

Literatur für onkologie heute 4/2020

SCHWERPUNKT: LUNGENKARZINOM

UPDATE: Periphere und zentrale Neurotoxizität nach Tumorthherapie (S. 31–40)

S. Koeppen

1. Wang XM et al. Discovering cytokines as targets for chemotherapy-induced painful peripheral neuropathy. *Cytokine* 2012; 59: 3–9
2. Staff NP et al. Chemotherapy induced peripheral neuropathy: A current review. *Ann Neurol* 2017; 81: 772–781
3. Miltenburg NC, Boogerd W. Chemotherapy-induced neuropathy: A comprehensive survey. *Cancer Treat Rev* 2014; 40: 872–882
4. Merkies IS, Schmitz PI, van der Meché FG, vanDoorn PA; for the Inflammatory Neuropathy Cause and Treatment (INCAT) Group. Reliability and responsiveness of a graduated tuning fork in immunemediated polyneuropathies. *J Neurol Neurosurg Psychiatry* 2000; 68: 669–671
5. Leitlinienprogramm Onkologie (Deutsche Krebsgesellschaft, Deutsche Krebshilfe, AWMF): Supportive Therapie bei onkologischen PatientInnen - Langversion 1.1, 2017, AWMF Registernummer: 032/054OL. (<http://leitlinienprogramm-onkologie.de/Supportive-Therapie.95.0.html>). Zugegriffen: 05.07.2019
6. Mücke M et al. Quantitative sensory testing (QST). English version. *Schmerz* 2016
7. Boyette-Davis JA et al. Follow-up psychophysical studies in bortezomib related chemoneuropathy patients. *J Pain* 2011; 12: 1017–1024
8. Cavaletti G et al. Multi-center assessment of the Total Neuropathy Score for chemotherapy-induced peripheral neurotoxicity. *J Peripher Nerv Syst* 2006; 11: 135–141
9. McCrary JM et al; on behalf of the INFOCUS Delphi working party. Optimal clinical assessment strategies for chemotherapy-induced peripheral neuropathy (CIPN): a systematic review and Delphi survey. *Support Care Cancer* 2017; 25: 3485–3493
10. Postma TJ et al; on behalf of the EORTC Quality of Life Group. The development of an EORTC quality of life questionnaire to assess chemotherapy-induced peripheral neuropathy: The QLQ-CIPN20. *Eur J Cancer* 2005; 41: 1135–1139
11. Seretny M et al. Incidence, prevalence, and predictors of chemotherapy induced peripheral neuropathy: A systematic review and meta-analysis. *Pain* 2014; 155: 2461–2470
12. Delforge M et al. Treatment-related peripheral neuropathy in multiple myeloma: the challenge continues. *Lancet Oncol* 2010; 11: 1086–1095
13. Cliff J et al. The molecular genetics of chemotherapy-induced peripheral neuropathy: A systematic review and meta-analysis. *Crit Rev Oncol Hematol* 2017; 120: 127–140
14. Argyriou AA et al. Chemotherapy induced peripheral neurotoxicity: management informed by pharmacogenetics. *Nat Rev Neurol* 2017; 13: 492–504
15. Brydoy M et al. Observational study of prevalence of long-term Raynaud like phenomena and neurological side effects in testicular cancer survivors. *J Natl Cancer Inst* 2009; 101: 1682–1695
16. Hjelle LV et al. Associations between long-term serum platinum and neurotoxicity and ototoxicity, endocrine gonadal function, and cardiovascular disease in testicular cancer survivors. *Urol Oncol* 2016; 34: 487 e13–487 e20
17. Windebank AJ, Grisold, W. Chemotherapy-induced neuropathy. *J Peripher Nerv Syst* 2008; 13: 27–46
18. Avan A et al. Platinum-induced neurotoxicity and preventive strategies: past, present, and future. *Oncologist* 2015; 20: 411–432
19. Pachman DR et al. Clinical Course of Oxaliplatin-Induced Neuropathy: Results From the Randomized Phase III Trial N08CB (Alliance). *J Clin Oncol* 2015; 33: 3416–3422

