

《达比加群酯相关严重不良事件文献病例分析》附件

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纳入文献的目录

- [1] Legrand M, Mateo J, Aribaud A, et al. The use of dabigatran in elderly patients[J]. *Arch Intern Med*, 2011, 171(14): 1285-1286. DOI: 10.1001/archinternmed.2011.314.
- [2] Wychowski MK, Kouides PA. Dabigatran-induced gastrointestinal bleeding in an elderly patient with moderate renal impairment[J]. *Ann Pharmacother*, 2012, 46(4): e10. DOI: 10.1345/aph.1Q747.
- [3] Cano EL, Miyares MA. Clinical challenges in a patient with dabigatran-induced fatal hemorrhage[J]. *Am J Geriatr Pharmacother*, 2012, 10(2): 160-163. DOI: 10.1016/j.amjopharm.2012.02.004.
- [4] Barton CA, McMillian WD, Raza SS, et al. Hemopericardium in a patient treated with dabigatran etexilate[J]. *Pharmacotherapy*, 2012, 32(5): e103-107. DOI: 10.1002/j.1875-9114.2012.01036.x.
- [5] Garber ST, Sivakumar W, Schmidt RH. Neurosurgical complications of direct thrombin inhibitors—catastrophic hemorrhage after mild traumatic brain injury in a patient receiving dabigatran[J]. *J Neurosurg*, 2012, 116(5): 1093-1096. DOI: 10.3171/2012.2.JNS112132.
- [6] Béné J, Saïd W, Rannou M, et al. Rectal bleeding and hemostatic disorders induced by dabigatran etexilate in 2 elderly patients[J]. *Ann Pharmacother*, 2012, 46(6): e14. DOI: 10.1345/aph.1Q705.
- [7] Dy EA, Shiltz DL. Hemopericardium and cardiac tamponade associated with dabigatran use[J]. *Ann Pharmacother*, 2012, 46(7-8): e18. DOI: 10.1345/aph.1R112.
- [8] Mastrobuoni S, Robblee JA, Boodhwani M. Spontaneous ascending aortic intramural haematoma in a patient on dabigatran[J]. *Interact Cardiovasc Thorac Surg*, 2012, 15(2): 299-300. DOI: 10.1093/icvts/ivs220.
- [9] Verma A, Chhibber V, Emhoff T, et al. Promise and challenges of anticoagulation with dabigatran[J]. *Clin Kidney J*, 2012, 5(4): 336-338. DOI: 10.1093/ckj/sfs068.
- [10] Kernan L, Ito S, Shirazi F, et al. Fatal gastrointestinal hemorrhage after a single dose of dabigatran[J]. *Clin Toxicol (Phila)*, 2012, 50(7): 571-573. DOI: 10.3109/15563650.2012.705290.
- [11] Lillo-Le Louët A, Wolf M, Soufir L, et al. Life-threatening bleeding in four patients with an unusual excessive response to dabigatran: implications for emergency surgery and resuscitation[J]. *Thromb Haemost*, 2012, 108(3): 583-585. DOI: 10.1160/TH12-03-0149.
- [12] Rochweg B, Xenodemetropoulos T, Crowther M, et al. Dabigatran-induced acute hepatitis[J]. *Clin Appl Thromb Hemost*, 2012, 18(5): 549-550. DOI: 10.1177/1076029611435840.
- [13] Stöllberger C, Rakusan S, Wimpissinger FT, et al. Spontaneous gross haematuria during dabigatran therapy for secondary stroke prevention[J]. *Thromb Haemost*, 2012, 108(3): 579-581. DOI: 10.1160/TH12-03-0156.
- [14] Yokoi K, Isoda K, Kimura T, et al. Diffuse alveolar hemorrhage associated with dabigatran[J]. *Intern Med*, 2012, 51(18): 2667-2668. DOI: 10.2169/internalmedicine.51.8345.
- [15] Chen BC, Viny AD, Garlich FM, et al. Hemorrhagic complications associated with dabigatran use[J]. *Clin Toxicol (Phila)*, 2012, 50(9): 854-857. DOI: 10.3109/15563650.2012.721888.
- [16] Okada M, Okada K. Exfoliative esophagitis and esophageal ulcer induced by dabigatran[J]. *Endoscopy*, 2012, 44 Suppl 2 UCTN: E23-E24. DOI: 10.1055/s-0031-1291503.
