritis: 12 year followup of 460 patients treated in community practice. *J Rheumatol*, 2000, 27, s. 1864–1871.
- 32 Kremer, J. M. – Phelps, C. T.: Long-term prospective study of the use of methotrexate in the treatment of rheumatoid arthritis. *Arthritis Rheum*, 1992, 35, s. 138–145.
- 33 Sany, J. – Anaya, J. M. – Lussiez, V., et al.: Treatment of rheumatoid arthritis with methotrexate: a prospective open longterm study of 191 cases. *J Rheumatol*, 1991, 18, s. 1323–1327.
- 34 Krause, D.: Response to methotrexate treatment is associated with reduced mortality in patients with severe rheumatoid arthritis. *Arthritis Rheum*, 2000, 43, s. 14–21.
- 35 Choi, H. K. – Hernan, M. A. – Server, J. D., et al.: Methotrexate and mortality in patients with rheumatoid arthritis: a prospective study. *Lancet*, 2002, 359, s. 1173–1177.
- 36 Tugwell, P. – Bennett, K. – Bell, M., et al.: Methotrexate in RA. *Ann Intern Med*, 1989, 110, s. 581–583.
- 37 Baton, J. M. – Martin, R. W. – Fleischmann, R. M., et al.: A comparison of etanercept and methotrexate in patients with early rheumatoid arthritis. *N Engl J Med*, 2000, 343, s. 1586–1593.
- 38 Drosos, A. A. – Tsifetaki, N. – Tsiakou, E. K., et al.: Influence of methotrexate on radiological progression in rheumatoid arthritis: a sixty-month prospective study. *Clin Exp Rheumatol*, 1997, 15, s. 263–267.
- 39 Jeurissen, M. E. – Boerbooms, A. M. – van de Putte, L. B., et al.: Influence of methotrexate and azathioprine on radiological progression in rheumatoid arthritis. A randomized, double-blind study. *Ann Intern Med*, 1991, 114, s. 999–1004.
- 40 Emery, P. – Breedveld, F. C. – Lemmel, E. M., et al.: A comparison of the efficacy and safety of leflunomide and methotrexate for the treatment of rheumatoid arthritis. *Rheumatology (Oxford)*, 2000, 39, s. 655–665.
- 41 Jeurissen, M. E. – Boerbooms, A. M. – van de Putte, L. B., et al.: Methotrexate versus azathioprine in the treatment of rheumatoid arthritis. A forty-eight-week randomized, double-blind trial. *Arthritis Rheum*, 1991, 34, s. 961–972.

- 42 Aletaha, D. – Smolen, J. S.: Effectiveness profiles and dose dependent retention of traditional disease modifying antirheumatics drugs for rheumatoid arthritis. An observational study. *J Rheumatol*, 2002, 29, s. 1631–1638.
- 43 Strnad, V. – Cohen, S. – Sheriff, M., et al.: Treatment of active rheumatoid arthritis with leflunomide compared with placebo and methotrexate. *Arch Intern Med*, 1999, 159, s. 2542–2550.
- 44 Wilske, K. A. – Healy, L. A.: Remodelling the pyramid—a concept whose time has come. *J Rheumatol*, 1989, 16, s. 565–567.
- 45 Tugwell, P. – Pincus, T. – Jocum, D., et al.: Combination therapy with cyclosporine and methotrexate in severe rheumatoid arthritis. *N Engl J Med*, 1995, 333, s. 137–141.
- 46 Weinblatt, M. E. – Kremer, J. M. – Bankhurst, A. D., et al.: A trial of etanercept, a recombinant tumor necrosis factor receptor: Fc fusion protein in patients with rheumatoid arthritis receiving methotrexate. *N Engl J Med*, 1999, 340, s. 253–259.
- 47 Kremer, J. M. – Caldwell, J. R. – Cannon, G. W., et al.: The combination of leflunomide and methotrexate in patients with active rheumatoid arthritis who failing on MTX treatment alone. *Arthritis Rheum*, 2000, 43 (dopl.), s. 224.
- 48 Lipsky, P. E. – van der Neijde, D. M. – St Clair, E. W., et al.: Infliximab and methotrexate in the treatment of rheumatoid arthritis. Anti-Tumor Necrosis Factor Trial in Rheumatoid Arthritis with Concomitant Therapy Study Group. *N Engl J Med*, 2000, 343, s. 1594–1602.
- 49 Weinblatt, M. E. – Keystone, E. C. – Furst, D., et al.: Adalimumab, a fully human anti-tumor necrosis factor alpha-monoclonal antibody, for the treatment of rheumatoid arthritis in patients taking methotrexate. The ARMADA trial. *Arthritis Rheum*, 2003, 48, s. 35–45.
- 50 O'Dell, J. O. – Haire, C. E. – Ericsson, N., et al.: Treatment of rheumatoid arthritis with methotrexate alone sulphasalazine and hydroxychloroquine, or a combination of three medications. *N Engl J Med*, 1996, 334, s. 1287–1291.
- 51 Boers, M. – Verhoeven, A. C. – Markusse, H. M., et al.: Randomised comparison of combined step-down prednisolone, methotrexate and sulphasalazine with sulphasalazine alone in early rheumatoid arthritis. *Lancet*, 1997, 350, s. 309–318.
- 52 Proudman, S. M. – Conaghan, P. G. – Richardson, C., et al.: Treatment of poor prognosis early rheumatoid arthritis. *Arthritis Rheum*, 2000, 43, s. 1809–1819.
- 53 Möttönen, T. – Hanonen, P. – Leirisalo-Repo, M., et al.: Comparison of combination therapy with single therapy in early rheumatoid arthritis. *Lancet*, 1999, 353, s. 1568–1573.
- 54 Dougados, M. – Domne, B. – Cantagrel, A., et al.: Combination therapy in early rheumatoid arthritis. *Ann Rheum Dis*, 1999, 58, s. 220–225.
- 55 Furst, D. – Breedveld, F. C. – Kalden, J. R., et al.: Updated consensus statement on biological agents for the treatment of rheumatoid arthritis and other immune mediated inflammatory diseases (May 2002). *Ann Rheum Dis*, 2003, 62 (dopl. II), s. ii2–ii19.
- 56 Rau, R. – Hernom, G. – Kargen, T., et al.: A double blind, randomized parallel trial of intramuscular methotrexate and gold sodium thiomalate in early erosive rheumatoid arthritis. *J Rheumatol*, 1991, 18, s. 328–333.
- 57 Nelson, D. T. – Anderson, J. J. – Meenan, R. F., et al.: Use of short-term efficacy/toxicity tradeoffs to select second-line drugs in rheumatoid arthritis. A metaanalysis of published clinical trials. *Arthritis Rheum*, 1992, 35, s. 1117–1125.
- 58 Kremer, J. M. – Alarcon, G. S. – Lightfoot, R. W. Jr.: Methotrexate for rheumatoid arthritis. Suggested Guidelines for Monitoring Toxicity. *Arthritis Rheum*, 1994, 37, s. 316–328.
- 59 Furst, D. E. – Eriskon, N. – Clute, L., et al.: Adverse experience with methotrexate during 176 weeks of long-term prospective trial in patients with rheumatoid arthritis. *J Rheumatol*, 1990, 17, s. 1628–1635.
- 60 Balli, F. M. – Mirro, J. Jr. – Reagan, G. H., et al.: Pharmacokinetics of subcutaneous methotrexate. *J Clin Oncol*, 1988, 6, s. 1882–1886.
- 61 Hoekstra, M. – Haagsma, C. – Nerv, C., et al.: Bioavailability of Higher Dose Methotrexate Comparing Oral and Subcutaneous Administration in Patients with Rheumatoid Arthritis. *J Rheumatol*, 2004, 31, s. 645–648.
- 62 Tugwell, P. – Bennett, K. – Gent, M.: Methotrexate in rheumatoid arthritis. Indications, contraindications, efficacy and safety. *Ann Intern Med*, 1987, 107, s. 358–366.
- 63 Wegryzn, J. – Adeleine, P. – Miossec, P.: Better efficacy of methotrexate given by intramuscular injection than orally in patients with rheumatoid arthritis. *Ann Rheum Dis*, 2004, 63, s. 1232–1234.
- 64 Rozin, A. – Schapira, D. – Balbir-Gurman, A., et al.: Relapse of rheumatoid arthritis after substitution of oral for parenteral administration of methotrexate. *Ann Rheum Dis*, 2002, 61, s. 756–757.
- 65 Braun, J. – Kästner, P. – Flaxenberg, P., et al.: The clinical efficacy and safety of subcutaneous versus oral application of methotrexate in patients with active rheumatoid arthritis. *Abstrakt. Ann Rheum Dis*, 2006, 65 (dopl. II), s. 87.
- 66 Ruperto, N. – Murray, K. J. – Gerlioni, V., et al.: A randomized trial of parenteral methotrexate comparing an intermediate dose with a higher dose in children with juvenile idiopathic arthritis who failed to respond to standard doses of methotrexate. *Arthritis Rheum*, 2004, 50, s. 2191–2201.
- 67 Brooks, P. J. – Spruill, W. J. – Parish, R. C., et al.: Pharmacokinetics of methotrexate administered by intramuscular and subcutaneous injections in patients with rheumatoid arthritis. *Arthritis Rheum*, 1990, 33, s. 91–94.
- 68 Jundt, J. W. – Browne, B. A. – Fiocco, G. P., et al.: A comparison of low dose methotrexate bioavailability: Oral solution, oral tablet, subcutaneous and intramuscular dosing. *J Rheumatol*, 1993, 20, s. 1845–1849.
- 69 Artur, A. B. – Klinkhoff, A. V. – Teufel, A.: Safety of self-injection of gold and methotrexate. *J Rheumatol*, 2001, 26, s. 302–305.
- 70 Zackheim, H. S.: Subcutaneous administration of methotrexate. *J Am Acad Dermatol*, 1992, 26, s. 1008.
- 71 Breedveld, F. C. – Weisman, M. H. – Kavanaugh, A. F., et al.: The PREMIER study: A multicenter, randomized, double-blind clinical trial of combination therapy with adalimumab plus methotrexate versus methotrexate alone or adalimumab alone in patients with early, aggressive rheumatoid arthritis who had not had previous methotrexate treatment. *Arthritis Rheum*, 2006, 54 (1), s. 26–37.
- 72 Klareskog, L. – van der Heijde, D. – de Jager, J. P., et al.: Therapeutic effect of the combination of etanercept and methotrexate compared with each treatment alone in patients with rheumatoid arthritis: double-blind randomised controlled trial. TEMPO (Trial of Etanercept and Methotrexate with Radiographic Patient Outcomes) study investigators. *Lancet*, 2004, 28, 363 (9410), s. 675–681.