20. Brozou V, Vadalouca A, Zis P. Pain in Platin-Induced Neuropathies: A Systematic Review and Meta-Analysis. *Pain Ther* 2018; 7: 105–119
21. Alberti P et al. Risk stratification of oxaliplatin induced peripheral neurotoxicity applying electrophysiological testing of dorsal sural nerve. *Support Care Cancer* 2018; 26: 3143–3151
22. Bennett BK et al. Impact of oxaliplatin-induced neuropathy: a patient perspective. *Support Care Cancer* 2012; 20: 2959–2967
23. Briani C et al. Long-term course of oxaliplatin-induced polyneuropathy: a prospective 2-year follow-up study. *J Peripher Nerv Syst* 2014; 19: 299–306
24. Argyriou AA et al. Chemotherapy induced peripheral neuropathy in adults: a comprehensive update of the literature. *Cancer Manag Res* 2014; 6: 135–147
25. Loprinzi CL et al. Natural history of paclitaxel-associated acute pain syndrome: prospective cohort study NCCTGN08C1. *J Clin Oncol* 2011; 29: 1472–1478
26. Reeves BN et al. Further data supporting that paclitaxel-associated acute pain syndrome is associated with development of peripheral neuropathy: North Central Cancer Treatment Group trial N08C1. *Cancer* 2012; 118: 5171–5178
27. Bao T et al. Long-term chemotherapy induced peripheral neuropathy among breast cancer survivors: prevalence, risk factors, and fall risk. *Breast Cancer Res Treat* 2016; 159: 327–333
28. Bulls HW et al. A longitudinal examination of associations between age and chemotherapy-induced peripheral neuropathy in patients with gynecologic cancer. *Gynecol Oncol* 2019; 152: 310–315
29. Greenlee H et al. BMI, Lifestyle Factors and Taxane-Induced Neuropathy in Breast Cancer Patients: The Pathways Study. *J Natl Cancer Inst* 2017; 109
30. Liu Y et al. Role of nab-paclitaxel in metastatic breast cancer: a meta analysis of randomized clinical trials. *Oncotarget* 2017; 8: 72950–72958
31. Cortes J et al; on behalf of the EMBRACE (Eisai Metastatic Breast Cancer Study Assessing Physician's Choice Versus E7389) investigators. Eribulin monotherapy versus treatment of physician's choice in patients with metastatic breast cancer (EMBRACE): a phase 3 open-label randomised study. *Lancet* 2011; 377: 914–923
32. Richardson PG et al. Reversibility of symptomatic peripheral neuropathy with bortezomib in the phase III APEX trial in relapsed multiple myeloma: impact of a dose-modification guideline. *Br J Haematol* 2009; 144: 895–903
33. Brinchen S et al. Efficacy and safety of once-weekly bortezomib in multiple myeloma patients. *Blood* 2010; 116: 4745–4753
34. Moreau P et al. Subcutaneous versus intravenous administration of bortezomib in patients with relapsed multiple myeloma: a randomised, phase 3, non-inferiority study. *Lancet Oncol* 2011; 12: 431–440
35. Palumbo A, Gay F. How to treat elderly patients with multiple myeloma: combination of therapy or sequencing. *Hematology Am Soc Hematol Educ Program* 2009; 1: 566–577
36. Dimopoulos MA et al; for the ENDEAVOR investigators. Carfilzomib and dexamethasone versus bortezomib and dexamethasone for patients with relapsed or refractory multiple myeloma (ENDEAVOR): a randomised, phase 3, open-label, multicentre study. *Lancet Oncol* 2016; 17: 27–38
37. Brinchen S, De WiE, Dimopoulos MA. New Agents in Multiple Myeloma: An Examination of Safety Profiles. *Clin Lymphoma Myeloma Leuk* 2017; 17: 391–407
38. Richardson PG et al. Phase 1 study of twice-weekly ixazomib, an oral proteasome inhibitor, in relapsed/refractory multiple myeloma patients. *Blood* 2014; 124: 1038–1046
39. Moreau P et al; for the TOURMALINE-MM1 Study Group. Oral Ixazomib, Lenalidomide, and Dexamethasone for Multiple Myeloma. *N Engl J Med* 2016; 374: 1621–1634
40. Kumar S et al. Management of adverse events associated with ixazomib plus lenalidomide/dexamethasone in relapsed/refractory multiple myeloma. *Br J Haematol* 2017; 178: 571–582
41. Cavaletti G et al. Thalidomide sensory neurotoxicity: a clinical and neurophysiologic study. *Neurology* 2004; 62: 2291–2293