- [17] Husari A, Beydoun A, Sheik Ammar A, et al. The untold story of dabigatran etexilate: alveolar hemorrhage in an elderly patient with interstitial pulmonary fibrosis[J]. *J Thromb Thrombolysis*, 2013, 35(1): 81-82. DOI: 10.1007/s11239-012-0784-9.
- [18] Best M, Palmer K, Jones QC, et al. Acute adrenal failure following anticoagulation with dabigatran after hip replacement and thrombolysis for massive pulmonary embolism[J]. *BMJ Case Rep*, 2013, 2013: bcr2012007334. DOI: 10.1136/bcr-2012-007334.
- [19] Huang GS, Chance EA. When dabigatran and trauma collide[J]. *Am Surg*, 2013, 79(1): 113-114.
- [20] Fellows SE, Rosini JM, Curtis JA, et al. Hemorrhagic gastritis with dabigatran in a patient with renal insufficiency[J]. *J Emerg Med*, 2013, 44(2): e221-e225. DOI: 10.1016/j.jemermed.2012.02.042.
- [21] Maddry JK, Amir MK, Sessions D, et al. Fatal dabigatran toxicity secondary to acute renal failure[J]. *Am J Emerg Med*, 2013, 31(2): 462. DOI: 10.1016/j.ajem.2012.08.015.
- [22] Schattner A, Kozak N, Friedman J. Fatality in a patient treated with dabigatran[J]. *Am J Emerg Med*, 2013, 31(2): 443. DOI: 10.1016/j.ajem.2012.05.022.
- [23] Chang DN, Dager WE, Chin AI. Removal of dabigatran by hemodialysis[J]. *Am J Kidney Dis*, 2013, 61(3): 487-489. DOI: 10.1053/j.ajkd.2012.08.047.
- [24] Singh S, Savage L, Klein M, et al. Severe necrotic oesophageal and gastric ulceration associated with dabigatran[J]. *BMJ Case Rep*, 2013, 2013: bcr2013009139. DOI: 10.1136/bcr-2013-009139.

- [25] Harinstein LM, Morgan JW, Russo N. Treatment of dabigatran-associated bleeding: case report and review of the literature[J]. *J Pharm Pract*, 2013, 26(3): 264-269. DOI: 10.1177/0897190012465955.
- [26] Shafi ST, Negrete H, Roy P, et al. A case of dabigatran-associated acute renal failure[J]. *WMJ*, 2013, 112(4): 173-175, 176.
- [27] Singh T, Maw TT, Henry BL, et al. Extracorporeal therapy for dabigatran removal in the treatment of acute bleeding: a single center experience [J]. *Clin J Am Soc Nephrol*, 2013, 8(9): 1533-1539. DOI: 10.2215/CJN.01570213.
- [28] Lal Y, Van Heukelom J. Dabigatran: a cause of hematologic emergency[J]. *Am J Med Sci*, 2013, 346(3): 190-193. DOI: 10.1097/MAJ.0b013e31826c5a56.
- [29] Schaeffer S, Conway SE. Fatal bleeding associated with dabigatran[J]. *Am J Health Syst Pharm*, 2013, 70(19): 1651-1652. DOI: 10.2146/ajhp120518.
- [30] Moeckel GW, Luciano RL, Brewster UC. Warfarin-related nephropathy in a patient with mild IgA nephropathy on dabigatran and aspirin[J]. *Clin Kidney J*, 2013, 6(5): 507-509. DOI: 10.1093/ckj/sft076.
- [31] Finsterer J, Stöllberger C, Paul G, et al. Ischemic stroke and intestinal bleeding under dabigatran in metabolic myopathy[J]. *Cardiovasc Ther*, 2013, 31(6): e111-114. DOI: 10.1111/1755-5922.12044.
- [32] Kim J, Yadava M, An IC, et al. Coagulopathy and extremely elevated PT/INR after dabigatran etexilate use in a patient with end-stage renal disease[J]. *Case Rep Med*, 2013, 2013: 131395. DOI: 10.1155/2013/131395.
- [33] Basetty P, Bellovich K. A cautionary tale: dabigatran toxicity associated with allergic interstitial nephritis[J]. *Am J Kidney Dis*, 2013, 61(4): A24. DOI: 10.1053/j.ajkd.2013.02.039.
- [34] 张灵, 苏法荣, 徐家红, 等. 新型抗凝药物-达比加群酯致肠道出血一例[J]. *中华医学杂志*, 2013, 93(37): 3006-3007. DOI: 10.3760/cma.j.issn.0376-2491.2013.37.026.
