

Bedeutung der neuen Variante der Creutzfeldt-Jakobschen-Erkrankung in der Transfusionsmedizin

- 1) Wells GA, Scott AC, Johnsonn CT, Gunning RF, Hancock RD, Jeffrey M, Dawson M, Bradley R. A novel progressive spongiform encephalopathy in cattle. *Vet Rec* 1987;121:419-420
- 2) Wilesmith JW, Ryan JB, Atkinson MJ. Bovine spongiform encephalopathy: studies on the epidemiological origin. *Vet Rec* 1991;128:199-203
- 3) Auer F, Blümel J, Burger R, Buschmann A, Dietz K, Heiden M, Hitzler WE, Klamm H, Kreil Th, Kretzschmar H, Nübling M, Offergeld R, Pauli G, Schottstedt V, Seitz R, Volkens P, Zerr I. Overall Blood Supply Strategy with Regard to Variant Creutzfeldt-Jacob Disease (vCJD). *Transfus Med Hemoth* 2006;33 (suppl 2): 1-39
- 4) Roucou X, LeBlanc AC. Cellular prion protein neuroprotective function: implications in prion diseases. *J Mol Med* 2005;83:3-11
- 5) McBride PA, Schulz-Schaeffer WJ, Donaldson M, Bruce M, Diringner H, Kretzschmar HA, Beekes M. Early spread of scrapie from the gastrointestinal tract to the central nervous system involves autonomic fibers of the splanchnic and vagus nerves. *J. Virol* 2001;75:9320-9327
- 6) Zou S, Fang CT, Schonberger LB. Transfusion Transmission of Human Prion Diseases. *Transf Med Rev* 2008;22:58-69
- 7) The National Creutzfeldt-Jakob Disease Surveillance Unit (NCJDSU): Variant Creutzfeldt-Jakob Disease. Current data. www.cjd.ed.ac.uk/vcjdworld.htm.
- 8) Hilton DA, Ghani A, Conyers L, Edwards P, McCardle LM, Ritchie D, Penney M, Hegazy D, Ironside JW. Prevalence of lymphoreticular prion protein accumulation in UK tissue samples. *J Pathol* 2004;203:733-739
- 9) Ironside JW, Bishop MT, Conolly K, Hegazy D, Lowrie S, Le Grice M, Ritchie DL, McCardle LM, Hilton DA. Variant Creutzfeldt-Jakob disease: Prion protein genotype analysis of positive appendix tissue samples from a retrospective prevalence study. *BMJ* 2006;332:1186-1188
- 10) Hamaguchi T, Noguchi-Shinohara M, Nozaki I, Nakamura Y, Sato T, Kitamoto T, Mizusawa H, Yamada M. Medical procedures and risk for sporadic Creutzfeldt-Jakob disease Japan 1999-2008. *Emerg Infect Dis* 2009;15:265-271
- 11) Dorsey K, Zou S, Schonberger LB, Sullivan M, Kessler D, Notari IV E, Fang CT, Dodd RY. Lack of evidence of transfusion transmission of Creutzfeldt-Jakob disease in a US surveillance study. *Transfusion* 2009;49:977-984
- 12) Hunter N, Forster J, Chong A, McCutcheon S, Parnham D, Eaton S, MacKenzie C, Houston F. Transmission of prion diseases by blood transfusion. *J Gen Virol* 2002;83:2897-2905
- 13) Bons N, Lehmann S, Mestre-Frances N, Dormont D, Brown P. Brain and buffy coat transmission of bovine spongiform encephalopathy to primate *Microcebus murinus*. *Transfusion* 2002;42:513-516
- 14) Herzog C, Sales N, Etcheagaray N, Charbonnier A, Freire S, Dormont D, Deslys JP, Lasmezas CI. Tissue distribution of bovine spongiform encephalopathy agent in primates after intravenous or oral infection. *Lancet* 2004;363:422-428
- 15) Ironside JW, Head MW. Variant Creutzfeldt-Jakob disease: risk of transmission by blood and blood products. *Haemophilia* 2004;10 (suppl 4):64-69
- 16) Siso S, Gonzales L, Houston F, Hunter N, Martin S, Jeffrey M. The neuropathologic phenotype of experimental ovine BSE is maintained after blood transfusion. *Blood* 2006;108:745-748
- 17) Houston F, Foster JD, Chong A, Hunter N, Bostock CJ. Transmission of BSE by blood transfusion in sheep. *Lancet* 2000;356:999-1000
- 18) Houston F, McCutcheon S, Goldmann W, Chong A, Foster J, Siso S, Gonzalez L, Jeffrey M, Hunter N. Prion diseases are efficiently transmitted by blood transfusion in sheep. *Blood* 2008;112:4379-4745
- 19) Hewitt PE, Llewelyn CA, Mackenzie J, Will RG. Three reported cases of variant Creutzfeldt-Jakob disease transmission following transfusion of labile blood components. *Vox Sang* 2006;91:348