Glukokortikoidy v terapii revmatoidní artritidy

MUDr. Hana Ciferská, Ph.D. | MUDr. Šárka Forejtová Revmatologický ústav, Praha

- 1 Goldman, K. – Gertel, S. – Amital, H.: Anti-citrullinated peptide antibodies is more than an accurate tool for diagnosis of rheumatoid arthritis. *Isr Med Assoc J*, 2013, 15 (9), s. 516–519.
- 2 Aletaha, D. – Neogi, T. – Silman, A. J., 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.
- 3 Pincus, T. – Callahan, L. F. – Sale, W. G., et al.: Severe functional declines, work disability and increased mortality in seventy-five rheumatoid arthritis patients studied over nine years. *Arthritis Rheum*, 1984, 27, s. 864–872.
- 4 Scott, D. L. – Wolfe, F. – Huizinga, T. W.: Rheumatoid arthritis. *Lancet*, 2010, 376, s. 1094–1108.
- 5 Smolen, J. S. – Landewé, R. – Breedveld, F. C., et al.: EULAR recommendations for the management of rheumatoid arthritis with synthetic and biological disease-modifying antirheumatic drugs: 2013 update. *Ann Rheum Dis*, 2014, 73, s. 492–509, doi: 10.1136/annrheumdis-2013-204573, Epub 25. 10. 2013.
- 6 Kazuhiro, I. – Chung, K. F. – Adcock, I. M.: Update on glucocorticoid action and resistance. *J Allergy Clin Immunol*, 2006, 117, s. 522–543.
- 7 Lu, N. Z. – Collins, J. B. – Grissom, S. F., et al.: Selective regulation of bone cell apoptosis by translational isoforms of the glucocorticoid receptor. *Mol Cell Biol*, 2007, 27, s. 7143–7160.
- 8 Pavelka, K. – Venkovský, J., et al.: Doporučení České revmatologické společnosti pro léčbu revmatoidní artritidy. *Česká revmatologie*, 2010, 4, s. 182–191.
- 9 Lu, N. Z. – Cidlowski, J. A.: The origin and functions of multiple human glucocorticoid receptor isoforms. *Ann NY Acad Sci*, 2004, 1024, s. 102–123.
- 10 Stahn, C. – Buttigereit, F.: Genomic and nongenomic effects of glucocorticoids. *Nat Clin Pract Rheumatol*, 2008, 4, s. 525–533.
- 11 Rhen, T. – Cidlowski, J. A.: Antiinflammatory action of glucocorticoids—new mechanisms for old drugs. *N Engl J Med*, 2005, 353, s. 1711–1723.
- 12 Stellato, C.: Post-transcriptional and nongenomic effects of glucocorticoids. *Proc Am Thorac Soc*, 2004, 1, s. 255–263.
- 13 Uhlenhaut, N. H. – Barish, G. D. – Yu, R. T., et al.: Insights into negative regulation by the glucocorticoid receptor from genome-wide profiling of inflammatory cistromes. *Mol Cell*, 2013, 49, s. 158–171.
- 14 De Bosscher, K. – Haegeman, K., et al.: Minireview: latest perspectives on antiinflammatory actions of glucocorticoids. *Mol Endocrinol*, 2009, 23, s. 281–291.
- 15 Buttigereit, F.: A fresh look at glucocorticoids how to use an old ally more effectively. *Bull NYU Hosp Jt Dis*, 2012, 70, dopl. 1, s. 26–29.
- 16 Gotzsche, P. C. – Johansen, H. K.: Short-term low-dose corticosteroids vs placebo and nonsteroidal antiinflammatory drugs in rheumatoid arthritis. *Cochrane Database Syst Rev*, 2004, 3, CD000189.
- 17 Visser, K. – Goekoop-Ruiterman, Y. P. – de Vries-Bouwstra, J. K., et al.: A matrix risk model for the prediction of rapid radiographic progression in patients with rheumatoid arthritis receiving different dynamic treatment strategies: post hoc analyses from the BeSt study. *Ann Rheum Dis*, 2010, 69, s. 1333–1337.
- 18 Boers, M.: The COBRA trial 20 years later. *Clin Exp Rheumatol*, 2011, 29 (dopl. 68), s. S46–S51.
- 19 van Tuyl, L. H. – Boers, M. – Lems, W. F., et al.: Survival, comorbidities and joint damage 11 years after the COBRA combination therapy trial in early rheumatoid arthritis. *Ann Rheum Dis*, 2010, 69, s. 807–812.
- 20 Duru, N. – van der Goes, M. C. – Jacobs, J. W., et al.: EULAR evidence-based and consensus-based recommendations on the management of medium to high-dose glucocorticoid therapy in rheumatic diseases. *Ann Rheum Dis*, 2013, 72, s. 1905–1913.
- 21 Kirwan, J. R.: The effect of glucocorticoids on joint destruction in rheumatoid arthritis. The Arthritis and Rheumatism Council Low-Dose Glucocorticoid Study Group. *N Engl J Med*, 1995, 333, s. 142–146.
- 22 van Everdingen, A. A. – Jacobs, J. W., et al.: Low-dose prednisone therapy for patients with early active rheumatoid arthritis: clinical efficacy, disease-modifying properties, and side effects: a randomized, double-blind, placebo-controlled clinical trial. *Ann Intern Med*, 2002, 1, 136, s. 1–12.
- 23 Akker, M. F. – Jacobs, J. W. – Welsing, P. M., et al.: Utrecht Rheumatoid Arthritis Cohort Study Low-dose prednisone inclusion in a methotrexate-based, tight control strategy for early rheumatoid arthritis: a randomized trial Group. *Ann Intern Med*, 2012, 6, 156, s. 329–339.
- 24 Wassenberg, S. – Rau, R. – Steinfeld, P., et al.: Very low-dose prednisolone in early rheumatoid arthritis retards radiographic progression over two years: a multicenter, double-blind, placebo-controlled trial. *Arthritis Rheum*, 2005, 52, s. 3371–3380.
- 25 Buttigereit, F. – Mehta, D. – Kirwan, J., et al.: Low-dose prednisone chronotherapy for rheumatoid arthritis: a randomised clinical trial (CAPRA-2). *Ann Rheum Dis*, 2013, 72, s. 204–210.
- 26 van der Veen, M. J. – Bijlsma, J. W.: The effect of methylprednisolone pulse therapy on methotrexate treatment of rheumatoid arthritis. *Clin Rheumatol*, 1993, 12, s. 500–505.
- 27 Sadra, V. – Khabbazi, A. – Kohali, S., et al.: Randomized double-blind study of the effect of dexamethasone and methylprednisolone pulse in the control of rheumatoid arthritis flare-up: a preliminary study. *Int J Rheum Dis*, 2014, 17, s. 389–393.
- 28 Caporali, R. – Todoerti, M. – Sakellarou, G. – Montecucco, C.: Glucocorticoids in rheumatoid arthritis. *Drugs*, 2013, 73, s. 31–43.
- 29 Iglesias, I. W. 3rd – Sutton, J. D. – Bender, J. C., et al.: Intravenous pulsed steroids in rheumatoid arthritis: a comparative dose study. *J Rheumatol*, 1990, 17, s. 159–162.
- 30 Blyth, T. – Hunter, J. A. – Stirling, A.: Pain relief in the rheumatoid knee after steroid injection. A single-blind comparison of hydrocortisone succinate, and triamcinolone acetonide or hexacetonide. *Br J Rheumatol*, 1994, 33, s. 461–463.
- 31 Chakravarty, K. – Pharaoh, P. D. – Scotty, D. G.: A randomized controlled study of post-injection rest following intra-articular steroid therapy for knee synovitis. *Br J Rheumatol*, 1994, 33, s. 464–468.
- 32 Furtado, R. N. – Oliveira, L. M. – Natour, J.: Polycartilicular corticosteroid injection versus systemic administration in treatment of rheumatoid arthritis patients: a randomized controlled study. *J Rheumatol*, 2005, 32, s. 1691–1698.
- 33 Fardellone, P. – Séjourné, A. – Packou, J. – Goëb, V.: Bone remodeling markers in rheumatoid arthritis. *Mediators Inflamm*, 2014, 484280, doi: 10.1155/2014/484280, Epub 15. 4. 2014.
- 34 Saag, K. G.: Resolved: Low-dose glucocorticoids are neither safe nor effective for the long-term treatment of rheumatoid arthritis. *Arthritis Rheum*, 2001, 45, s. 468–471.
- 35 van der Goes, M. C. – Jacobs, J. W. – Bijlsma, J. W.: Toward safer treatment with glucocorticoids: via patient and rheumatologist perspectives to recommendations on monitoring for adverse events. *Clin Exp Rheumatol*, 2011, 29 (dopl. 68), s. S116–S120.
- 36 Laan, R. F. – van Riel, P. L. – van de Putte, L. B. – van Erning, L. J., et al.: Low-dose prednisone induces rapid reversible axial bone loss in patients with rheumatoid arthritis. A randomized, controlled study. *Ann Intern Med*, 1993, 119, s. 963–968.
- 37 Michel, B. A. – Bloch, D. A. – Fries, J. F.: Predictors of fractures in early rheumatoid arthritis. *J Rheumatol*, 1991, 18, s. 804–808.
- 38 Ruiz-Arruzza, I. – Ugarte, A. – Cabezas-Rodriguez, I., et al.: Glucocorticoids and irreversible damage in patients with systemic lupus erythematosus. *Rheumatology (Oxford)*, 2014, 27, Epub před tiskem.
- 39 Guzman-Clark, J. R. – Fang, M. A. – Sehl, M. E., et al.: Barriers in the management of glucocorticoid-induced osteoporosis. *Arthritis Rheum*, 2007, 57, s. 140–146.
- 40 Myllykangas-Luosujärvi, R. – Aho, K. – Isomäki, H.: Death attributed

- to antirheumatic medication in a nationwide series of 1666 patients with rheumatoid arthritis who have died. *J Rheumatol*, 1995, 22, s. 2214–2217.
- 41 Boers, M. – Verhoeven, A. C. – Markusse, H. M., et al.: Randomised comparison of combined step-down prednisolone, methotrexate and sulphasalazine with sulphasalazine alone in early rheumatoid arthritis. *Lancet*, 1997, 2, 350, s. 309–318.
- 42 Hansen, M. – Podenphant, J. – Florescu, A., et al.: A randomised trial of differentiated prednisolone treatment in active rheumatoid arthritis. Clinical benefits and skeletal side effects. *Ann Rheum Dis*, 1999, 58, s. 713–718.
- 43 Svensson, B. – Boomem, A. – Albertsson, K., et al.: Low-dose prednisolone in addition to the initial disease-modifying antirheumatic drug in patients with early active rheumatoid arthritis reduces joint destruction and increases the remission rate: a two-year randomized trial. *Arthritis Rheum*, 2005, 52, s. 3360–3370.

Subkutánní tocilizumab v léčbě revmatoidní artritidy

MUDr. Heřman Mann Revmatologický ústav a Klinika revmatologie 1. LF UK, Praha

- 1 Zhang, X. – Chen, Y. C. – Fettner, S. – Rowell, L. – Gott, T. – Grimsey, P. – Unsworth, A.: Pharmacokinetics and pharmacodynamics of tocilizumab after subcutaneous administration in patients with rheumatoid arthritis. *Int J Clin Pharmacol Ther*, 2013, 51 (8), s. 620–630.
- 2 Ohta, S. – Tsuru, T. – Terao, K. – Mogi, S. – Zuzami, M. – Shono, E. – Ishida, Y. – Táruri, E. – Omak, M.: Mechanism-based approach using a biomarker response to evaluate tocilizumab subcutaneous injection in patients with rheumatoid arthritis with an inadequate response to synthetic DMARDs (MATSURI study). *J Clin Pharmacol*, 2014, 54 (1), s. 109–119.
- 3 Ogata, A. – Tanimura, K. – Sugimoto, T. – Inoue, H. – Urata, Y. – Matsubara, T. – Kondo, M. – Ueki, Y. – Iwahashi, M. – Tohma, S. – Ohta, S. – Saeki, Y. – Tahala, T.: Musashi Study Investigators. Phase III study of the efficacy and safety of subcutaneous versus intravenous tocilizumab monotherapy in patients with rheumatoid arthritis. *Arthritis Care Res (Hoboken)*, 2014, 66 (3), s. 344–354.
- 4 Burmester, G. R. – Rubbert-Roth, A. – Cantagrel, A. – Hall, S. – Leszczynski, P. – Feldman, D. – Rangaraj, M. J. – Roane, G. – Ludivico, C. – Lu, P. – Rowell, L. – Bao, M. – Mysler, E. F.: A randomised, double-blind, parallel-group study of the safety and efficacy of subcutaneous tocilizumab versus intravenous tocilizumab in combination with traditional disease-modifying antirheumatic drugs in patients with moderate to severe rheumatoid arthritis (SUMMACTA study). *Ann Rheum Dis*, 2014, 73 (1), s. 69–74.
- 5 Schoels, M. M. – van der Heijde, D. – Breedveld, F. C. – Burmester, G. R. – Dougados, M. – Emery, P. – Ferraccioli, G. – Gabay, C. – Gibofsky, A. – Gomez-Reino, J. J. – Jones, G. – Kvien, T. K. – Murakami, M. – Nishimoto, N. – Smolen, J. S.: Blocking the effects of interleukin-6 in rheumatoid arthritis and other inflammatory rheumatic diseases: systematic literature review and meta-analysis informing a consensus statement. *Ann Rheum Dis*, 2013, 72, s. 583–589.

Nové léky u psoriatické artritidy

MUDr. Jiří Štolfa Revmatologický ústav, Praha

- 1 Rozenblit, M. – Lebwohl, M.: New biologics for psoriasis and psoriatic arthritis. *Dermatol Therap*, 2009, 22, s. 56–60.
- 2 Mease, J. P. – Fleischmann, M. – Wollenhaupt, J., et al.: Effect of certolizumab pegol over 48 weeks on signs and symptoms in patients with psoriatic arthritis with and without prior tumor necrosis factor inhibitor exposure. *ACR*, 2013, 312, abstrakt S132.
- 3 Goldminz, A. M. – Gottlieb, A. B.: Ustekinumab for psoriasis and psoriatic arthritis. *J Rheumatol Suppl*, 2012, 89, s. 86–89.
- 4 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.
- 5 Leonardi, C. L. – Kimball, A. B. – Papp, K. A., et al.: PHOENIX 1 study investigators. Efficacy and safety of ustekinumab, a human interleukin-12/23 monoclonal antibody, in patients with psoriasis: 76-week results from a randomised, double-blind, placebo-controlled trial (PHOENIX 1). *Lancet*, 2008, 371, s. 1665–1674.
- 6 Papp, K. A. – Langley, R. G. – Lebwohl, M., et al.: PHOENIX 2 study investigators. Efficacy and safety of ustekinumab, a human interleukin-12/23 monoclonal antibody, in patients with psoriasis: 52-week results from a randomised, double-blind, placebo-controlled trial (PHOENIX 2). *Lancet*, 2008, 371, s. 1675–1684.
- 7 McInnes, I. B. – Kavanaugh, A. – Gottlieb, A. B. – Puig, L. – Rahman, P. – Ritchlin, C. – Brodmerkel, C. – Li, S. – Wang, Y. – Mendelsohn, A. M. – Doyle, M. K.: PSUMMIT 1 Study GroupEfficacy and safety of ustekinumab in patients with active psoriatic arthritis: 1 year results of the phase 3, multicentre, double-blind, placebo-controlled PSUMMIT 1 trial. *Lancet*, 2013, 31, 382, s. 780–789.
- 8 Lowes, M. A. – Kikuchi, T. – Fuentes-Duculan, J., et al.: Psoriasis vulgaris lesions contain discrete populations of Th1 and Th17 T cells. *J Invest Dermatol*, 2008, 128, s. 1207–1211.
- 9 Noordenbos, T. – Yeremenko, N. – Gofita, I., et al.: Interleukin-17-positive mast cells contribute to synovial inflammation in spondylarthritis. *Arthritis Rheum*, 2012, 64, s. 99–109.
- 10 Wilson, N. J. – Boniface, K. – Chan, J. R., et al.: Development, cytokine profile and function of human interleukin 17-producing helper T cells. *Nat Immunol*, 2007, 8, s. 950–957.
- 11 Weaver, C. T. – Hatton, R. D. – Mangan, P. R. – Harrington, L. E.: IL-17 family cytokines and the expanding diversity of effector T cell lineages. *Ann Rev Immunol*, 2007, 25, s. 821–852.
- 12 Leonardi, C. – Matheson, R. – Zacharia, C., et al.: Anti-interleukin-17 monoclonal antibody ixekizumab in chronic plaque psoriasis. *N Engl J Med*, 2012, 366, s. 1190–1199.
- 13 Mease, P. J.: Psoriatic arthritis: update on pathophysiology, assessment and management. *Ann Rheum Dis*, 2011, 70, dopl. 1, s. i77–84.
- 14 Chimenti, M. S. – Ballanti, E. – Perricone, C. – Cipriani, P. – Giacomelli, R. – Perricone, R.: Immunomodulation in psoriatic arthritis: focus on cellular and molecular pathways. *Autoimmun Rev*, 2013, 12, s. 599–606.
- 15 Mease, P. – Genovese, M. C. – Gladstein, G., et al.: Abatacept in the treatment of patients with psoriatic arthritis: results of a six-month, multicentre, randomized, double-blind, placebo-controlled, Phase II trial. *Arthritis Rheum*, 2011, 63, s. 939–948.
- 16 Abrams, J. R. – Lebwohl, M. G. – Guzzo, C. A., et al.: CTLA-4 Ig mediated blockade of T-cell costimulation in patients with psoriasis vulgaris. *J Clin Invest*, 1999, 103, s. 1243–1252.
- 17 Mease, P., et al.: Abatacept in the treatment of patients with psoriatic arthritis: results of a six-month, multicenter, randomized, double-blind, placebo-controlled trial. *Arthritis Rheum*, 2011, 63, s. 939–948.
- 18 Mease, P. J.: Psoriatic arthritis: update on pathophysiology, assessment and management. *Ann Rheum Dis*, 2011, 70, dopl. 1, s. i77–84.
- 19 Ghoreschi, K. – Laurence, A. – O’Shea, J. J.: Janus kinases in immune cell signalling. *Immuno Rev*, 2009, 228, s. 273–287.
- 20 Ghoreschi, K. – Jesson, M. I. – Li, X., et al.: Modulation of innate and adaptive immune responses by tofacitinib (CP-690, 550). *J Immunol*, 2011, 186, s. 4234–4243.
- 21 Papp, K. A. – Menter, A. – Strober, B., et al.: Efficacy and safety of tofacitinib, an oral Janus kinase inhibitor, in the treatment of psoriasis: a Phas00652b randomized placebo-controlled dose-ranging study. *Br J Dermatol*, 2012, 167, s. 668–677.
- 22 Schett, G. – Wollenhaupt, J. – Papp, K., et al.: Oral apremilast in the treatment of active psoriatic arthritis: Results of a multicentre, randomized, double-blind, placebo controlled study. *Arthritis Rheum*, 2012, Epub před tiskem, doi: 10.1002/art. 34580.
- 23 Kavanaugh, A.: ACR, 2012, abstrakt L13, prezentováno 13. 11. 2012.
- 24 Kavanaugh, A., et al.: Long-term (52-week) results of a phase 3, randomized, controlled trial of apremilast, an oral phosphodiesterase 4 inhibitor, in patients with psoriatic arthritis. *EULAR*, 2013, abstrakt LB1, prezentováno 12. 6. 2013.
- 25 Birbara, C. – Blanco, F. J. – Crowley, J. J.: *EULAR*, 2013, abstrakty SAT0299, OP0104, SAT0280, prezentováno 15. 6. 2013.
- 26 Cohen, S. B. – Dore, R. K. – Lane, N. E., et al.: Denosumab treatment effects on structural damage, bone mineral density, and bone turnover in rheumatoid arthritis: a twelve-month, multicentre, randomized, double-blind, placebo-controlled, phase II clinical trial. *Arthritis Rheum*, 2008, 58, s. 1299–1309.