Zhang L, Su FR, Xu JH, et al. A case of intestinal bleeding caused by a new anticoagulant drug-dabigatran etexilate[J]. *Natl Med J China*, 2013, 93(37): 3006-3007. DOI: 10.3760/cma.j.issn.0376-2491.2013.37.026.
- [35] Carter A, Sarda P, George M, et al. Hip arthroplasty fatality related to dabigatran induced gastrointestinal haemorrhage[J]. *Ann R Coll Surg Engl*, 2014, 96(1): 115E-117E. DOI: 10.1308/003588414X13824511649779.
- [36] Bachellerie B, Ruiz S, Conil JM, et al. Patient with acute renal injury presenting dabigatran overdose: hemodialysis for surgery[J]. *Ann Fr Anesth Reanim*, 2014, 33(1): 44-46. DOI: 10.1016/j.annfar.2013.11.011.
- [37] Simonsen CZ, Steiner T, Tietze A, et al. Dabigatran-related intracerebral hemorrhage resulting in hematoma expansion[J]. *J Stroke Cerebrovasc Dis*, 2014, 23(2): e133-e134. DOI: 10.1016/j.jstrokecerebrovasdis.2013.08.011.
- [38] Faust AC, Peterson EJ. Management of dabigatran-associated intracerebral and intraventricular hemorrhage: a case report[J]. *J Emerg Med*, 2014, 46(4): 525-529. DOI: 10.1016/j.jemermed.2013.11.097.
- [39] Stein P, Bosshart M, Brand B, et al. Dabigatran anticoagulation and stanford type A aortic dissection: lethal coincidence: case report with literature review[J]. *Acta Anaesthesiol Scand*, 2014, 58(5): 630-637. DOI: 10.1111/aas.12303.
- [40] Moon HH, Lee SE, Oh DJ, et al. Dabigatran toxicity secondary to acute kidney injury[J]. *J Korean Soc Clin Toxicol*, 2014, 12(2): 92-96.
- [41] Otteno H, Smith E, Huffaker RK. Dabigatran induced hemorrhagic cystitis in a patient with painful bladder syndrome[J]. *Case Rep Urol*, 2014, 2014: 871481. DOI: 10.1155/2014/871481.
- [42] Kang TS, Lord K, Kunjukunju N. Spontaneous choroidal hemorrhage in a patient on dabigatran etexilate (Pradaxa)[J]. *Retin Cases Brief Rep*, 2014, 8(3): 175-177. DOI: 10.1097/ICB.0000000000000035.
- [43] Zimmer V, Casper M, Lammert F. Extensive dabigatran-induced exfoliative esophagitis harboring squamous cell carcinoma[J]. *Endoscopy*, 2014, 46 Suppl 1 UCTN: E273-274. DOI: 10.1055/s-0034-1365782.
- [44] Paul S, Hamouda D, Prashar R, et al. Management of dabigatran-induced bleeding with continuous venovenous hemodialysis[J]. *Int J Hematol*, 2015, 101(6): 594-597. DOI: 10.1007/s12185-015-1739-7.
- [45] Bamps S, Decramer T, Vandenbussche N, et al. Dabigatran-associated spontaneous acute cervical epidural hematoma[J]. *World Neurosurg*, 2015, 83(2): 257-258. DOI: 10.1016/j.wneu.2014.10.012.
- [46] Montaruli B, Erroi L, Vitale C, et al. Dabigatran overdose: case report of laboratory coagulation parameters and hemodialysis of an 85-year-old man[J]. *Blood Coagul Fibrinolysis*, 2015, 26(2): 225-229. DOI: 10.1097/MBC.0000000000000221.
- [47] Bouchard J, Ghannoum M, Bernier-Jean A, et al. Comparison of intermittent and continuous extracorporeal treatments for the enhanced elimination of dabigatran[J]. *Clin Toxicol (Phila)*, 2015, 53(3): 156-163. DOI: 10.3109/15563650.2015.1004580.
- [48] Claisse G, Delavenne X, Masson I, et al. Venovenous haemodiafiltration for the management of dabigatran overdose in intensive care unit[J]. *Clin Kidney J*, 2015, 8(2): 199-201. DOI: 10.1093/ckj/sfv001.
- [49] Scheppach W, Meesmann M. Exfoliative esophagitis while taking dabigatran[J]. *Dtsch Med Wochenschr*, 2015, 140(7): 515-518. DOI: 10.1055/s-0041-101313.