- 20) Paul-Ehrlich-Institut. Informationen zu Gerinnungsfaktoren und Prionen. www.pei.de/cln_115/nn_154580/DE/infos/fachkreise/am-infos-ablage/sik/2005-01-02-haemate-info.html?_nnn=true

- 21) Ironside JW. Creutzfeldt-Jakob Disease. *Treatment Hemophilia* 2009;49:1-14
- 22) Valleron AJ, Boelle PY, Will R, Cesbron JY. Estimation of epidemic size and incubation time based on age characteristics of vCJD in the United Kingdom. *Science* 2001;294:1726-1728
- 23) Clewley JP, Kelly CM, Andrews N, Vogliqi K, Mallinson G, Kaisar M, Hilton DA, Ironside JW, Edwards P, McCardle LM, Ritchie DL, Dabaghian R, Ambrose HE, Gill ON. Prevalence of disease related prion protein in anonymous tonsil specimens in Britain: cross sectional opportunistic survey. *BMJ* 2009;338:b1142
- 24) Alperovitch A, Will RG. Prediction of the size of vCJD epidemic in France. *CR Biol* 2002;325:33-36
- 25) Chadeau-Hyam M, Tard A, Bird S, Le Guennec S, Bemrah N, Volatier JL, Alperovitch A. Estimation of the exposure of the French population to BSE agent: comparison of the 1980-95 consumption of beef products containing mechanically recovered meat in France and the UK, by birth cohort and gender. *Stat Methods Med Res* 2003;12:247-260
- 26) Chadeau-Hyam M, Alperovitch A. Risk of variant Creutzfeldt-Jakob disease in France. *Int. J Epidemiol* 2005;34:46-52
- 27) Lefrère JJ, Hewitt P. From mad cows to sensible blood transfusion: the risk of prion transmission by labile blood components in the United Kingdom and in France. *Transfusion* 2009;49:797-812
- 28) Seitz R, Auer F, Blümel J, Burger R, Buschmann A, Dietz K, Heiden M, Hitzler WE, Klamm H, Kreil Th, Kretzschmar H, Nübling M, Offergeld R, Pauli G, Schottstedt V, Volkens P, Zerr I. Impact of vCJD on blood supply. *Biologicals* 2007;35:79-97
- 29) Dietz K, Raddatz G, Wallis J, Mueller N, Zerr I, Duerr HP, Lefèvre H, Siefried E, Loewer J. Blood transfusion and spread of variant Creutzfeldt-Jakob disease. *Emerg Inf Dis* 2007;13:89-96
- 30) Clarke C, Will RG, Ghani AC. Is there the potential for an epidemic of variant Creutzfeldt-Jakob disease via blood transfusion in the UK? *J R Soc Interface* 2007;4:675-684
- 31) Garske T, Ward HJT, Clarke P, Will RG, Ghani AC. Factors determining the potential for onward transmission of variant Creutzfeldt-Jakob disease via surgical instruments. *J R Soc Interface* 2006;3:757-766
- 32) Richtlinien zur Gewinnung von Blut und Blutbestandteilen und zur Anwendung von Blutprodukten (Hämotherapie) Deutscher Ärzte-Verlag 2007
- 33) Coste J, Prowse C, Eglin R, Fang C. A report on transmissible spongiform encephalopathies and transfusion safety. *Vox Sang* 2009;96:284-291
- 34) Burnouf T, Padilla A. Current strategies to prevent transmission of prions by human plasma derivatives. *Transfusion Clin Biol* 2006;13:320-328
- 35) Brown P, Rohwer RG, Dunstan BX, MacAuley C, Gajdusek DC, Drohan WN. The distribution of infectivity in blood components and plasma derivatives in experimental models of transmissible spongiform encephalopathy. *Transfusion* 1998;38:810-816
- 36) Stenland CJ, Lee DC, Petteway SR, Rubinstein R. Partitioning of human and sheep forms of the pathogenic prion protein during the purification of therapeutic proteins from human plasma. *Transfusion* 2002;42:1497-1500
- 37) Gregori L, Maring JA, MacAuley C, Dunstan B, Rentsch M, Kempf C, Rohwer RG. Partitioning of TSE infectivity during ethanol fractionation of human plasma. *Biologicals* 2004;32:1-10
- 38) Stellungnahme zum Risiko der Übertragung von vCJK durch Plasmaderivate aus humanem Plasma (Mitteilungen des Arbeitskreises Blut des Bundesministeriums für Gesundheit). *Bgbl* 2009;52:648-649
- 39) Gregori L, McCombie N, Palmer D, Birch P, Sowemimo-Coker SO, Giulivi A, Rohwer RG. Effectiveness of leucoreduction for removal of infectivity of transmissible spongiform encephalopathies from blood. *Lancet* 2004;364:529-531
- 40) Prowse C. Prion removal with filter. *ISBT Science Series* 2006;1:230-234.