Primární plicní hypertenze u systémových onemocnění pojiva

doc. MUDr. Radim Bečvář, CSc. Revmatologický ústav a Revmatologická klinika 1. LF UK, Praha
doc. MUDr. Pavel Jansa, Ph.D. II. interní klinika kardiologie a angiologie VFN a 1. LF UK, Praha

- 1 Galie, N. – Manes, A., et al.: Pulmonary arterial hypertension associated to connective tissue diseases. *Lupus*, 2005, 14, s. 713–717.
- 2 Mukerjee, D. – St George, D., et al.: Prevalence and outcome in systemic sclerosis associated pulmonary arterial hypertension: application of a registry approach. *Ann Rheum Dis*, 2003, 62, s. 1088–1093.
- 3 Humbert, M. – Sitbon, O., et al.: Pulmonary arterial hypertension in France. Results from a national registry. *Am J Respir Crit Care Med*, 2006, 173, s. 1023–1029.
- 4 Jansa, P. – Bečvar, R., et al.: Pulmonary arterial hypertension associated with systemic sclerosis in the Czech Republic. *Clin Rheumatology*, 2012, 31, s. 557–561.
- 5 Pan, T. L. – Thumboo, J. – Boey, M. L.: Primary and secondary pulmonary hypertension in systemic lupus erythematosus. *Lupus*, 2000, 9, s. 338–342.
- 6 Prabu, A. – Patel, K., et al.: Prevalence and risk factors for pulmonary arterial hypertension in patients with lupus. *Rheumatology (Oxford)*, 2009, 48, s. 1506–1511.
- 7 Dawson, J. K. – Goodson, N. G., et al.: Raised pulmonary artery pressures measured with Doppler echocardiography in rheumatoid arthritis patients. *Rheumatology (Oxford)*, 2000, 39, s. 1320–1325.
- 8 Udayakumar, N. – Venkatesan, S., et al.: Pulmonary hypertension in rheumatoid arthritis-relation with the duration of the disease. *Int J Cardiol*, 2008, 127, s. 410–412.
- 9 Fagan, K. A. – Badesch, D. B.: Pulmonary hypertension associated with connective tissue disease. *Prog Cardiovasc Dis*, 2002, 45, s. 225–234.
- 10 Jeon, C. H. – Choi, J. Y. – Seo, Y. I.: Pulmonary hypertension associated with rheumatic diseases: baseline characteristics from the Korean registry. *Int J Rheum Dis*, 2013, 16, s. 789.
- 11 Farber, H. W. – Loscalzo, J.: Pulmonary arterial hypertension – mechanism of disease. *N Engl J Med*, 2004, 351, s. 1655–1665.
- 12 Shahane, A.: Pulmonary hypertension in rheumatic diseases: epidemiology and pathogenesis. *Rheumatol Int*, 2013, 33, s. 1655–1667.
- 13 Yang, X. – Mardekian, J., et al.: Prevalence of pulmonary arterial

- hypertension in patients with connective tissue diseases: a systematic review of the literature. *Clin Rheumatol*, 2013, 32, s. 1519–1531.
- 14 Sullivan, W. D. – Hurst, D. J., et al.: A prospective evaluation emphasizing pulmonary involvement in patients with mixed connective tissue disease. *Medicine* (Baltimore), 1984, 63, s. 92–107.
- 15 Jansa, P. – Aschermann, M., et al.: Plicní arteriální hypertenze u systémových onemocnění pojiva. *Rheumatologia*, 2006, 20, s. 13–18.
- 16 Simonneau, G. – Galie, N., et al.: Clinical classification of pulmonary hypertension. *J Am Coll Cardiol*, 2004, 43 (dopl. 1), s. 55–125.
- 17 Jansa, P. – Bečvář, R., et al.: Výskyt a časná detekce plicní arteriální hypertenze u systémové sklerodermie v ČR. *Postgraduální medicína*, 2012, 14, příl. 1 Vybrané kapitoly z kardiologie, s. 42–48.
- 18 Jansa, P. – Popelová, J., et al.: Chronická plicní hypertenze. Doporučený diagnostický a léčebný postup České kardiologické společnosti 2010. *Cor Vasa*, 2011, 53, s. 169–182.
- 19 Daniels, L. B. – Krummen, D. E., et al.: Echocardiography in pulmonary vascular disease. *Cardiol Clin*, 2004, 22, s. 383–399.
- 20 McGoon, M., Guterman, D., et al.: Screening, early detection, and diagnosis of pulmonary arterial hypertension: ACCP evidence-based clinical practice guidelines. *Chest*, 2004, 126 (dopl. 1), s. 145–345.

Nová injekční forma Abataceptu (využití v praxi)

MUDr. Liliana Šedová Revmatologický ústav, Praha

- 1 Pavelka, K. – Vencovský, J.: Doporučení České revmatologické společnosti pro léčbu revmatoidní artridy. *Čes Revmatol*, 2010, 4, s. 182–191.
- 2 Smolen, J. S. – Landewé, R. – Breedveld, F. 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.
- 3 Genovese, M. C. – Covarrubias, J. A. – Leon, G., et al.: Subcutaneous abatacept versus intravenous abatacept a phase IIIb non-inferiority study in patients with an inadequate response to methotrexate. *Arthritis Rheum*, 2011, 63, s. 2854–2864.
- 4 Genovese, M. C. – Cobos, A. C. – Leon, G., et al.: Subcutaneous abatacept versus intravenous abatacept in patients with rheumatoid arthritis: long-term data from the ACQUIRE (Abatacept Comparison of sub/Qu/cutaneous versus intravenous In Inadequate Responders to methotrexatE) trial. *Arthritis Rheum*, 2011, 63, s. S150.
- 5 Genovese, M. C. – Tena, C. P. – Covarrubias, A., et al.: Subcutaneous abatacept for the treatment of rheumatoid arthritis: Longterm data from the ACQUIRE Trial. *J Rheumatol*, 2011, 41, s. 629–639.
- 6 Nash, P. – Nayiager, S. – Genovese, M. C., et al.: Immunogenicity, safety, and efficacy of abatacept administered subcutaneously with or without background methotrexate in patients with rheumatoid arthritis: Results from a phase III, international, multicenter, parallel-arm, open-label study (ACCOMPANY). *Arthritis Care & Research*, 2013, 65, s. 718–728.
- 7 Kaine, J. – Gladstein, G. – Strusberg, I., et al.: Evaluation of abatacept administered subcutaneously in adults with active rheumatoid arthritis: impact of withdrawal and reintroduction on immunogenicity, efficacy and safety (phase IIIb ALLOW study). *Ann Rheum Dis*, 2012, 71, s. 38–44.
- 8 Keystone, E. C. – Kremer, J. M. – Russell, A., et al.: Abatacept in subjects who switch from intravenous to subcutaneous therapy: results from the phase IIb ATTUNE study. *Ann Rheum Dis*, 2012, 71, s. 857–861.
- 9 Schiff, M. – Weinblatt, M. E. – Valente, R., et al.: Head-to-head comparison of subcutaneous abatacept versus adalimumab for rheumatoid arthritis: two-year efficacy and safety findings from the AMPLEx trial. *Ann Rheum Dis*, 2014, 73, s. 86–94.
- 10 Horák, P. – Skácelová, M. – Hejduk, K. – Pavelka, K.: Abatacept a jeho použití v CR v léčbě RA – údaje z registru ATTRA. *Čes Rheumatol*, 2012, 20, s. 163–169.
- 11 Choy, E. H. – Panayi, G. S.: Cytokine pathways and joint inflammation in rheumatoid arthritis. *N Engl J Med*, 2001, 344, s. 907–916.
- 12 Linsley, P. S., et al.: CTLA-4 is a second receptor for the B cell activation antigen B7. *J Exp Med*, 1991, 174, s. 561–569.

Parametry kostního modelu a jejich ovlivnění denosumabem

MUDr. Jan Rosa Mediscan Praha 4-Chodov

- 1 Fleisch, H.: *Bisphosphonates in bone disease. From the laboratory to the patient*. 4. vydání, Academic Press, 2000.
- 2 Seman, E.: Age- and menopause-related bone loss compromise cortical and trabecular microstructure. *J Gerontol A Biol Sci Med Sci*, 2013, 68, s. 1218–1225.
- 3 Ghasem-Zadeh, A. – Bohte, A., et al.: Intracortical remodelling and porosity in the distal radius and post-mortem femurs of women: a cross-sectional study. *Lancet*, 2010, 375, s. 1729–1736.
- 4 Zebaze, R. – Ghasem-Zadeh, A. – Bohte, A., et al.: Intracortical remodelling and porosity in the distal radius and post-mortem femurs of women: a cross-sectional study. *Lancet*, 2010, 375, s. 1729–1736.
- 5 Wachter, N. J. – Krischak, G. D. – Mentzel, M., et al.: Correlation of bone mineral density with strength and microstructural parameters of cortical bone in vitro. *Bone*, 2002, 31, s. 90–95.
- 6 Report of a WHO Study Group. *Assessment of fracture risk and its application to screening of postmenopausal osteoporosis*. WHO Technical Reports Series 843, Ženeva 1994.
- 7 Holzer, G. – von Skrbensky, G. – Holzer, L. A. – Pichl, W.: Hip Fractures and the contribution of cortical versus trabecular bone to femoral neck strength. *J Bone Miner Res*, 2009, 24, s. 468–474.
- 8 Kersh, M. E. – Pandy, M. G. – Bui, Q. M., et al.: The heterogeneity in femoral neck structure and strength. *J Bone Miner Res*, 2013, 28, s. 1022–1028.
- 9 Pistoia, W. – van Rietbergen, B. – Rüeggsegger P.: Mechanical consequences of different scenarios for simulated bone atrophy and recovery in the distal radius. *Bone*, 2003, 33, s. 937–945.
- 10 Roux, J.-P. – Wegrzyn, J. – Arlot, M. E., et al.: Contribution of Trabecular and cortical components to biomechanical behavior of human vertebrae: an ex vivo study. *J Bone Miner Res*, 2010, 25, s. 356–361.
- 11 Christiansen, B. A. – Kopperdahl, D. L. – Kiel, D. P. – Krabeny, T. M. – Bouxsein, M. L.: Mechanical contributions of the cortical and trabecular compartments contribute to differences in age-related changes in vertebral body strength in men and women assessed by QCT-based Finite Element Analysis. *J Bone Miner Res*, 2011, 26, s. 974–983.
- 12 Center, J. R.: The definition and clinical significance of nonvertebral fractures. *Curr Osteoporos Rep*, 2010, 8, s. 227–234.
- 13 Boyle, W. J. – Simonet, W. S. – Lacey, D. L.: Osteoclast differentiation and activation. *Nature*, 2003, 423, s. 337–342.
- 14 McClung, M. R. – Lewiecki, E. M. – Gelleret, M. L., et al.: Effect of denosumab on bone mineral density and biochemical markers of bone turnover: 8-year results of a phase 2 clinical trial. *Osteoporos Int*, 2013, 24, s. 227–235.
- 15 Bone, H. G. – Bolognese, M. A. – Yuenet, C. K., et al.: Effects of denosumab treatment and discontinuation on bone mineral density and bone turnover markers in postmenopausal women with low bone mass. *J Clin Endocrinol Metab*, 2011, 96, s. 972–980.
- 16 Cummings, S. R. – San Martin, J. – McClung, M. R., et al.: Denosumab for prevention of fractures in postmenopausal women with osteoporosis. *N Engl J Med*, 2009, 361, s. 756–765.
- 17 Simon, J. A. – Recknor, C. – Moffett, A. H., et al.: Impact of denosumab on the peripheral skeleton of postmenopausal women with osteoporosis: bone density, mass, and strength of the radius, and wrist fracture. *Menopause*, 2013, 20, s. 130–137.
- 18 Bonoen, S. – Adachi, J. D. – Man, Z., et al.: Treatment with denosumab reduces the incidence of new vertebral and hip fractures in postmenopausal women at high risk. *J Clin Endocrinol Metab*, 2011, 96, s. 1727–1736.
- 19 Roux, C. – Lippuner, K. – Bone, H. G.: Denosumab treatment of postmenopausal women with osteoporosis for 7 years: clinical fracture results from the first 4 years of the FREEDOM extension. Dostupné z: http://www.abstracts2view.com/eular/view.php?nu=EULAR13L_OP025, vyhledáno 23. 7. 2014.
- 20 Bone, H. G. – Bolognese, M. A. – Yuenet, C. K., et al.: Effects of denosumab on bone mineral density and bone turnover in postmenopausal women. *J Clin Endocrinol Metab*, 2008, 93, s. 2149–2157.
- 21 Genant, H. K. – Engelke, K. – Hanley, D. A., et al.: Denosumab improves density and strength parameters as measured by QCT of the radius in postmenopausal women with low bone mineral density. *Bone*, 2010, 47, s. 131–139.
- 22 Genant, H. K. – Libanati, C. – Engelke, K., et al.: Improvements in hip trabecular, subcortical, and cortical density and mass in postmenopausal women with osteoporosis treated with denosumab. *Bone*, 2013, 50, s. 482–488.
- 23 Rizzoli, R. – Laroche, M. – Krieg, M.-A., et al.: Strontium ranelate and alendronate have diverging effects on distal tibia bone microstructure in women with osteoporosis. *Rheumatol Int*, 2010, 30, s. 1341–1348.
- 24 Seeman, E. – Delmas, P. D. – Hanley, D. A., et al.: Microarchitectural deterioration of cortical and trabecular bone: differing effects of denosumab and alendronate. *J Bone Miner Res*, 2010, 25, s. 1886–1894.
- 25 Roschger, P. – Rinnenthaler, S. – Yates, J., et al.: Alendronate increases degree and uniformity of mineralization in cancellous bone and decreases the porosity in cortical bone of osteoporotic women. *Bone*, 2001, 29, s. 185–191.
- 26 Zebaze, R. M. – Libanati, C. – Austin, M., et al.: Differing effects of denosumab and alendronate on cortical and trabecular bone. *Bone*, 2014, 59, s. 173–179.
- 27 Bolognese, M. A. – Teiglbjærg, C. S. – Zanchetta, J. R., et al.: Denosumab significantly increases DXA BMD at both trabecular and cortical sites: results from the FREEDOM study. *J Clin Densitom*, 2013, 16, s. 147–153.
- 28 Delmas, P. D. – Zhengqing, L. – Cooper, C.: Relationship between changes in bone mineral density and fracture risk reduction with anti-resorptive drugs: some issues with meta-analyses. *J Bone Miner Res*, 2004, 19, s. 330–337.
- 29 Delmas, P. D. – Seman, E.: Changes in bone mineral density explain little of the reduction in vertebral or nonvertebral fracture risk with anti-resorptive therapy. *Bone*, 2004, 34, s. 599–604.
- 30 Sarkar, S. – Mitlak, B. H. – Wong, M., et al.: Relationships between bone mineral density and incident vertebral fracture risk with raloxifene therapy. *J Bone Miner Res*, 2002, 17, s. 1–10.
- 31 Austin, M. – Yang, Y.-C. – Vittinghoff, E., et al.: Relationship between bone mineral density changes with denosumab treatment and risk reduction for vertebral and nonvertebral fractures. *J Bone Miner Res*, 2012, 27, s. 687–693.