- [50] Abdallah M, Abdallah T, Abi Rafeh N, et al. A sanguineous pleuro pericardial effusion in a patient recently treated with dabigatran[J]. *Heart Lung*, 2015, 44(3): 209-211. DOI: 10.1016/j.hrtlng.2015.02.006.
- [51] Chai-Adisaksopha C, Hillis C, Lim W, et al. Hemodialysis for the treatment of dabigatran-associated bleeding: a case report and systematic review[J]. *J Thromb Haemost*, 2015, 13(10): 1790-1798. DOI: 10.1111/jth.13117.
- [52] Kumar R, Smith RE, Henry BL. A review of and recommendations for the management of patients with life-threatening dabigatran-associated hemorrhage: a single-center university hospital experience[J]. *J Intensive Care Med*, 2015, 30(8): 462-472. DOI: 10.1177/0885066614527417.
- [53] Escoli R, Santos P, Andrade S, et al. Dabigatran-related nephropathy in a patient with undiagnosed IgA nephropathy[J]. *Case Rep Nephrol*, 2015, 2015: 298261. DOI: 10.1155/2015/298261.
- [54] Deidda A, Rapallo M, Sofia M, et al. Thrombocytopenia possibly induced by dabigatran: a case report[J]. *J Pharmacovigilance*, 2015, 3(4): 170. DOI: 10.4172/2329-6887.1000170.
- [55] Potolidis E, Mandros C, Kotsa K, et al. Dabigatran associated leukocytoclastic vasculitis[J]. *Case Rep Med*, 2015, 2015: 616109. DOI: 10.1155/

- 2015/616109.
- [56] Kızıllırmak F, Gunes HM, Guler E, et al. Hemopericardium and cardiac tamponade in a patient treated with dabigatran etexilate[J]. *Korean Circ J*, 2016, 46(1): 99-101. DOI: 10.4070/kcj.2016.46.1.99.
- [57] Crapelli GB, Bianchi P, Isgrò G, et al. A case of fatal bleeding following emergency surgery on an ascending aorta intramural hematoma in a patient taking dabigatran[J]. *J Cardiothorac Vasc Anesth*, 2016, 30(4): 1027-1031. DOI: 10.1053/j.jvca.2015.10.017.
- [58] Marino KK, Santiago RA, Dew RB 3rd, et al. Management of dabigatran-associated bleeding with two doses of idarucizumab plus hemodialysis [J]. *Pharmacotherapy*, 2016, 36(10): e160-e165. DOI: 10.1002/phar.1830.
- [59] Monti M, Vincentelli G, Borgognoni F, et al. A dangerous adverse event in the use of dabigatran[J]. *Italian J Med*, 2016, 10: 250-251. DOI: 10.4081/ijm.2015.629.
- [60] 张卫芳, 陆社桂, 熊淑华, 等. 达比加群酯联合塞来昔布致上消化道出血 1 例[J]. *中国新药与临床杂志*, 2016, 35(8): 596-598. DOI: 10.14109/j.cnki.xyylc.2016.08.015.
- Zhang WF, Lu SG, Xiong SH, et al. A case of upper gastrointestinal bleeding caused by dabigatran etexilate combined with celecoxib[J]. *Chin J New Drugs Clin*, 2016, 35(8): 596-598. DOI: 10.14109/j.cnki.xyylc.2016.08.015.
- [61] Stöllberger C, Heger M, Finsterer J. Hemopericardium under dabigatran for stroke prevention in atrial fibrillation[J]. *Blood Coagul Fibrinolysis*, 2017, 28(2): 185-188. DOI: 10.1097/MBC.0000000000000553.
- [62] Jud P, Gary T, Tiesenhause K, et al. Renal failure caused by a partly calcified aortic aneurysm in a patient with dabigatran therapy: a case report[J]. *Medicine (Baltimore)*, 2017, 96(17): e6789. DOI: 10.1097/MD.00000000000006789.
- [63] Akgedik R, Günaydin Z, Bektas O, et al. Spontaneous hemothorax due to dabigatran use in a patient with atrial fibrillation[J]. *Clin Respir J*, 2017, 11(3): 394-396. DOI: 10.1111/crj.12327.
- [64] Kalaitzidis RG, Duni A, Liapis G, et al. Anticoagulant-related nephropathy: a case report and review of the literature of an increasingly recognized entity[J]. *Int Urol Nephrol*, 2017, 49(8): 1401-1407. DOI: 10.1007/s11255-017-1527-9.