- 41) Sowemimo-Coker SO, Pesci S, Andrade F, Kim A, Kascsak RB, Kascsak RJ, Meeker C, Carp R. Pall leukotrap affinity prion-reduction filter removes exogenous infectious prions and endogenous infectivity from red cell concentrates. *Vox Sang* 2006;90:265-275

- 42) Beekes M, Blümel J, Burger R, v Dewitz C, Gröner A, Heiden M, Kretzschmar H, Nübling M, Schlenkrich U, Schottstedt V, Seitz R, Strobel J, Willkommen H, Wirsing von König CH, Zerr I. Report of the working group „Overall blood supply strategy with regard to variant Creutzfeldt-Jakob Disease (vCJD)“. *Transfus Med Hemother* 2009;36:79-93
- 43) Castilla J, Saa P, Soto C. Detection of prions in blood. *Nat Med* 2005;11:982-985
- 44) Saa P, Castilla J, Soto C. Presymptomatic detection of Prions in Blood. *Science* 2006;313:92-94
- 45) Atarashi R, Moore RA, Sim VL, Hughson AG, Dorward DW, Onwubiko HA, Priola SA, Caughey B. Ultrasensitive detection of scrapie protein using seed conversion of recombinant prion protein. *Nat Meth* 2007;4:645-650
- 46) Pan T, Li R, Wong BS, Kang SC, Ironside J, Sy MS. Novel antibody enzyme-linked immunosorbent assay that distinguishes prion protein in sporadic and variant cases of Creutzfeldt-Jakob disease. *J Clin Microbiol* 2005;43:1118-1126
- 47) Gregori L, Gray BN, Rose E, Spinner DS, Kascsak RJ, Rohwer RG. A sensitive and quantitative assay for normal PrP in plasma. *J Virol Meth* 2008;149:251-259
- 48) Fagge T, Barclay GR, MacGregor I, Head M, Ironside J, Turner M. Variation in concentration of prion protein in the peripheral blood of patients with variant and sporadic Creutzfeldt-Jakob disease detected by dissociation enhanced lanthanide fluoroimmunoassay and flow cytometry. *Transfusion* 2005;45:504-513
- 49) Varshney M, Waggoner PS, Tan CP, Aubin K, Montagna RA, Craighead HG. Prion protein detection using nanomechanical resonator arrays and secondary mass labelling. *Anal Chem* 2008;80:2141-2148
- 50) Minor P, Newham J, Jones N, Bergeron C, Gregori L, Asher D, van Engelenburg F, Stroebel T, Vey M, Barnard G, Head M. Standards for the assay of Creutzfeldt-Jakob disease specimens. *J Gen Virol* 2004;85:1777-1784
- 51) Cooper JK, Ladhani K, Minor PD. Reference materials for the evaluation of pre-mortem variant Creutzfeldt-Jakob disease diagnostic assays. *Vox Sang* 2007;92:302-310
- 52) Akimov S, Yakovleva O, Vasilyeva I, McKenzie C, Cervenakova L. Persistent propagation of variant Creutzfeldt-Jakob disease agent in murin spleen stromal cell culture with features of mesenchymal stem cells. *J Virol* 2008;82:10959-10962
- 53) v Dewitz C. Legal and ethical aspects regarding the development and application of screening assays to detect vCJD infections. www.karger.com/doi/10.1159/000188082
- 54) Hewitt PE. Implications of notifying donors and recipients. *Vox Sang* 2004;87(suppl 2):S1-S2
- 55) Health Protection Agency, UK. Consultation on a new vCJD test for blood donors. http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1195733832029?p=1225960597236