Etanercept – adherence k léčbě, setrvání na léčbě, data z registrů

MUDr. David Suchý, Ph.D. FN Plzeň

- 1 Klarskog, L. – van der Heijde, D. – de Jager, J. P., et al.: Therapeutic effect of the combination of etanercept and methotrexate compared with each treatment alone in patients with rheumatoid arthritis: double-blind randomised controlled trial. *Lancet*, 2004, 363 (9410), s. 675–681.
- 2 Emery, P. – Breedveld, F. C. – Hall, S., et al.: Comparison of methotrexate monotherapy with a combination of methotrexate and etanercept in active, early, moderate to severe rheumatoid arthritis (COMET): a randomised, double-blind, parallel treatment trial. *Lancet*, 2008, 372, s. 375–382.
- 3 Klarskog, L. – Gaubitz, M. – Rodríguez-Valverde, V., et al.: Assessment of long-term safety and efficacy of etanercept in a 5-year extension study in patients with rheumatoid arthritis. *Clin Exp Rheumatol*, 2011, 29, s. 238–247.
- 4 Gorman, J. D. – Sack, K. E. – Davis, J. C.: Treatment of ankylosing spondylitis by inhibition of tumor necrosis factor α. *N Engl J Med*, 2002, 346, s. 1349–1356.
- 5 Brandt, J. – Kharizou, A. – Listing, J., et al.: Six-month results of a double-blind, placebo-controlled trial of etanercept treatment in patients with active ankylosing spondylitis. *Arthritis Rheum*, 2003, 48, s. 1667–1675.
- 6 Davis, J. C. – van der Heijde, D. – Braun, J., et al.: Recombinant human tumor necrosis factor receptor (Etanercept) for treating ankylosing spondylitis. *Arthritis Rheum*, 2003, 48, s. 3230–3236.
- 7 Calin, A. – Dijkmans, B. A. C. – Emery, P., et al.: Outcomes of a multicentre randomised clinical trial of etanercept to treat ankylosing spondylitis. *Ann Rheum Dis*, 2004, 63, s. 1594–1600.
- 8 Davis, J. C. – van der Heijde, D. – Braun, J., et al.: Efficacy and safety of up to 192 weeks of etanercept therapy in patients with ankylosing spondylitis. *Ann Rheum Dis*, 2008, 67, s. 346–352.
- 9 Baraliakos, X. – Haibel, H. – Fritz, C., et al.: Long-term outcome of patients with active ankylosing spondylitis with etanercept-sustained efficacy and safety after seven years. *Arthritis Res Ther*, 2013, 15, R67 (Epub před tiskem).
- 10 Song, I. H. – Hermann, K. – Haibel, H., et al.: Effects of etanercept versus sulfasalazine in early axial spondyloarthritis on active inflammatory lesions as detected by whole-body MRI (ESTHER): a 48-week randomised controlled trial. *Ann Rheum Dis*, 2011, 70, s. 590–596.
- 11 Martinez Santana, V. – González-Sarmiento, E. – Calleja Hernandez, M. A. – Sánchez Sánchez, T.: Comparison of drug survival rates for tumor necrosis factor antagonists in rheumatoid arthritis. *Patient Preference and Adherence*, 2013, 7, s. 719–727.
- 12 Geenberg, J. D. – Reed, G. – Decktor, D., et al.: A comparative effectiveness study of adalimumab, etanercept and infliximab in biologically naïve and switched rheumatoid arthritis patients: results from the US CORRONA registry. *Ann Rheum Dis*, 2012, 71, s. 1134–1142.
- 13 Hetland, M. L. – Christensen, I. – Tarp, U., et al.: Direct comparison of treatment responses, remission rates, and drug adherence in patients with rheumatoid arthritis treated with adalimumab, etanercept, or infliximab: results from eight years of surveillance of clinical practice in the nationwide Danish DANBIO registry. *Arthritis Rheum*, 2010, 62, s. 22–32.
- 14 Neoviú, M. – Arkema, E. V. – Olsson, H., et al.: for the ARTIS Study Group. Drug survival on TNF inhibitors in patients with rheumatoid arthritis: comparison of adalimumab, etanercept and infliximab. *Ann Rheum Dis*, 27. 11. 2013 (Epub před tiskem).
- 15 Arora, A. – Mahajan, A. – Spurden, D., et al.: Long-term drug survival of TNF inhibitor therapy in RA patients: A systematic review of European National Drug Registers. *Crit Rev Rheumatol*, 2013, 764518.
- 16 Morgan, C. L. – Emery, P. – Porter, D., et al.: Treatment of rheumatoid arthritis with etanercept with reference to disease-modifying anti-rheumatic drugs: long-term safety and survival using prospective, observational data. *Rheumatology (Oxford)*, 2014, 53, s. 186–194.
- 17 Pavalka, K. – Forejtová, S. – Stolfa, J., et al.: Anti-TNF therapy of ankylosing spondylitis in clinical practice. Results from the Czech national registry ATTRA. *Clin Exp Rheumatol*, 2009, 27, s. 958–963.
- 18 Esposito, M. – Gisoldi, P. – Cassano, N., et al.: Survival rate of antitumour necrosis factor & treatments for psoriasis in routine dermatological practice: a multicentre observational study. *British Journal Dermatology*, 2013, 169, s. 666–672.
- 19 Van den Reek, J. M. – Van Lomig, P. P. – Otero, M. E., et al.: Satisfaction of treatment with biologics is high in psoriasis: results from the Bio-CAPTURE network. *Br J Dermatol*, 1. 2. 2014 (Epub před tiskem).
- 20 Garcés, S., et al.: The immunogenicity of anti-TNF therapy in immune-mediated inflammatory diseases: a systematic review of the literature with a meta-analysis. *Ann Rheum Dis*, 2013, 72, s. 1947–1955.
- 21 Enbrel SPC.
- 22 Humira SPC.
- 23 Remicade SPC.
- 24 Simponi SPC.
- 25 Cimzia SPC.
- 26 Weinbatt, M. E. – Bathon, J. M. – Kremer, J. M., et al.: Safety and efficacy of etanercept beyond 10 years of therapy in North American patients with early and longstanding rheumatoid arthritis. *Arthritis Care Res (Hoboken)*, 2011, 63, s. 373–382.
- 27 Martin-Mola, E. – Sieper, J. – Leirisalo-Repo, M. – Dijkmans, B. A. – Vilahos, B. – Pedersen, R. – Koenig, A. S. – Freundlich, B.: Sustained efficacy and safety, including patient-reported outcomes, with etanercept treatment over 5 years in patients with ankylosing spondylitis. *Clin Exp Rheum*, 2010, 28 (2), s. 238–245.
- 28 Kimball, A. B. – Pariser, D. – Yamauchi, P. S., et al.: OBSERVE-5 interim analysis: an observational postmarketing safety registry of etanercept for the treatment of psoriasis. *J Am Acad Dermatol*, 2013, 68, s. 756–764.
- 29 Marchesoni, A. – Zaccara, E. – Gorla, R., et al.: TNF-alpha antagonist survival rate in a cohort of rheumatoid arthritis patients observed under conditions of standard clinical practice. *Ann NY Acad Sci*, 2009, 1173, s. 837–846.
- 30 Van Vollenhoven, R., et al.: *Ann Rheum Dis*, 2006, 65(dopl. II), 511, SAT0199.