- [65] Huang J, Lin W, Lv D, et al. Dabigatran-induced massive spontaneous hemothorax[J]. *Drug Saf Case Rep*, 2017, 4(1): 12. DOI: 10.1007/s40800-017-0054-z.
- [66] Jelani QU, Gordon R, Schussheim A. Dabigatran-induced spontaneous hemopericardium and cardiac tamponade[J]. *Tex Heart Inst J*, 2017, 44(5): 370-372. DOI: 10.14503/THIJ-16-6073.
- [67] Kaur U, Chakrabarti SS, Manna S, et al. Severe haematuria of lower urinary tract origin with low dose dabigatran use in three Indian elderly patients: unresolved issues in the safety of novel oral anticoagulants[J]. *Ther Adv Drug Saf*, 2018, 9(1): 89-91. DOI: 10.1177/2042098617742344.
- [68] Mathais Q, Esnault P, Cruc M, et al. Spontaneous cervical spinal epidural hematoma associated with dabigatran[J]. *World Neurosurg*, 2018, 112: 264-266. DOI: 10.1016/j.wneu.2018.01.199.
- [69] Jansky L, Mukkamala P, Jebakumar D, et al. Acute kidney injury and undiagnosed immunoglobulin A nephropathy after dabigatran therapy[J]. *Proc (Bayl Univ Med Cent)*, 2018, 31(3): 321-323. DOI: 10.1080/08998280.2018.1463036.
- [70] Havig SM, Lea D, Krpo M, et al. Fatal adverse event with dabigatran in elderly patient with reduced kidney function[J]. *Basic Clin Pharmacol Toxicol*, 2018, 123(2): 221-226. DOI: 10.1111/bcpt.12985.
- [71] Shiroshita A, Nakashima K, Tanaka Y, et al. Successful treatment with idarucizumab for diffuse alveolar hemorrhage induced by dabigatran etexilate: a case report[J]. *J Thromb Thrombolysis*, 2018, 46(2): 271-273. DOI: 10.1007/s11239-018-1676-4.
- [72] Patel S, Hossain MA, Ajam F, et al. Dabigatran-induced acute interstitial nephritis: an important complication of newer oral anticoagulation agents[J]. *J Clin Med Res*, 2018, 10(10): 791-794. DOI: 10.14740/jocmr3569w.
- [73] Sharfuddin N, Nourbakhsh M, Box A, et al. Anticoagulant related nephropathy induced by dabigatran[J]. *Case Rep Nephrol*, 2018, 2018: 7381505. DOI: 10.1155/2018/7381505.
- [74] 李蒙, 谢栋, 李正翔, 等. 达比加群酯致罕见胆汁淤积型肝损伤 1 例[J]. *中国医院药学杂志*, 2018, 38(23): 2498-2499. DOI: 10.13286/j.cnki.chinhosp-pharmacy.2018.23.24.
- Li M, Xie D, Li ZX, et al. Rare cholestatic liver injury caused by dabigatran ester[J]. *Chin J Hosp Pharm*, 2018, 23: 2498-2499. DOI: 10.13286/j.cnki.chinhosp-pharmacy.2018.23.24.
- [75] 岳小莉. 达比加群酯致胃肠道出血 1 例[J]. *临床合理用药杂志*, 2019, 12(19): 128-129. DOI: 10.15887/j.cnki.13-1389/r.2019.19.072.
- Yue XL. A case of gastrointestinal bleeding caused by dabigatran etexilate[J]. *Chin J Clin Ration Drug Use*, 2019, 12(19): 128-129. DOI: 10.15887/j.cnki.13-1389/r.2019.19.072.
- [76] 王霞, 晏妮, 吕中明, 等. 1 例复杂性药品不良反应的药学监护[J]. *中南药学*, 2019, 17(5): 782-784. DOI: 10.7539/j.issn.1672-2981.2019.05.032.
- Wang X, Yan N, Lyu ZM, et al. Pharmaceutical care for one patient with complex adverse drug reactions[J]. 2019, 17(5): 782-784. DOI: 10.7539/j.issn.1672-2981.2019.05.032.
- [77] Shankar S, Saxena A, Saverimuthu A, et al. Dabigatran-associated diffuse alveolar hemorrhage[J]. *Am J Ther*, 2020, 27(3): e301-e303. DOI: 10.1097/MJT.0000000000000816.