42. Palumbo A et al. Consensus guidelines for the optimal management of adverse events in newly diagnosed, transplant-ineligible patients receiving melphalan and prednisone in combination with thalidomide (MPT) for the treatment of multiple myeloma. *Ann Hematol* 2010; 89: 803–811
43. Hanaizi Z et al. The European medicines agency review of pomalidomide in combination with low-dose dexamethasone for the treatment of adult patients with multiple myeloma: summary of the scientific assessment of the committee for medicinal products for human use. *Oncologist* 2015; 20: 329–334
44. Moreau P et al. Adverse event management in patients with relapsed and refractory multiple myeloma taking pomalidomide plus low-dose dexamethasone: A pooled analysis. *Eur J Haematol* 2017; 99: 199–206
45. Greig SL. Panobinostat: A Review in Relapsed or Refractory Multiple Myeloma. *Target Oncol* 2016; 11: 107–114
46. San-Miguel JF et al. Panobinostat plus bortezomib and dexamethasone versus placebo plus bortezomib and dexamethasone in patients with relapsed or relapsed and refractory multiple myeloma: a multicentre, randomised, double-blind phase 3 trial. *Lancet Oncol* 2014; 15: 1195–1206
47. Hershman DL, Lacchetti C, and Loprinzi CL. Prevention and Management of Chemotherapy-Induced Peripheral Neuropathy in Survivors of Adult Cancers: American Society of Clinical Oncology Clinical Practice Guideline Summary. *J Oncol Pract* 2014; 10: e421-e424
48. Smith EM et al; for the Alliance for Clinical Trials in Oncology. Effect of duloxetine on pain, function, and quality of life among patients with chemotherapy-induced painful peripheral neuropathy: a randomized clinical trial. *JAMA* 2013; 309: 1359–1367
49. Hou S et al. Treatment of Chemotherapy-Induced Peripheral Neuropathy: Systematic Review and Recommendations. *Pain Physician* 2018; 21: 571–592
50. Albers JW et al. Interventions for preventing neuropathy caused by cisplatin and related compounds. *Cochrane Database Syst Rev* 2014; 3: CD005228
51. Glimelius B et al. Persistent prevention of oxaliplatin-induced peripheral neuropathy using calmagofodipir (PledOx®): a placebo-controlled randomised phase II study (PLIANT). *Acta Oncol* 2018; 57: 393–402
52. Finnerup NB et al. Pharmacotherapy for neuropathic pain in adults: a systematic review and meta-analysis. *Lancet Neurol* 2015; 14: 162–173
53. Fallon MT et al. Cancer treatment-related neuropathic pain: proof of concept study with menthol - a TRPM8 agonist. *Support Care Cancer* 2015; 23: 2769–2777
54. Streckmann F et al. Exercise program improves therapy-related side-effects and quality of life in lymphoma patients undergoing therapy. *Ann Oncol* 2014; 25: 493–499
55. Kleckner IR et al. Effects of exercise during chemotherapy on chemotherapy-induced peripheral neuropathy: a multicenter, randomized controlled trial. *Support Care Cancer* 2018; 26: 1019–1028
56. Wang XM et al. Chemobrain: a critical review and causal hypothesis of link between cytokines and epigenetic reprogramming associated with chemotherapy. *Cytokine* 2015; 72: 86–96
57. Deneux V et al. Acute methotrexate-related neurotoxicity and pseudo-stroke syndrome. *Arch Pediatr* 2017; 24: 1244–1248
58. Magge RS, DeAngelis LM. The double-edged sword: Neurotoxicity of chemotherapy. *Blood Rev* 2015; 29: 93–100
59. Thiel E et al. High-dose methotrexate with or without whole brain radiotherapy for primary CNS lymphoma (G-PCNSL-SG-1): a phase 3, randomised, non-inferiority trial. *Lancet Oncol* 2010; 11: 1036–1047
60. Acharya G et al. 5-FU-induced leukoencephalopathy with reversible lesion of splenium of corpus callosum in a patient with colorectal cancer. *BMJ Case Rep* 2017; 2017: bcr-2017-222030
61. Obadia M et al. Capecitabine-induced acute toxic leukoencephalopathy. *Neurotoxicology* 2017; 62: 1–5