Glukokortikoidy indukovaná osteoporóza

MUDr. Olga Růžičková Revmatologický ústav, Praha

- 1 Kanis, J. A. – Johansson, H. – Oden, A., et al.: A meta-analysis of prior corticosteroid use and fracture risk. *J Bone Miner Res*, 2004, 19, s. 893–899.
- 2 Lekamwasam, S. – Adachi, J. D. – Agusudei, D., et al.: A Framework for the development of guidelines for the management of glucocorticoid-induced osteoporosis. *Osteoporos Int*, 2012, 23, s. 2257–2276.
- 3 Canalí, E. – Mazzotti, G. – Gustina, A. – Bilezikian, J. P.: Glucocorticoid-induced osteoporosis: pathophysiology and therapy. *Osteoporos Int*, 2007, 18, s. 1319–1328.
- 4 de Vries, F. – Bräde, M. – Leufkens, H. G., et al.: Fracture risk with intermittent high dose oral glucocorticoid therapy. *Arthritis Rheum*, 2007, 56, s. 208–214.
- 5 Adachi, J. D. – Papaioannou, A.: In whom and how to prevent glucocorticoid-induced osteoporosis. *Best Pract Res Clin Rheumatol*, 2005, 19, s. 1039–1064.
- 6 Van Staa, T. P. – Leufkens, H. G. – Abenhaim, L. – Zhang, B. – Cooper, C.: Oral corticosteroids and fracture risk: relationship to daily and cumulative doses. *Rheumatology (Oxford)*, 2000, 39, s. 1383–1389.
- 7 Steinbuch, M. – Youket, T. E. – Cohen, S.: Oral glucocorticoid use is associated with an increased risk of fracture. *Osteoporos Int*, 2005, 15, s. 323–328.
- 8 Van Staa, T. P. – Leufkens, H. G. – Cooper, C.: The epidemiology of corticosteroid-induced osteoporosis: a meta-analysis. *Osteoporos Int*, 2002, 13, s. 777–787.
- 9 Van Staa, T. P. – Leufkens, H. G. – Abenhaim, L. – Zhang, B. – Cooper, C.: Use of oral corticosteroids and risk of fractures. *J Bone Miner Res*, 2000, 15, s. 993–1000.
- 10 Kroger, H. – Honkanen, R. – Saarikoski, S. – Mihava, E.: Decreased axial bone mineral density in perimenopausal women with rheumatoid arthritis—a population based study. *Ann Rheum Dis*, 1994, 53, s. 18–23.
- 11 Van Staa, T. P. – Leufkens, H. G. – Cooper, C.: Use of inhaled corticosteroids and risk of fractures. *J Bone Miner Res*, 2001, 16, s. 581–588.
- 12 Etmiran, M. – Sadatsafavi, M. – Ganjizadeh Zavareh, S. – Takkouche, B. – Fitzgerald, J. M.: Inhaled corticosteroids and the risk of fractures in older adults: a systematic review and meta-analysis. *Drug Saf*, 2008, 31, s. 409–414.
- 13 Rizzoli, R. – von Tscharner, V. – Fleisch, H.: Increase of adenylate cyclase catalytic-unit activity by dexamethasone in rat osteoblast-like cells. *Biochem J*, 1986, 237, s. 447–454.
- 14 Leib, E. S. – Saag, K. G. – Adachi, J. D. – Geusens, P. P. – Binkley, N. – McCloskey, E. V. – Hans, D. B.: Official positions for FRAX clinical regarding glucocorticoids: the impact of the use of glucocorticoids on the estimate by FRAX of the 10 year risk of fracture from Joint Official Positions Development Conference of the International Society for Clinical Densitometry and International Osteoporosis Foundation on FRAX. *J Clin Densitom*, 2011, 14, s. 212–219.
- 15 Van Staa, T. P. – Leufkens, H. G. – Abenhaim, L. – Zhang, B. – Cooper, C.: Use of oral corticosteroids and risk of fractures. *J Bone Miner Res*, 2000, 15, s. 993–1000.
- 16 Ton, F. N. – Gunawardene, S. C. – Lee, H. – Neer, R. M.: Effects of low-dose prednisone on bone metabolism. *J Bone Miner Res*, 2005, 20, s. 464–470.
- 17 Canalí, E. – Mazzotti, G. – Gustina, A. – Bilezikian, J. P.: Glucocorticoid-induced osteoporosis: pathophysiology and therapy. *Osteoporos Int*, 2007, 18, s. 1319–1328.
- 18 Einstein, R. S. – Jilka, R. L. – Parfitt, A. M. – Manolagas, S. C.: Inhibition of osteoblastogenesis and promotion of apoptosis of osteoblasts and osteocytes by glucocorticoids. Potential mechanisms of their deleterious effects on bone. *J Clin Invest*, 1998, 102, s. 274–282.
- 19 Einstein, R. S.: Glucocorticoid-induced osteoporosis. In: MR ASB (ed.): *Primer on the metabolic bone diseases and disorders of mineral metabolism*. John Wiley & Sons, Hoboken, NJ, 2009, doi: 10.1002/9780470623992.ch58.
- 20 Rochefort, G. Y. – Pallu, S. – Benhamou, C. L.: Osteocyte: the unrecognized side of bone tissue. *Osteoporos Int*, 2011, 21, s. 1457–1469.
- 21 Hayashi, K. – Yamaguchi, T. – Yano, S. – Kanazawa, I. – Yamauchi, M. – Yamamoto, M. – Sugimoto, T.: BMP2/3 antagonists are upregulated by dexamethasone in osteoblasts and reversed by alendronate and PTH: potential therapeutic targets for glucocorticoid-induced osteoporosis. *Biochem Biophys Res Commun*, 2009, 379, s. 261–266.
- 22 Yao, W. – Cheby, Z. – Busse, C. – Pham, A. – Nakamura, M. C. – Lane, N. E.: Glucocorticoid excess in mice results in early activation of osteoclastogenesis and adipogenesis and prolonged suppression of osteogenesis: a longitudinal study of gene expression in bone tissue from glucocorticoid-treated mice. *Arthritis Rheum*, 2008, 58, s. 1674–1686.
- 23 Vestergaard, P. – Rejnmark, L. – Mosekilde, L.: Fracture risk associated with different types of oral corticosteroids and effect of termination of corticosteroids on the risk of fractures. *Calcif Tissue Int*, 2008, 82, s. 249–257.
- 24 Hofbauer, L. C. – Gauner, M.: Live and let die: molecular effects of glucocorticoids on bone cells. *Mol Endocrinol*, 2009, 23, s. 1525–1531.
- 25 Einstein, R. S. – Nicholas, R. W. – Manolagas, S. C.: Apoptosis of osteocytes in glucocorticoid-induced osteonecrosis of the hip. *J Clin Endocrinol Metab*, 2000, 85, s. 2907–2912.
- 26 Cooper, M. S. – Rabbit, E. H. – Goddard, P. E. – Bartlett, W. A. – Hewison, M. – Stewart, P. M.: Osteoblastic 11 β-hydroxysteroid dehydrogenase type 1 activity increases with age and glucocorticoid exposure. *J Bone Miner Res*, 2002, 17, s. 979–986.
- 27 Štepán, J.: Osteoporóza a metabolická onemocnění skeletu. In: Pavelka, K., et al.: *Revmatologie*. Praha, Maxdorf Jessenius, 2012, s. 483–552.
- 28 Van Staa, T. P. – Leufkens, H. G. – Cooper, C.: The epidemiology of corticosteroid induced osteoporosis: a meta-analysis. *Osteoporos Int*, 2002, 13, s. 777–787.
- 29 Compston, J. E.: Emerging consensus on prevention and treatment of glucocorticoid-induced osteoporosis. *Curr Rheumatol Rep*, 2007, 9, s. 78–84.
- 30 Compston, J. – Reid, D. M. – Boisdon, J. – Brandi, M. L. – Burlet, N. – Cahall, D. – Delmas, P. D. – Dere, W. – Devogelaer, J. P. – Fitzpatrick, L. A. – Flaminio, B. – Goel, N. – Korte, S. – Laslop, A. – Nátlák, B. – Ormarsdóttir, S. – Ringe, J. – Rizzoli, R. – Tsouderos, Y. – Van Staa, T. – Reginster, J. Y.: Recommendations for the registration of agents for prevention and treatment of glucocorticoid-induced osteoporosis: an update from the Group for the Respect of Ethics and Excellence in Science. *Osteoporos Int*, 2008, 19, s. 1247–1250.
- 31 Kanis, J. A. – Johnell, O. – Oden, A. – Johansson, H. – McCloskey, E.: FRAX and the assessment of fracture probability in men and women from the UK. *Osteoporos Int*, 2008, 19, s. 385–397.
- 32 Kanis, J. A. – McCloskey, E. V. – Johansson, H. – Strom, O. – Borgstrom, F. – Oden, A.: Case finding for the management of

