

表1 模造薬に関する最近の文献とその内容のまとめ

年	被害内容	原因	文献
2017	9人の患者が偽造A型ボツリヌス神経毒素の投与により末梢筋力低下のボツリヌス中毒を発症した。完全な回復に6-12週間かかった。(エジプト)	高濃度のA型ボツリヌス神経毒素を含む偽造 Neuroxin <sup>®</sup> 投与	Rashid EAMA, El-Mahdy NM, Kharoub HS, Gouda AS, ElNabarawy NA, Mégarbane B. Basic Clin Pharmacol Toxicol. 2018 Nov;123(5):622-627. doi: 10.1111/bcpt.13048. Epub 2018 Jun 21.
2019	青年男子が砕かれた錠剤をXanaxだと思って服用したが模造医薬品であった。一時昏睡状態となったが回復した。分析の結果、合成麻薬であるU-47700が検出された(米国)	偽造薬中のU 47700(合成麻薬)中毒	Chapman BP, Lai JT, Krotulski AJ, Fogarty MF, Griswold MK, Logan BK, Babu KM. Pediatr Emerg Care. 2019 Feb 15. doi: 10.1097/PEC.00000000000001775. [Epub ahead of print]

表 2 . 模造薬による健康被害報告

番号	発生年	国	健康被害	原因	参考文献
01	1969	南アフリカ	7 人の子供死亡	ジエチレングリコール入りの鎮静剤	Bonati, 2009; Alkahtani et al., 2010; Bowie, 1972
02	1982	米国	7 人死亡	シアン化合物入りパラセタモール	Cockburn et al., 2005
03	1986	インド	14 人の患者死亡	ジエチレングリコールで汚染された不純なグリセリン	Pandya, 1988; Gautam et al., 2009
04	1988	ナイジェリア	21 歳の女性死亡	偽造インスリンによる高血糖	Cheng, 2009
05	1989	ハイチ	89 人死亡	ジエチレングリコールで調製されたパラセタモール咳止めシロップ	Cohen et al., 2007
06	1990	ナイジェリア	109 人の子供死亡	ジエチレングリコールで汚染されたシロップ/エリキシル剤による急性腎不全	Alfadi et al., 2013; Bonati, 2009; Alkahtani et al., 2010; Cockburn et al., 2005; Gautam et al., 2009; ten Ham, 1992; Okuonghae et al., 1992; Alubo, 1994; Stearn, 2004; Deisingh, 2005; Garuba et al., 2009; Hellstrom, 2011; Oshikoya & Senbanjo, 2010; Hall et al., 2006; Newton et al., 2006a; Reidenberg & Conner, 2001; Roger & Boateng, 2007
07	1990	バングラデシュ	51 の子供を含む 236 人の患者死亡	ジエチレングリコールで汚染されたパラセタモールシロップ	Hanif et al., 1995; Bonati, 2009; Alkahtani et al., 2010; Cockburn et al., 2005; Gautam et al., 2009; Hall et al., 2006; Newton et al., 2006a; Reidenberg & Conner, 2001; Roger & Boateng, 2007; Manchester, 2005
08	1992	アルゼンチン	26 人死亡	高レベルのジエチレングリコールを含むプロポリスシロップ	O'Brien et al., 1998; Alkahtani et al., 2010; Cockburn et al., 2005; Gautam et al., 2009; Newton et al., 2006a; Reidenberg & Conner, 2001; Roger & Boateng, 2007
09	1995	ハイチ	89 人以上の子供が死亡	ジエチレングリコールが混入したパラセタモールシロップ	Alfadi et al., 2013; O'Brien et al., 1998; Bonati, 2009; Alkahtani et al., 2010; Cockburn et al., 2005; Stearn, 2004; Deisingh, 2005; Hall et al., 2006; Newton et al., 2006a; Reidenberg & Conner, 2001; Roger & Boateng, 2007; CDC, 1996; Junod, 2000; Rassool, 2004; Wertheimer & Santella, 2005; Burki, 2010; Ziance, 2008; Wertheimer, 2003; Baratta et al., 2012; ten Ham, 2003
10	1995	ニジェール	2500 人死亡	偽造髄膜炎ワクチン	Alfadi et al., 2013; Stearn, 2004; Rassool, 2004; Wertheimer & Santella, 2005; Burki, 2010; Ziance, 2008; Baratta