62. Henricks LM et al. DPYD genotype-guided dose individualisation of fluoropyrimidine therapy in patients with cancer: a prospective safety analysis. *Lancet Oncol* 2018; 19: 1459–1467
63. Pinnix CC et al. Dorsal column myelopathy after intrathecal chemotherapy for leukemia. *Am J Hematol* 2017; 92: 155–160
64. Alsdorf WH et al. Severe and irreversible myelopathy after concurrent systemic and intrathecal nucleoside analogue treatment for refractory diffuse large B-cell lymphoma: A case report and review of the literature. *J Oncol Pharm Pract* 2016; 22: 523–527
65. Millan NC et al. Acute and sub-acute neurological toxicity in children treated for acute lymphoblastic leukemia. *Leuk Res* 2018; 65: 86–93
66. Kataria PS, Kendre PP, Patel AA. Ifosfamide-induced Encephalopathy Precipitated by Aprepitant: A Rarely Manifested Side Effect of Drug Interaction. *J Pharmacol Pharmacother* 2017; 8: 38–40
67. Spain L et al. Neurotoxicity from immune-checkpoint inhibition in the treatment of melanoma: a single centre experience and review of the literature. *Ann Oncol* 2017; 28: 377–385
68. Carl D et al. Steroid responsive encephalopathy associated with autoimmune thyroiditis following ipilimumab therapy: a case report. *BMC Res Notes* 2015; 8: 316
69. Katada E et al. Posterior Reversible Encephalopathy Syndrome after a Variety of Combined Chemotherapies Containing Bevacizumab for Metastatic Colon Cancer. *Intern Med* 2018; 57: 2403–2407
70. Couturier MA et al. Cerebral venous thrombosis in adult patients with acute lymphoblastic leukemia or lymphoblastic lymphoma during induction chemotherapy with l-asparaginase: The GRAALL experience. *Am J Hematol* 2015; 90: 986–991
71. Li SH et al. Incidence of ischemic stroke post-chemotherapy: a retrospective review of 10,963 patients. *Clin Neurol Neurosurg* 2006; 108: 150–156
72. Santos C, Morgan BW, Geller RJ. The successful treatment of 5-fluorouracil (5-FU) overdose in a patient with malignancy and HIV/AIDS with uridine triacetate. *Am J Emerg Med* 2017; 35: 802 e7–802 e8
73. Ma WW et al. Emergency use of uridine triacetate for the prevention and treatment of life-threatening 5-fluorouracil and capecitabine toxicity. *Cancer* 2017; 123: 345–356
74. Cachia D et al. Myelopathy following intrathecal chemotherapy in adults: a single institution experience. *J Neurooncol* 2015; 122: 391–398
75. Vakiti A et al. Ifosfamide-Induced Metabolic Encephalopathy in 2 Patients With Cutaneous T-Cell Lymphoma Successfully Treated With Methylene Blue. *J Investig Med High Impact Case Rep* 2018; 6: 2324709618786769
76. Treanor CJ et al. Non-pharmacological interventions for cognitive impairment due to systemic cancer treatment. *Cochrane Database Syst Rev* 2016; 8: CD011325
77. Oh PJ, Kim J. The Effects of Nonpharmacologic Interventions on Cognitive Function in Patients With Cancer: A Meta-Analysis. *Oncol Nurs Forum* 2016; 43: E205–217