- osteoporosis with FRAX—assessment and intervention thresholds for the UK. *Osteoporos Int*, 2008, 19, s. 1395–1408.
- 33 Kanis, J. A. – Johansson, H. – Oden, A. – McCloskey, E. V.: Guidance for the adjustment of FRAX according to the dose of glucocorticoids. *Osteoporos Int*, 2011, 22, s. 809–816.
- 34 Ström, O. – Borgström, F. – Kanis, J. A. – Compston, J. – Cooper, C. – McCloskey, E. V. – Jönsson, B.: Osteoporosis: burden, healthcare provision and opportunities in the European Union. *Arch Osteoporos*, 2011, doi: 10.1007/s11657-011-0060-1.
- 35 Grossmann, J. M. – Gordon, R. – Ranganath, V. K. – Deal, C. – Caplan, L. – Chen, W. – Curtis, J. R. – Fürst, D. E. – McMahon, M. – Patkar, N. – Volkman, E. – Saag, K. G.: American College of Rheumatology 2010 recommendations for the prevention and treatment of glucocorticoid-induced osteoporosis. *Arthritis Care Res* (Hoboken), 2010, 62, s. 1515–1526.
- 36 Lewakasam, S. – Adachi, J. D. – Agnusdei, D. – Bilezikian, J. – Boom, S. – Borgström, F. – Cooper, C. – Diez Perez, A. – Eastell, R. – Hofbauer, L. C. – Kanis, J. A. – Langdahl, B. L., et al. for the Joint IOF-ECTS GIO Guidelines Working Group: A framework for the development of guidelines for the management of glucocorticoid-induced osteoporosis. *Osteoporos Int*, 2012, doi: 10.1007/s00198-012-1958-1.
- 37 Ringe, J. D. – Faber, H.: Calcium and vitamin D in the prevention and treatment of glucocorticoid-induced osteoporosis. *Clin Exp Rheumatol*, 2000, 18 (dopl. 21), s. S44–S48.
- 38 Makovic, V. – Heaney, R. P.: Calcium balance during human growth: Evidence for threshold behavior. *Am J Clin Nutr*, 1992, 55, s. 992–996.
- 39 Dawson-Hughes, B. – Dallal, G. E. – Krall, E. A. – Sadowski, L. – Sahyoun, N. – Tannenbaum, S.: A controlled trial of the effect of calcium supplementation on bone density in post-menopausal women. *N Engl J Med*, 1990, 323, s. 878–883.
- 40 Hahn, T. J. – Hahn, B. H.: Osteopenia in subjects with rheumatic diseases: Principles of diagnosis and therapy. *Semin Arthritis Rheum*, 1997, 6, s. 65–88.
- 41 Hahn, T. J. – Halstead, L. R. – Teitelbaum, S. L. – Hahn, B. H.: Altered mineral metabolism in glucocorticoid-induced osteopenia: Effect of 25-hydroxyvitamin D administration. *J Clin Invest*, 1979, 64, s. 655–665.
- 42 Lane, N. E. – Genant, H. K. – Kiney, J. H. – Engleman, E.: Effect of intermittent cyclic etidronate (ICT) therapy for glucocorticoid-induced osteoporosis in rheumatoid arthritis (RA): Interim analysis. *J Bone Miner Res*, 1993, 8, s. S262.
- 43 Pitt, P. – Li, F. – MacIntosh, C.: A double-blind placebo-controlled study to determine the effects of intermittent cyclical etidronate on bone mineral density in patients on long-term corticosteroid treatment. *J Bone Miner Res*, 1997, 12, s. S510.
- 44 Poubelle, P. E. – Adachi, J. D. – Hawkins, F.: Alendronate increases bone mineral density in patients on glucocorticoid therapy: Results of the multinational study. *Arthritis Rheum*, 1997, 40, s. S327.
- 45 Lund, B. – Andersen, R. B. – Trios, T. – Hjorth, L. – Jorgensen, F. S. – Norman, A. W. – Sorensen, O. H.: Effect of 1-alpha-hydroxy vitamin D3 and 1,25-dihydroxy vitamin D3 on intestine and bone in glucocorticoid-treated patients. *Clin Endocrinol*, 1977, 7, s. 1775–1815.
- 46 Ringe, J. D.: Active vitamin D metabolites in glucocorticoid-induced osteoporosis. *Calcif Tissue Int*, 1997, 60, s. 124–127.
- 47 Adachi, J. D. – Ioannidis, G.: Calcium and vitamin D therapy in corticosteroid-induced bone loss: What is the evidence? *Calcif Tissue Int*, 1999, 65, s. 332–336.
- 48 Ringe, J. D. – Faber, H.: Calcium and vitamin D in the prevention and treatment of glucocorticoid-induced osteoporosis. *Clin Exp Rheumatol*, 2000, 18 (dopl. 21), s. S44–S48.
- 49 Saag, K. G. – Emkey, R. – Schnitzer, T. J. – Brown, J. P. – Hawkins, F. – Goemaere, S. – Thamsborg, G. – Liberman, U. A. – Delmas, P. D. – Malice, M. P. – Czachur, M. – Daifotis, A. G.: Alendronate for the prevention and treatment of glucocorticoid-induced osteoporosis. Glucocorticoid-induced Osteoporosis Intervention Study Group. *N Engl J Med*, 1998, 339, s. 292–299.
- 50 Adachi, J. D. – Saag, K. G. – Delmas, P. D. – Liberman, U. A. – Emkey, R. D. – Seman, E. – Lane, N. E., et al.: Two-year effects of alendronate on bone mineral density and vertebral fracture in patients receiving glucocorticoids: a randomized, double-blind, placebo controlled extension trial. *Arthritis Rheum*, 2001, 44, s. 202–211.
- 51 De Nijs, R. N. – Jacobs, J. W. – Lems, W. F. – Laan, R. F. – Algara, A. – Husman, A. M. – Buskens, E. – de Laet, C. E. – Oostveen, A. C. – Geusgens, P. P. – Bruyn, G. A. – Dijkmans, B. A. – Bijlsma, J. W.: Alendronate or alfacalcidol in glucocorticoid-induced osteoporosis. *N Engl J Med*, 2006, 355, s. 675–684.
- 52 Pitt, P. – Li, F. – Todd, P. – Weber, D. – Pack, S. – Moniz, C.: A double blind placebo controlled study to determine the effects of intermittent cyclical etidronate on bone mineral density in patients on long-term oral corticosteroid treatment. *Torax*, 1998, 53, s. 351–356.
- 53 Wells, G. A. – Cranney, A. – Peterson, J. – Boucher, M. – Shea, B. – Robinson, V. – Coyle, D. – Tugwell, P.: Alendronate for the primary and secondary prevention of osteoporotic fractures in postmenopausal women. *Cochrane Database Syst Rev*, 2008, 1, CD001155.
- 54 Okada, Y. – Nawata, M. – Nakayama, S. – Saito, K. – Tahala, Y.: Alendronate protects premenopausal women from bone loss and fracture associated with high-dose glucocorticoid therapy. *J Rheumatol*, 2008, 35, s. 2249–2254.
- 55 Cohen, S. – Levy, R. M. – Keller, M. – Boling, E. – Emkey, R. D. – Greenwald, M. – Zicic, T. M. – Wallach, S. – Seseck, K. L. – Lukert, B. P. – Axelrod, D. W. – Chines, A. A.: Risedronate therapy prevents corticosteroid-induced bone loss: a twelve-month, multicenter, randomized, double-blind, placebo-controlled, parallel-group study. *Arthritis Rheum*, 42, s. 2309–2318.
- 56 Bianchi, M. L.: Glucocorticoids and bone: some general remarks and some special observations in pediatric patients. *Calcif Tissue Int*, 1999, 70, s. 384–390.
- 57 Inoue, Y. – Shimojo, N. – Suži, S. – Arima, T. – Tomista, M. – Minagawa, M. – Kohno, Y.: Efficacy of intravenous alendronate for the treatment of glucocorticoid-induced osteoporosis in children with autoimmune diseases. *Clin Rheumatol*, 2008, 27, s. 909–912.
- 58 Wallach, S. – Cohen, S. – Reid, D. M. – Hughes, R. A. – Hosking, D. J. – Laan, R. F. – Robert, S. M. – Maricic, M. – Rosen, C. – Brown, J. – Barton, I. – Chines, A. A.: Effects of risedronate treatment on bone density and vertebral fracture in patients on corticosteroid therapy. *Calcif Tissue Int*, 2000, 67, s. 277–285.
- 59 Reid, D. M. – Devogelaer, J. P. – Saag, K. – Roux, C. – Lau, C. S. – Reginster, J. Y. – Papanastasiou, P. – Ferreira, A. – Hartl, F. – Fashola, T. – Mesenbrink, P. – Sambrook, P. N.: Zoledronic acid and risedronate in the prevention and treatment of glucocorticoid-induced osteoporosis (HORIZON): a multicentre, double-blind, double-dummy, randomised controlled trial. *Lancet*, 2009, 373, s. 1253–1263.
- 60 Devogelaer, J. P. – Adler, R. A. – Recknor, C. – See, K. – Warner, M. R. – Wong, M. – Krohn, K.: Baseline glucocorticoid dose and bone mineral density response with teriparatide or alendronate therapy in patients with glucocorticoid-induced osteoporosis. *J Rheumatol*, 2010, 37, s. 141–148.
- 61 Saag, K. G. – Shane, E. – Boom, S. – Marin, F. – Donley, D. W. – Tailor, K. A. – Dalsky, G. P. – Marcus, R.: Teriparatide or alendronate in glucocorticoid-induced osteoporosis. *N Engl J Med*, 2007, 357, s. 2028–2039.
- 62 Saag, K. G. – Zanchetta, J. R. – Devogelaer, J. P. – Adler, R. A. – Eastell, R. – See, K. – Krege, J. H. – Krohn, K. – Warner, M. R.: Effects of teriparatide versus alendronate for treating glucocorticoid-induced osteoporosis: thirty-six-month results of a randomized, double-blind, controlled trial. *Arthritis Rheum*, 2009, 60, s. 3346–3355.
- 63 Neer, R. M. – Arnaut, C. D. – Zanchetta, J. R. – Prince, R. – Gaich, G. A. – Reginster, J. Y. – Hodsman, A. B. – Eriksen, E. F. – Ish-Shalom, S. – Genant, H. K. – Wang, Q. – Nátlak, B. H.: Effect of parathyroid hormone (1–34) on fractures and bone mineral density in postmenopausal women with osteoporosis. *N Engl J Med*, 2001, 344, s. 1434–1441.
- 64 Langdahl, B. L. – Marin, F. – Shane, E. – Dobnig, H. – Zanchetta, J. R. – Maricic, M. – Krohn, K. – See, K. – Warner, M. R.: Teriparatide versus alendronate for treating glucocorticoid-induced osteoporosis: an analysis by gender and menopausal status. *Osteoporos Int*, 2009, 20, s. 2095–2104.
- 65 Gluer, C. – Marin, F. – Ridge, J., et al.: Comparative effect of teriparatide and risedronate in glucocorticoid-induced osteoporosis in men: 18-month results of the EuroGIOPs Trial. *JBMR*, 2013, 28, s. 1355–1368.
- 66 Kraenzlin, M. E. – Meier, C.: Parathyroid hormone analogues in the treatment of osteoporosis. *Nat Rev Endocrinol*, 2011, 7, s. 647–656.
- 67 Neer, R. M. – Arnaut, C. D. – Zanchetta, J. R., et al.: Effect of parathyroid hormone (1–34) on fractures and bone mineral density in postmenopausal women with osteoporosis. *N Engl J Med*, 2001, 344, s. 143441.
- 68 Hoibauer, L. C. – Gori, F. – Riggs, B. L. – Lacey, D. L. – Dunstan, C. R. – Spelsberg, T. C. – Khola, S.: Stimulation of osteoprotegerin ligand and inhibition of osteoprotegerin production by glucocorticoids in human osteoblastic lineage cells: potential paracrine mechanisms of glucocorticoid-induced osteoporosis. *Endocrinology*, 1999, 140, s. 4382–4389.
- 69 Sivagurunathan, S. – Muir, M. M. – Brennan, T. C. – Seale, J. P. – Mason, R. S.: Influence of glucocorticoids on human osteoclast generation and activity. *J Bone Miner Res*, 2005, 20, s. 390–398.
- 70 Vidal, N. O. – Brandstrom, H. – Jonsson, K. B. – Ohlsson, C.: Osteoprotegerin mRNA is expressed in primary human osteoblast like cells: down-regulation by glucocorticoids. *J Endocrinol*, 1998, 159, s. 191–195.
- 71 Hoibauer, L. C. – Zeitz, U. – Schoppeit, M. – Skalicky, M. – Schuler, C. – Stolina, M. – Kostenku, P. J. – Erben, R. G.: Prevention of glucocorticoid-induced bone loss in mice by inhibition of RANKL. *Arthritis Rheum*, 2009, 60, s. 1427–1437.
- 72 Cohen, S. B. – Dore, R. K. – Lane, N. E. – Ory, P. A. – Peterfy, C. G. – Sharp, J. T. – van der Neude, D. – Zhou, L. – Tsui, W. – Newmark, R.: Denosumab treatment effects on structural damage, bone mineral density, and bone turnover in rheumatoid arthritis: a twelve-month, multicenter, randomized, double-blind, placebo-controlled, phase II clinical trial. *Arthritis Rheum*, 2008, 58, s. 1299–1309.
- 73 Jia, J. – Yao, W. – Guan, M. – Dai, W. – Shahnazari, M. – Kar, R. – Bonewald, L. – Juan, J. X. – Lane, N. E.: Glucocorticoid dose determines osteocyte cell fate. *FASEB J*, 2011, 25, s. 3366–3376.
- 74 Stoch, S. A. – Wagner, J. A.: Cathepsin K inhibitors: a novel target for osteoporosis therapy. *Clin Pharmacol Ther*, 2008, 83, s. 172–176.
- 75 Hayashi, K. – Yamaguchi, T. – Yano, S. – Kanazawa, I. – Yamauchi, M. – Yamamoto, M. – Sugimoto, T.: BMPA/ht antagonists are upregulated by dexamethasone in osteoblasts and reversed by alendronate and PTH: potential therapeutic targets for glucocorticoid-induced osteoporosis. *Biochem Biophys Res Commun*, 2009, 379, s. 261–266.
- 76 Yao, W. – Cheby, Z. – Busse, C. – Pham, A. – Nakanuta, M. C. – Lane, N. E.: Glucocorticoid excess in mice results in early activation of osteoclastogenesis and adipogenesis and prolonged suppression of osteogenesis: a longitudinal study of gene expression in bone tissue from glucocorticoid-treated mice. *Arthritis Rheum*, 2008, 58, s. 1674–1686.
- 77 Marenzana, M. – Greenslade, K. – Eddleston, A. – Okoye, R. – Marshall, D. – Moore, A. – Robinson, M. K.: Sclerostin antibody treatment enhances bone strength but does not prevent growth retardation in young mice treated with dexamethasone. *Arthritis Rheum*, 2011, 63, s. 2385–2395.
- 78 Gerber, A. N. – Masuno, K. – Diamond, M. I.: Discovery of selective glucocorticoid receptor modulators by multiplexed reporter screening. *Proc Natl Acad Sci USA*, 2009, 106, s. 4929–4934.
- 79 Rauch, A. – Gossy, V. – Bradle, D. – Gevaert, E. – Jacques, P. – Van Beneden, K. – Vandooren, B. – Gaumer, M. – Hofbauer, L. C. – Haegeman, G. – Elewaut, D. – Tuckermann, J. P. – De Bosscher, K.: An anti-inflammatory selective glucocorticoid receptor modulator preserves osteoblast differentiation. *FASEB J*, 2011, 25, s. 1323–1332.
- 80 Mok, C. C. – Ying, K. Y. – To, C. H. – Ho, L. Y. – Yu, K. L. – Lee, H. K. – Ma, K. M.: Raloxifene for prevention of glucocorticoid-induced bone loss: a 12-month randomised double-blinded placebo-controlled trial. *Ann Rheum Dis*, 2010, 70, s. 778–784.
- 81 Kanis, J. A. – Stevenson, M. – McCloskey, E. V. – Davis, S. – Lloyd-Jones, M.: Glucocorticoid-induced osteoporosis: a systematic review and cost-utility analysis. *Health Technol Assess*, 2007, 1, s. iii–iv, ix–xi, 1–231.
- 82 De Vries, F. – Bradle, M. – Leufkens, H. G. – Lammers, J. W. – Cooper, C. – Van Staa, T. P.: Fracture risk with intermittent high-dose oral glucocorticoid therapy. *Arthritis Rheum*, 2007, 56, s. 208–214.
- 83 Compston, J.: Management of glucocorticoid-induced osteoporosis. *Nat Rev Rheumatol*, 2010, 6, s. 82–88.
- 84 Van Staa, T. P. – Leufkens, H. G. – Abenhaim, L. – Zhang, B. – Cooper, C.: Oral corticosteroids and fracture risk: relationship to daily and cumulative doses. *Rheumatology*, 2000 (Oxford), 39, s. 1383–1389.
- 85 Laan, R. F. – van Riel, P. L. – van de Putte, L. B. – van Erning, L. J. – van’t Hof, M. A. – Lemmens, J. A.: Low-dose prednisone induces rapid reversible axial bone loss in patients with rheumatoid arthritis. A randomized, controlled study. *Ann Intern Med*, 1993, 119, s. 963–968.
- 86 Lewakasam, S. – Adachi, J. D. – Agnusdei, D. – Bilezikian, J. – Boom, S. – Borgström, F. – Cooper, C. – Diez Perez, A., et al. for the Joint IOF-ECTS GIO Guidelines Working Group: A framework for the development of guidelines for the management of glucocorticoid-induced osteoporosis. *Osteoporos Int*, 2012, doi: 10.1007/s00198-012-1958-1.
- 87 Sambrook, P. – Birmingham, J. – Kelly, P. – Kempler, S. – Nguyen, T. – Pocock, N. – Eisman, J.: Prevention of corticosteroid osteoporosis. A comparison of calcium, calcitriol, and calcitonin. *N Engl J Med*, 1993, 328, s. 1747–1752.
- 88 Rizzoli, R. – Reginster, J. Y. – Boom, S. – Breart, G. – Diez-Perez, A. – Felsenberg, D. – Kaufman, J. M. – Kanis, J. A. – Cooper, C.: Adverse reactions and drug-drug interactions in the management of women with postmenopausal osteoporosis. *Calciif Tissue Int*, 2011, 89, s. 91–104.
- 89 Rizzoli, R. – Adachi, J. D. – Cooper, C., et al.: Management of glucocorticoid-induced osteoporosis. *Calciif Tissue Int*, 2012, 91, s. 225–243.

Pětiletá data golimumabu v léčbě psoriatické artritidy

MUDr. Jiří Štolfa Revmatologický ústav Praha

- 1 Kavanaugh, A. – McInnes, I. – Mease, P. – Krueger, G. G., et al.: Golimumab, a new human tumor necrosis factor alpha antibody, administered every four weeks as a subcutaneous injection in psoriatic arthritis: Twenty-four-week efficacy and safety results of a randomized, placebo-controlled study. *Arthritis Rheum*, 2009, 60, s. 976–986.
- 2 Kavanaugh, A. – van der Neijde, D. – McInnes, I. B., et al.: Golimumab in psoriatic arthritis: one-year clinical efficacy, radiographic, and safety results from a phase III, randomized, placebo-controlled trial. *Arthritis Rheum*, 2012, 64, s. 2504–2517.
- 3 Kavanaugh, A. – McInnes, I. B. – Mease, P. J., et al.: Clinical efficacy, radiographic and safety findings through 2 years of golimumab treatment in patients with active psoriatic arthritis: results from a long-term extension of the randomised, placebo-controlled GO-REVEAL study. *Ann Rheum Dis*, 2012, 72, s. 1777–1785.
- 4 Štolfa, J. – Venkovský, J. – Pavelka, K.: Doporučené postupy České revmatologické společnosti pro léčbu psoriatické artritidy. *Česká revmatologie*, 2012, 1, s. 13–18.
- 5 Dlates, L. C. – Cook, R. – Lee, K. A. – Chandran, V. – Gladman, D. D.: Frequency, predictors, and prognosis of sustained minimal disease activity in an observational psoriatic arthritis cohort. *Arthritis Care Res* (Hoboken), 2010, 62, s. 970–976.
- 6 Dlates, L. C. – Hellierwell, P. S.: Validation of minimal disease activity Criteria for psoriatic arthritis using international trial data. *Arthritis Care Research*, 2010, s. 965–969.
- 7 Kavanaugh, A. – McInnes, I. – Mease, P., et al.: Impact of persistent minimal disease activity on long-term outcomes in psoriatic arthritis: Results from 5 years of the long term extension of a randomised, placebo-controlled study. EULAR, Paříž, 2014, post. OP00801.