					et al., 2012; Mukhopadhyay, 2007; Nsimba, 2008; Wertheimer & Norris, 2009; Reynolds & McKee, 2010
11	1998	ブラジル	200 人の望まない妊娠	偽造避妊薬	Stearn, 2004; Deisingh, 2005; Reidenberg & Conner, 2001; Wertheimer & Santella, 2005; Ziance, 2008; Wertheimer et al., 2003; Csillag, 1998
12	1998	インド	36 人の子供が急性腎不全に罹患し、そのうち 33 人死亡	ジエチレングリコールで汚染された咳去痰薬	Bonati, 2009; Alkahtani, et al., 2010; Cockburn et al., 2005; Gautam et al., 2009; Deisingh, 2005; Hellstrom, 2011; Hall et al., 2006; Newton et al., 2006a; Reidenberg & Conner, 2001; Roger & Boateng, 2007; Rassool, 2004; Mukhopadhyay, 2007; Kumar, 2001; Singh et al., 1998; Hari et al., 2006
13	1998	ブラジル	7 人死亡	偽造抗がん薬	Reidenberg & Conner, 2001; Csillag, 1998
14	1998	ロシア	1000 人入院	偽造インスリン	Ziance, 2008
15	1999	カンボジア	30 人死亡	スファドキシシ - ピリメタミンで偽造したアルテスネート	Roger & Boateng, 2007; Rassool, 2004; Mukhopadhyay, 2007
16	1999	米国	17 名死亡、254 人に副作用	偽造ゲンタマイシン	Moken, 2003
17	2001	米国	7 州で数人の患者が組織腫脹または皮膚発疹を発症	偽造成長ホルモン注射投与	Editorial, 2001
18	2002	米国	16 歳の少年が痛みを伴う痙攣を発症	非常に少量のエボジェンしか含まない薬剤の注射	Dooley et al., 2010
19	2002	米国	1 人の女性ががん患者死亡	表示規格の 1/20 のエボエチンアルファしか含まない薬剤投与	Lawler, 2009
20	2004	ナイジェリア	3 病院が副作用報告	微生物で汚染された輸液	Garuba et al., 2009
21	2004	カナダ	4 人死亡	タルクを圧縮して作られた偽造ノルバスク摂取による心臓発作と脳卒中	Teichman, 2007
22	2004	アルゼンチン	2 人の女性が死亡、1 人は 26 週の未熟児を出産	鉄剤の注射	Stoneman et al., 2011
23	2005	米国	男性 5 人死亡	含有量の多い偽造デキストロメトर्फアン摂取	Ziance, 2008
24	2005	米国	数人の呼吸麻痺	偽造ボトックス	Liang, 2006
25	2005	ミャンマー	23 歳の男性が脳マラリアで死亡	パラセタモールを主成分とする偽造アルテスネイト錠	Newton et al., 2006b; Atemkeng et al., 2007
26	2006	カナダ	4 人死亡	タルクパウダーを含む偽造パイアグラ	Cheng & Shaughnessy, 2008
27	2006	パナマ	子供 100 人以上を含む 200 人死亡	ジエチレングリコールで汚染された偽造パラセタモール鎮咳薬	Rentz et al., 2006; Alfadl et al., 2013; Reynolds & McKee, 2010; Seiter, 2009; Marini et al., 2010
28	2007	カナダ	58 歳の女性が死亡	インターネットで購入した致死量の 15 倍量のアルミニウムを含むイレノール	Teichman, 2007; Cheng & Shaughnessy, 2008; Jackson et al., 2012
29	2007	香港	10 人の非糖尿病患者が低血糖により入院、1 人の死亡、1	グリベンクラミドを含有する勃起不全のための生薬。(黄色のカプセルは假偉哥とラベルされ、	Kao et al., 2009

