

Clinical and Radiographic Characteristics Associated With Abusive and Nonabusive Head Trauma: A Systematic Review

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背景

- Abusive head trauma (AHT) 是小於1歲兒童最常見的創傷性死亡
– 24–34 / 100 000; 仍被低估
- 目前仍沒有gold standard diagnostic test

研究目的

- 確定與AHT及non-abusive head trauma (nAHT)相關的臨床及影像特徵

方法

- MEDLINE (1950 ~)、EMBASE (1980~)、各大學會會刊 (1999~); 18th Nov 2010
- Inclusion criteria:
– < 6 歲的住院病患
– 頭部外傷

TABLE 3 Clinical and Radiographic Characteristics Associated With AHT and nAHT				
Characteristic	No. of Studies	OR (95% CI), OR >1 Favors Abusive; OR <1 Favors Nonabusive	I ² , %	P
Subdural hemorrhage(s)				
All studies	15	8.82 (6.77–11.74)	0	<.001
High-quality studies	14	8.80 (6.75–11.73)	0	<.001
Epidural hemorrhage(s)				
All studies	10	0.15 (0.08–0.28)	0	<.001
High-quality studies	9	0.15 (0.08–0.28)	0	<.001
Subarachnoid hemorrhage(s)				
All studies	12	1.42 (0.67–3.0)	76	.26
High-quality studies	11	1.31 (0.58–3.0)	80	.32
Cerebral edema				
All studies	9	2.17 (1.06–4.43)	54	.03
High-quality studies	7	2.05 (0.82–5.10)	65	.12
Cerebral ischemia				
High-quality studies	4	4.79 (1.84–12.40)	29	.00
Diffuse axonal injury				
All studies	6	1.47 (0.26–8.32)	61	.66
High-quality studies	4	0.85 (0.06–2.40)	72	.89
Skull fracture(s) or intracranial injury				
High-quality studies	4	7.76 (1.06–57.06)	88	.04
Isolated skull fracture(s)				
High-quality studies	2	0.01 (0.003–0.04)	0	<.001
Long bone fracture(s)				
All studies	6	4.254 (2.50–7.19)	0	<.001
High-quality studies	6	4.344 (2.52–7.48)	0	<.001
Metaphyseal fracture(s)				
All studies	2	11.78 (2.18–63.41)	0	.004
High-quality studies	1	1.506 (1.06–117.72)	Single estimate	<.001
Rib fracture(s)				
All studies	7	8.80 (4.04–19.1)	1	<.001
High-quality studies	6	9.16 (4.42–21.93)	0	<.001

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結論

- 整理出AHT及nAHT的相關臨床及影像特徵
- 需要未來multicenter prospective trial

討論

- 區別具挑戰性: Re-injury & Death VS 家庭革命
- Battered Child Syndrome = SDH + Skeletal Injury + Bruises *Kempe et al. (1962)*
- Apnea, retinal hemorrhage, fractures (rib, long bone, skull) & seizure *Maguire et al. (2009)*

討論

- SDH, hypoxic ischemic injury, cerebral edema *Kemp et al. (2011)*
- ↑ 挑剔性
 - 更嚴重(住院)及年輕的病人群

討論

- Limitations
 - Reporting missing data
 - Recall bias
 - Selection bias