Postavení stroncium ranelátu v léčbě osteoporózy

MUDr. Olga Růžičková Revmatologický ústav, Praha

- 1 World Health Organisation, WHO: Prevention and management of osteoporosis. Report of a WHO Scientific Group WHO Technical Report Series, 2003, č. 921.
- 2 Kanis, J. A. – Johnell, O.: Requirements for DXA for the management of osteoporosis in Europe. *Osteoporosis Int*, 2005, 16, s. 229–238.
- 3 Keen, R.: Osteoporosis: strategies for prevention and management. *Best Pract Res Clin Rheumatol*, 2007, 21, s. 109–122.
- 4 Delmas, P. D. – Fraser, M.: Strong bones in later life: luxury or necessity? *Bull World Health Organ*, 1999, 77, s. 416–422.
- 5 Kanis, J. A. – Burlet, N. – Cooper, C., et al.: European Guidance for the diagnosis and management of osteoporosis in postmenopausal women. *Osteoporosis Int*, 2008, 19, s. 399–428.
- 6 Gardner, M. J. – Flik, K. R. – Moar, P., et al.: Improvement in the undertreatment of osteoporosis following hip fracture. *J Bone Joint Surg Am*, 2002, 84, s. 134–138.
- 7 Gardner, M. J. – Brophy, R. H. – Demetrikopoulos, D., et al.: Interventions to improve osteoporosis treatment following hip fracture. A prospective, randomized trial. *J Bone Joint Surg Am*, 2005, 87, s. 3–7.
- 8 Bahl, S. – Coates, P. S. – Greenspan, S. L.: The management of osteoporosis following hip fracture: have we improved our care? *Osteoporosis Int*, 2003, 14, s. 884–888.
- 9 Greenspan, S. L. – Myers, E. R. – Maitland, L. A., et al.: Fall severity and bone mineral density as risk factors for hip fracture in ambulatory elderly. *JAMA*, 1994, 271, s. 128–133.
- 10 National Osteoporosis Foundation: Physicians guide to prevention and treatment of osteoporosis. Belle Mead, NJ, Excerpta Medica, 2003.
- 11 Cummings, S. R. – Nevitt, M. C. – Browner, W. S., et al.: Risk factors for hip fracture in white women. Study of osteoporotic Fracture Research Group. *N Engl J Med*, 1995, 332, s. 767–773.
- 12 European Medicines Agency. Strontium ranelate. Summary of product characteristics/Souhrn údajů o přípravku.
- 13 European Medicines Agency. Assessment report – periodic safety update report (EPAR – Protelos-H-C-560-PSU31).
- 14 Reginster, J. Y.: Cardiac concerns associated with strontium ranelate. *Expert Opin Drug Saf*, 2014, 13, s. 1209–1213.
- 15 Meunier, P. J. – Roux, C. – Seeman, E., et al.: The effects of strontium ranelate on the risk of vertebral fracture in women with postmenopausal osteoporosis. *N Engl J Med*, 2004, 350, s. 459–468.
- 16 Reginster, J. Y. – Seeman, E. – De Verneuil, M. C., et al.: Strontium ranelate reduces the risk of nonvertebral fractures in postmenopausal women with osteoporosis: Treatment of Peripheral Osteoporosis (TROPOS) study. *J Clin Endocrinol Metab*, 2005, 90, s. 2816–2822.
- 17 Reginster, J. Y. – Kaufman, J. M. – Goemaere, S., et al.: Maintenance of antifracture efficacy over 10 years with strontium ranelate in postmenopausal osteoporosis. *Osteoporos Int*, 2012, 23, s. 1115–1122.
- 18 Kaufman, J. M. – Audran, M. – Bianchi, G., et al.: Efficacy and safety of strontium ranelate in the treatment of osteoporosis in men. *J Clin Endocrinol Metab*, 2013, 98, s. 592–601.
- 19 Ringe, J. D. – Dorst, A. – Farahmand, P.: Efficacy of strontium ranelate on bone mineral density in men with osteoporosis. *Arzneimittelforschung*, 2010, 60, s. 267–272.
- 20 Kanis, J. A. – Johansson, H. – Odén, A., et al.: A meta-analysis of the effect of strontium ranelate on the risk of vertebral and non-vertebral fracture in postmenopausal osteoporosis and the interaction with FRAX®. *Osteoporos Int*, 2011, 22, s. 2347–2355.
- 21 Roux, C. – Reginster, J. Y. – Fechtenbaum, J., et al.: Vertebral fracture risk reduction with strontium ranelate in women with postmenopausal osteoporosis is independent of baseline risk factors. *J Bone Miner Res*, 2006, 21, s. 536–542.
- 22 Chavassieux, P. – Meunier, P. J. – Roux, J. P., et al.: Bone histomorphometry of transiliac paired bone biopsies after 6 or 12 months of treatment with oral strontium ranelate in 387 osteoporotic women: randomized comparison to alendronate. *J Bone Miner Res*, 2014, 29, s. 618–628.
- 23 Iolascon, G. – Frizzi, L. – Di Pietro, G., et al.: Bone quality and bone strength: benefits of the bone-forming approach. *Clin Cases Miner Bone Metab*, 2014, 11, s. 20–24.
- 24 Appelman-Dijkstra, N. M. – Papapoulos, S. E.: Prevention of incident fractures in patients with prevalent fragility fractures: Current and future approaches. *Best Pract Res Clin Rheumatol*, 2013, 27, s. 805–820.
- 25 Rossi, A. L. – Moldovan, S. – Querido, W., et al.: Effect of strontium ranelate on bone mineral: Analysis of nanoscale compositional changes. *Micron*, 2014, 56, s. 29–36.
- 26 Ammann, P. – Rizzoli, R.: Strontium ranelate treatment improves bone material level properties in human transiliac bone biopsy specimens. *Osteoporos Int*, 2014, 25, s. S222.
- 27 Jobke, B. – Burghardt, A. J. – Muche, B., et al.: Trabecular reorganization in consecutive iliac crest biopsies when switching from bisphosphonate to strontium ranelate treatment. *PLoS One*, 2011, 6, e23638.
- 28 Kanis, J. A. – Johansson, H. – Odén, A., et al.: A meta-analysis of the effect of strontium ranelate on the risk of vertebral and non-vertebral fracture in postmenopausal osteoporosis: the impact of severe osteoporosis and contraindications [abstract OC25]. World Congress on Osteoporosis, Osteoarthritis and Musculoskeletal Diseases – WCO-IOF-ECEO Sevilla 2014, 2.–5. dubna 2014, Sevilla, Španělsko.
- 29 Audran, M. – Jakob, F. J. – Palacios, S., et al.: A large prospective European cohort study of patients treated with strontium ranelate and followed up over 3 years. *Rheumatol Int*, 2013, 33, s. 2231–2239.
- 30 Cooper, C. – Fox, K. M. – Borer, J. S.: Ischaemic cardiac events and use of strontium ranelate in postmenopausal osteoporosis: a nested case-control study in the CPRD. *Osteoporos Int*, 2014, 25, s. 737–745.
- 31 Abrahamsen, B. – Grove, E. L. – Vestergaard, P.: Nationwide registry-based analysis of cardiovascular risk factors and adverse outcomes in patients treated with strontium ranelate. *Osteoporos Int*, 2014, 25, s. 757–762.
- 32 Svanström, H. – Pasternak, B. – Hviid, A.: Use of strontium ranelate and risk of acute coronary syndrome: cohort study. *Ann Rheum Dis*, 2014, 73, s. 1037–1043.
- 33 Protelos – Osseor_14-02_CHMP public health communication Art 20, 21. 2. 2014.
- 34 Compston, J.: Strontium ranelate lives to fight another day. *Maturitas*, 2014, 78, s. 75–76.

Belimumab v indikaci systémový lupus erythematoses

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

- 1 Stohl, W.: BlySfulness does not equal blissfulness in systemic lupus erythematosus: a therapeutic role for BlyS antagonists. *Curr Dir Autoimmun*, 2005, 8, s. 289–304.
- 2 Cancor, M. P.: The BlyS/BAFF family of ligands and receptors: key targets in the therapy and understanding of autoimmunity. *Ann Rheum Dis*, 2006, 65, s. 34–36.
- 3 Baker, K. P. – Edwards, B. M. – Main, S. H. – Choi, G. H. – Wager, R. E. – Halpern, W. G., et al.: Generation and characterization of LymphoStat-B, a human monoclonal antibody that antagonizes the bioactivities of B lymphocyte stimulator. *Arthritis Rheum*, 2003, 48, s. 3253–3265.
- 4 Lamore, R. 3rd. – Parmar, S. – Patel, K. – Hilas, O.: Belimumab (benlysta): a breakthrough therapy for systemic lupus erythematosus. *P T*, 2012, 37, s. 212–226.
- 5 Merrill, J. T. – Ginzler, E. M. – Wallace, D. J. – McKay, J. D. – Lisse, J. R. – Aranow, C., et al.: Long-term safety profile of belimumab plus standard therapy in patients with systemic lupus erythematosus. *Arthritis Rheum*, 2012, 64, s. 3364–3373.
- 6 Horák, P. – Tezová, D. – Závada, J. – Olejárová, M. – Skácelová, M. – Smrková, A. – Žurek, M.: Doporučení ČRS pro léčbu nemocných se SLE. *Ces Revmatol*, 2013, 3, s. 110–122.
- 7 Human Genome Science BENLYSTA (belimumab), <http://www.hgsi.com/belimumab.html>, vyhledáno 28. 8. 2014.
- 8 Furie, R. – Stohl, W. – Ginzler, E. M. – Becker, M. – Mistra, N. – Chatham, W., 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, s. 109.
- 9 Wallace, D. J. – Stohl, W. – Furie, R. A. – Lisse, J. R. – McKay, J. R. – Merrill, J. T. – Ginzler, E. M. – Wallace, D. J. – McKay, J. D. – Lisse, J. R. – Aranow, C., et al.: A phase II, randomized, double-blind, placebo-controlled, dose-ranging study of belimumab in patients with active systemic lupus erythematosus. *Arthritis Rheum*, 2009, 61, s. 1168–1178.
- 10 Navarra, S. V. – Guzmán, R. M. – Gallacher, A. E. – Hall, S. – Levy, R. A. – Jimenez, R. E., et al.: BLISS-52 Study Group. Efficacy and safety of belimumab in patients with active systemic lupus erythematosus: a randomized, placebo-controlled, phase 3 trial. *Lancet*, 2011, 367, s. 721–731.
- 11 Furie, R. – Petri, M. – Zamani, O. – Cervera, R. – Wallace, D. J. – Tezová, D., et al.: A phase III, randomized, placebo-controlled study of belimumab, a monoclonal antibody that inhibits B lymphocyte stimulator, in patients with systemic lupus erythematosus. BLISS-76 Study Group. *Arthritis Rheum*, 2011, 63, s. 3918–3930.

Dna a kardiovaskulární riziko

doc. MUDr. Petr Němec, Ph.D.

- 1 Zhang, W. – Doherty, M. – Pascual, E., et al.: EULAR evidence based recommendations for gout. Part I: Diagnosis. Report of a task force of the Standing Committee for International Clinical Studies Including Therapeutics (ESCRIT). *Ann Rheum Dis*, 2006, 65, s. 1301–1311.
- 2 Mikuls, T. R. – Farrar, J. T. – Bilkir, W. B., et al.: Gout epidemiology: results from the UK General Practice Research Database, 1990–1999. *Ann Rheum Dis*, 2005, 64, s. 267–272.
- 3 Annemans, L. – Spaepen, E. – Gaskin, M., et al.: Gout in the UK and Germany: prevalence, comorbidities and management in general practice 2000–2005. *Ann Rheum Dis*, 2008, 67, s. 960–966.
- 4 Alamanos, Y. – Drosos, A. A.: Epidemiology of adult rheumatoid arthritis. *Autoimmun Rev*, 2005, 4, s. 130–136.
- 5 Grassi, D. – Ferri, L. – Desideri, G., et al.: Chronic hyperuricemia, uric acid deposit and cardiovascular risk. *Curr Pharm Des*, 2013, 19, s. 2432–2438.
- 6 Pavelka, K.: Dna (arthritis urica). In: Pavelka, K. – Rovenský, J., et al.: *Klinická revmatologie*. Galen, 2003, s. 347–358.
- 7 Johnson, R. J. – Kang, D. H. – Feig, D., et al.: Is there a pathogenetic role for uric acid in hypertension and cardiovascular and renal disease? *Hypertension*, 2003, 41, s. 1183–1190.
- 8 Nakagawa, T. – Hu, H. – Zharkov, S., et al.: A causal role for uric acid in fructose-induced metabolit syndrome. *Am J Physiol Renal Physiol*, 2006, 290, s. F625–F631.
- 9 Campion, E. W. – Glynn, R. J. – DeLabry, L. O.: Asymptomatic hyperuricemia. Risks and consequences in the Normative Aging Study. *Am J Med*, 1987, 82, s. 421–426.
- 10 Puig, J. G. – de Miguel, E. – Castillo, M. C., et al.: Asymptomatic hyperuricemia: impact of ultrasonography. *Nucleosides Nucleotides Nucleic Acids*, 2008, 27, s. 592–595.
- 11 Žurek, M.: Patogeneze, diagnostika a léčba dny. *Vnitr Lek*, 2006, 52, s. 736–741.
- 12 Steele, T. H.: Hyperuricemic nephropathies. *Nephron*, 1999, 81, s. 45–49.
- 13 Souček, M.: Metabolický syndrom. *Vnitr Lek*, 2009, 55, s. 618–621.
- 14 Choi, H. K. – Ford, E. S. – Li, C. – Curhan, G.: Prevalence of the metabolic syndrome in patients with gout: the Third National Health and Nutrition Examination Survey. *Arthritis Rheum*, 2007, 57, s. 109–115.
- 15 Perez-Ruiz, F., et al.: EULAR 2013. Thu 0529.
- 16 Choi, H. K. – Curhan, G.: Circulation. Independent impact of gout on mortality and risk for coronary heart disease. *Circulation*, 2007, 116, s. 894–900.
- 17 Stack, A. G. – Hanley, A. – Casserly, L. F., et al.: Independent and joint associations of gout and hyperuricaemia with total and cardiovascular mortality. *QJM*, 2013, 106, s. 647–658.
- 18 Niskanen, L. K. – Laaksonen, D. E. – Nyysönen, K., et al.: Uric acid level as a risk factor for cardiovascular and all-cause mortality in middle-aged men: a prospective cohort study. *Arch Intern Med*, 2004, 164, s. 1546–1551.
- 19 Zhang, W. – Doherty, M. – Bardin, T., et al.: EULAR evidence based recommendations for gout. Part II: Management. Report of a task force of the EULAR Standing Committee for International Clinical Studies Including Therapeutics (ESCRIT). *Ann Rheum Dis*, 2006, 65, s. 1312–1324.
- 20 Khanna, D. – Fitzgerald, J. D. – Khanna, P. P., et al.: 2012 American College of Rheumatology guidelines for management of gout. Part 1: systematic nonpharmacologic and pharmacologic therapeutic approaches to hyperuricemia. *Arthritis Care Res* (Hoboken), 2012, 64, s. 1431–1446.
- 21 Khanna, D. – Khanna, P. P. – Fitzgerald, J. D., et al.: 2012 American College of Rheumatology guidelines for management of gout. Part 2: therapy and antiinflammatory prophylaxis of acute gouty arthritis. *Arthritis Care Res* (Hoboken), 2012, 64, s. 1447–1461.
- 22 Pavelka, K.: Terapie dny. In: Pavelka, K., et al.: *Farmakoterapie revmatických onemocnění*. Grada Publishing, 2005, s. 345–351.
- 23 Okamoto, K. – Nishino, T.: Crystal structures of mammalian xanthine oxidoreductase bound with various inhibitors: allopurinol, febuxostat, and FYX-051. *J Nippon Med Sch*, 2008, 75, s. 2–3.
- 24 Khosravan, R. – Kukulka, M. J. – Wu, J. T., et al.: The effect of age and gender on pharmacokinetics, pharmacodynamics, and safety of febuxostat, a novel nonpurine selective inhibitor of xanthine oxidase. *J Clin Pharmacol*, 2008, 48, s. 1014–1024.
- 25 Schumacher, H. R. Jr. – Becker, M. A. – Wortmann, R. L., et al.: Effects of febuxostat versus allopurinol and placebo in reducing serum urate in subjects with hyperuricemia and gout: a 28-week, phase III, randomized, double-blind, parallel-group trial. *Arthritis Rheum*, 2008, 59, s. 1540–1548.
- 26 Becker, M. A. – Schumacher, H. R. Jr. – Becker, M. A. – Wortmann, R. L., et al.: Febuxostat compared with allopurinol in patients with hyperuricemia and gout. *N Engl J Med*, 2005, 353, s. 2450–2461.
- 27 Becker, M. A. – Schumacher, H. R. Jr. – MacDonald, P. A., et al.: Clinical efficacy and safety of successful long term urate lowering with febuxostat or allopurinol in subjects with gout. *J Rheumatol*, 2009, 36, s. 1273–1282.
- 28 Schumacher, H. R. Jr. – Becker, M. A. – Lloyd, E., et al.: Febuxostat in the treatment of gout: 5-year findings of the FOCUS efficacy and safety study. *Rheumatology*, 2009, 48, s. 188–194.
- 29 Becker, M. A. – Schumacher, H. R. Jr. – Wortmann, R. L., et al.: Febuxostat, a novel nonpurine selective inhibitor of xanthine oxidase: a twenty-eight-day, multicenter, phase II, randomized, double-blind, placebo-controlled, doseresponse clinical trial examining safety and efficacy in patients with gout. *Arthritis Rheum*, 2005, 52, s. 916–923.
- 30 Tausche, A. K. – Christoph, M. – Forkmann, M., et al.: As compared to allopurinol, urate-lowering therapy with febuxostat has superior effects on oxidative stress and pulse wave velocity in patients with severe chronic tophaceous gout. *Rheumatol Int*, 2014, 34, s. 101–109.
- 31 Malik, U. Z. – Hundley, N. J. – Romero, G., et al.: Febuxostat inhibition of endothelial-bound XO: implications for targeting vascular ROS production. *Free Radic Biol Med*, 2011, 51, s. 179–184.