			人が ICU で治療	赤/ピンクのカプセルは「南原」と名付けられている)	
30	2008	中国	12 人の患者死亡	溶媒としてジエチレングリコールを用いて製造されたアルミシリシン	Alkahtani et al., 2010; Lin et al., 2008
31	2008	米国	81 人の死亡を含む 785 人に有害事象	過硫酸化コンドロイチン硫酸で汚染された偽造ヘパリン	Alfadi et al., 2013; Editorial, 2008; Lewis, 2009; Labadie, 2012
32	2008	シンガポール	150 人の患者が入院し、7 人が昏睡状態となり 4 人死亡	3 種類のハーブ製剤とシルデナフィルを含む偽造シアリス (タダラフィル)	Hellstrom, 2011; Kao et al., 2009; Sugita & Miyakawa, 2010; WHO, 2010; Liang & Mackey, 2012
33	2008	ノルウェー	44 人が中毒	スコボラミンを含有する偽造フルニトラゼパム錠	Vallersnes et al., 2009
34	2008	ナイジェリア	118 人の子供死亡	ジエチレングリコールを含むパラセタモールシロップ	Bonati, 2009; Alkahtani et al., 2010; Oshikoya & Senbanjo, 2010; Reynolds & McKee, 2010; Seiter, 2009
35	2009	中国	2 人が死亡、9 人が入院	通常の 6 倍量のグリベンクラミドを含む偽造薬	Cheng, 2009; Lewis, 2009; Holzgrabe & Malet-Martino, 2011
36	2010	オーストラリア	54 歳男性が重度の低血糖	偽造シアリス摂取	Chaubey et al., 2010
37	2010	中国	81 人の患者が眼内炎症に罹患	エンドトキシンで汚染された偽造品ペバシズマブ	Sun et al., 2011; Wang et al., 2013
38	2013	ギニアビサウ	74 人の患者が再発または痙攣の頻度が増加し、その後 2 人が死亡	偽造フェノバルビタール	Otte et al., 2015
39	2014	不明	65 歳の男性が肝毒性症状を発症	シルデナフィルを含む漢方薬	Nissan et al., 2016
40	2014	ナイジェリア	患者 105 人の発作頻度が高まった	偽造フェノバルビタール	Otte et al., 2015
41	2014	コンゴ	930 人がディストニック反応を起こし、11 人が死亡	ハロペリドールを含む偽造ジアゼパム	Peyraud et al., 2017
42	2014	米国	1 人の死亡を含む 40 人の患者に有害事象	大量のエンドトキシンと著しい細菌汚染を含む非滅菌偽造静脈注射液	Torrie et al., 2016
43	2015	米国	8 人に有害事象	フェンタニルやエチゾラムを含む偽造アルプラゾラム錠の摂取	Arens et al., 2016
44	2015	インド	15 人の患者が眼内炎症に罹患	偽造ペバシズマブの注射	Stewart et al., 2016
45	2016	米国	7 人に有害事象	フェンタニルおよびプロメタジンを含む偽造ノルコ (アセトアミノフェンおよびヒドロコドン)	Vo et al., 2016
46	2016	米国	サンフランシスコで 23 歳の男性が死亡	フラニルフェンタニルを含むオキシコドンを模した青い錠剤の摂取	Martucci et al., 2018
47	2017	エジプト	9 人の患者が偽造 A 型ボツリヌス神経毒素投与による医原性ボツリヌス中毒 (後天性神経筋接合部疾患) に発症	高濃度の A 型ボツリヌス神経毒素を含む偽造 Neuroxin R による治療	Rashid et al., 2018
48	2019	米国	若い成人男子が呼吸抑制	オピオイド (U-47700) を含む偽造アルプラゾラム (Xanax) の摂取	Chapman et al., 2019

49	不明	米国	子供1人がヒト成長ホルモンの注射後に灼熱感	安価なインスリンを含むヒト成長ホルモン	Vastag, 2003
50	不明	英国	男性1人が急性鉛中毒	勃起不全のための偽造アーユルヴェーダ薬 (Kamagra)	Barber & Jacyna, 2011
51	不明	日本	39歳男性が低血糖	極めて大量のグリベンクラミドと少量のシルデナフィルを含む精力剤	Kuramoto et al., 2015

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