Optimální dávka vitaminu D ve vztahu k sérovým koncentracím –25(OH)D

MUDr. Kateřina Zegzulková Revmatologický ústav, Praha

- 1 Holick, M. F. – Binkley, N. C. – Bischoff-Ferrari, H. A., et al.: Evaluation, treatment, and prevention of vitamin D deficiency: An endocrine society clinical practice guideline. *Journal of Clinical Endocrinology & Metabolism*, 2011, 96, s. 1911–1930.
- 2 Institute of Medicine: *Dietary Reference Intakes for Calcium and Vitamin D*. Washington, DC, The National Academies Press, 2011.
- 3 Flanagan, J. N. – Zouny, M. V. – Persons, K. S., et al.: Vitamin D metabolism in human prostate cells: implications for prostate cancer chemoprevention by vitamin D. *Anticancer Res*, 2006, 26, s. 2567–2572.
- 4 Schuessler, M. – Astecker, N. – Herzig, G. – Vorisek, G. – Schuster, I.: Skin is an autonomous organ in synthesis, two step activation and degradation of vitamin D3: CYP 27 in epidermis completes the set of essential vitamin D3-hydroxylases. *Steroids*, 2001, 66, s. 399–408.
- 5 Zhu, J. – DeLuca, H. F.: Vitamin D hydroxylase—four decades of searching, are we there yet? *Arch Biochem Biophys*, 2012, 523, s. 30–36.
- 6 Blunt, J. W. – Tahala, Y. – DeLuca, H. F.: Biological activity of 25-hydroxycholecalciferol, a metabolite of vitamin D3. *Proc Natl Acad Sci USA*, 1968, 61, s. 1503–1506.
- 7 Hollis, B. V. – Wagner, C. L.: Clinical aspects of the parent compound vitamin D. *J Clin Endocrinol Metab*, 2013, 98, s. 4619–4628.
- 8 Haddad, J. G. – Matsuoaka, L. Y. – Hollis, B. W. – Hu, Y. Z. – Wortsman, J.: Human plasma transport of vitamin D after oral endogenous synthesis. *J Clin Invest*, 1993, 91, s. 2552–2555.
- 9 Adams, J. S. – Clemens, T. L. – Parrish, J. A. – Holick, M. F.: Vitamin D synthesis and metabolism after ultraviolet irradiation on normal and vitamin D deficient subjects. *N Engl J Med*, 1982, 306, s. 722–725.
- 10 Heaney, R. P. – Rocker, R. R. – Grote, J. – Horst, R. L., et al.: Vitamin D3 is more potent than vitamin D2 in humans. *J Clin Endocrinol Metab*, 2011, 96, s. E447–E452.
- 11 Heaney, R. P. – Davies, K. M. – Chen, T. C. – Holick, M. F. – Barger-Lux, M. J.: Human serum 25-hydroxycholecalciferol response to extended oral dosing with cholecalciferol. *Am J Clin Nutr*, 2003, 77, s. 204–210.
- 12 Vieth, R. – Chan, P. C. – MacFarlane, G. D.: Efficacy and safety of Vitamin D3 intake exceeding the lowest observed adverse effect level. *Am J Clin Nutr*, 2001, 73, s. 288–294.
- 13 Sanders, K. M. – Start, A. L. – Williamson, E. J., et al.: Annual high dose oral vitamin D and falls and fractures in older women: a randomized controlled trial. *Jama*, 2010, 303, s. 1815–1822.
- 14 Hollis, B. W.: Short term and long term consequences and concerns regarding valid assessment of vitamin D deficiency: comparison of recent food supplementation and clinical guidance report. *Curr Opin Clin Nutr Metab Care*, 2011, 14, s. 598–604.
- 15 Rosen, C. J. – Adams, J. S. – Bikle, D. D., et al.: The nonskeletal effects of vitamin D: an endocrine society scientific statement. *Endo Rev*, 2012, 33, s. 456–492.
- 16 Murad, M. H. – Elamin, K. B. – Abu Elnour, N. O., et al.: The effect of vitamin D on falls: a systematic review and meta-analysis. *J Clin Endocrinol Metab*, 2011, 96, s. 2997–3006.
- 17 Reid, I. R. – Bolland, M. J.: Calcium risk benefit updated—new WHI analyses. *Maturitas*, 2014, 77, s. 1–3.
- 18 Bischoff-Ferrari, H. A. – Willett, W. C. – Wong, J. B., et al.: Fracture prevention with vitamin D supplementation—a meta-analysis of randomized controlled trials. *JAMA*, 2005, 293, s. 2257–2264.
- 19 Elamin, M. B. – Abu Elnour, N. O. – Elamin, K. B., et al.: Vitamin D and cardiovascular outcomes, a systematic review and meta-analysis. *J Clin Endocrinol Metab*, 2011, 96, s. 1931–1942.
- 20 Autier, P. – Boniol, M. – Pizot, C., et al.: Vitamin D status and ill health: a systematic review. *Lancet Diabetes Endocrinol*, 2014, 2, s. 76–89.
- 21 Chung, M. – Lee, J. – Terasawa, T., et al.: Vitamin D with or without calcium supplementation for prevention of cancer and fractures: an updated meta-analysis for the US Preventive services Task Force. *Ann Int Med*, 2011, 155, s. 827–838.
- 22 Georgie, P. S. – Pearson, E. R. – Witham, M. D.: Effect of vitamin D supplementation on glycaemic control and insulin resistance: a systematic review and meta-analysis. *Diabet Med*, 2012, 29, s. e142–e150.
- 23 Giovannucci, E. – Liu, Y. – Sim, E. B., et al.: Prospective study of predictors of vitamin D status and cancer incidence and mortality in men. *J Natl Cancer Inst*, 2006, 98, s. 451–459.
- 24 Bolland, M. J. – Grey, A. – Gamble, G. D., et al.: Are more trials of vitamin D supplementation needed for skeletal, vascular or cancer outcomes? A trial sequential meta-analysis. *Lancet Diab Endocrinol*, 2014, 2, s. 362–363.
- 25 Pikner, R.: Jaká můžeme být hladina vitamínu D a doporučené dávkování? CEVA [online], 16. 10. 2012, vyhledáno 16. 10. 2012.
- 26 Bruce, W. – Wagner, H. – Wagner, C. L.: The role of the parent compound Vitamin D with respect to metabolism and function: Why clinical dose intervals can affect clinical outcomes, systematic review. *J Clin Endocrinol Metab*, 2013, 98, s. 4619–4628.

Možnosti diskontinuace a deeskalace biologických DMARDs u pacientů s RA

MUDr. Jakub Závada, Ph.D. Revmatologický ústav, Praha

- 1 Tahala, Y. – Hirata, S. – Saleem, B. – Emery, P.: Discontinuation of biologics in patients with rheumatoid arthritis. *Clin Exp Rheumatol*, 2013, 31 (4, dopl. 78), s. 522–527.
- 2 Tahala, Y. – Takeuchi, T. – Mimori, T. – Saito, K. – Nawata, M. – Kameda, H. – Gojima, T. – Miyasaka, N. – Koike, T.: RRR study investigators: Discontinuation of infliximab after attaining low disease activity in patients with rheumatoid arthritis: RRR (remission induction by Remicade in RA) study. *Ann Rheum Dis*, 2010, 69 (7), s. 1286–1291, doi: 10.1136/ard.2009.121491, Epub 1. 4. 2010.
- 3 Tahala, Y. – Hirata, S. – Kubo, S. – Fukuyo, S. – Hanami, K. – Sawamukai, N. – Nakano, K. – Nakayamada, S. – Yamaoka, K. – Sawamura, F. – Saito, K.: Discontinuation of adalimumab after achieving remission in patients with established rheumatoid arthritis: 1-year outcome of the HONOR study. *Ann Rheum Dis*, 2013, doi: 10.1136/annrheumdis-2013-204016, publikováno před tiskem.
- 4 Saleem, B. – Keen, H. – Goeb, V. – Parmar, R. – Nizam, S. – Hensor, E. M. – Churchman, S. M. – Quinn, M. – Wakefield, R. – Conaghan, P. G. – Ponchel, F. – Emery, P.: Patients with RA in remission on TNF blockers: when and in whom can TNF blocker therapy be stopped? *Ann Rheum Dis*, 2010, 69 (9), s. 1636–1642, doi: 10.1136/ard.2009.117341, Epub 26. 4. 2010. Erratum in: *Ann Rheum Dis*, 2011, 70 (8), s. 1520.
- 5 Brodě, O. – Millasseau, E. – Albert, C. – Grisot, C. – Flory, P. – Roux, C. H. – Euller-Ziegler, L.: Effect of discontinuing TNF alpha antagonist therapy in patients with remission of rheumatoid arthritis. *Joint Bone Spine*, 2009, 76 (4), s. 350–355.
- 6 Smolen, J. S. – Emery, P. – Ferraccioli, G. F. – Samborski, W. – Berenbaum, F. – Davies, O. R. – Koetse, W. – Purcaru, O. – Bennett, B. – Burkhardt, H.: Certolizumab pegol in rheumatoid arthritis patients with low to moderate activity: the CERTAIN double-blind, randomised, placebo-controlled trial. *Ann Rheum Dis*, 2014.
- 7 Smolen, J. S. – Nash, P. – Dufet, P. – Hall, S. – Ilivanova, E. – Irazoqui-Palazuelos, F. – Miranda, P. – Park, M. C. – Pavelka, K. – Pedersen, R. – Szumski, A. – Hammond, C. – Kleniv, A. S. – Vlahos, B.: Maintenance, reduction, or withdrawal of etanercept after treatment with etanercept and methotrexate in patients with moderate rheumatoid arthritis (PRESERVE): a randomised controlled trial. *Lancet*, 2013, 381 (9870), s. 918–929.
- 8 Studie PRIZE: ww2.rheumatology.org/apps/MyAnnualMeeting/Abstract/35665, vyhledáno 2. 6. 2014.
- 9 Deter, J. – Bastion, H. – Listing, J. – Weiß, A. – Wassenberg, S. – Liebhaber, A. – Rockwitz, K. – Alten, R. – Krüger, K. – Rau, R., et al.: Induction therapy with adalimumab plus methotrexate for 24 weeks followed by methotrexate monotherapy up to week 48 versus methotrexate therapy alone for DMARD-naïve patients with early rheumatoid arthritis: HIT HARD, an investigator-initiated study. *Ann Rheum Dis*, 2013, 72 (6), s. 844–850.
- 10 Smolen, J. S. – Emery, P. – Fleischmann, R. – van Vollenhoven, R. F. – Pavelka, K. – Dufet, P. – Guérette, B. – Kuplet, H. – Redden, L. – Arora, V. – Kavanaugh, A.: Adjustment of therapy in rheumatoid arthritis on the basis of achievement of stable low disease activity with adalimumab plus methotrexate or methotrexate alone: the randomised controlled OPTIMA trial. *Lancet*, 2014, 383 (9914), s. 321–332.
- 11 Takeuchi, T. – Matsubara, T. – Ohta, S., et al.: Abatacept biologic-free remission study in established rheumatoid arthritis—ORION study. *Ann Rheum Dis*, 2013, 72 (dopl. 3), s. 613.
- 12 Nampei, A. – Nagayama, Y.: Discontinuation of tocilizumab after attaining remission in patients with rheumatoid arthritis. *Ann Rheum Dis*, 2013, 72 (dopl. 3), s. 877.
- 13 Batticciotto, A. – Varisco, V. – Antivalle, M., et al.: Dose reduction in patients with rheumatoid arthritis responding to the standard rituximab regimen. *Ann Rheum Dis*, 2013, 72 (dopl.), s. 877.
- 14 den Broeder, A. A. – van der Maas, A. – van den Bemt, B. J.: Dose de-escalation strategies and role of therapeutic drug monitoring of biologics in RA. *Rheumatology (Oxford)*, 2010, 49 (10), s. 1801–1803, doi: 10.1093/rheumatology/keq060, Epub 23. 3. 2010.
- 15 Smolen, J. S. – Landewé, R. – Breedveld, F. C. – Buch, M. – Burmester, G. – Dougados, M. – Emery, P. – Gaujoux-Viala, C. – Gossec, L. – Nam, J. – Ramiro, S. – Winthrop, K. – de Wit, M. – Aletaha, D. – Betteridge, N. – Bijlsma, J. W. – Boers, M. – Buttigereit, F. – Domme, B. – Cutolo, M. – Damjanov, N. – Gates, J. M. – Koulouma, M. – Kvíčen, T. K. – Mariette, X. – Pavelka, K. – van Riel, P. L. – Rubbert-Roth, A. – Scholte-Yoshaar, M. – Scóty, D. L. – Sokka-Isler, T. – Wong, J. B. – van der Neijde, D.: EULAR recommendations for the management of rheumatoid arthritis with synthetic and biological disease-modifying antirheumatic drugs: 2013 update. *Ann Rheum Dis*, 2014, 73 (3), s. 492–509.