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Original Contribution

Analysis of closed malpractice medical claims against Taiwanese EDs: 2003 to 2012

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Introduction

- Emergency care providers often work under adverse conditions → are at a particularly high risk for malpractice claims
- the average time between the alleged incident and litigation closure is 45 months, insurer will incur more than $14000 in expenses
- The cost of a medical malpractice claim ranges from US $313205 to $521560

Introduction

- In Taiwan, EP's pay the highest median indemnity payments in civil courts → 93% of physicians practice defensive medicine
- it is important to identify clinical behavior and medical error that leads to lawsuits
- this study aimed to examine a non-Western country's experience of ED-related closed medical claims and identify high-risk diseases

Methods

- The judicial system of Taiwan consists of the supreme court, high courts, and district courts
- The results of the medical appraisal were categorized into appropriate, negligent or controversial
- We conducted a retrospective study and reviewed the Taiwanese civil court verdicts that pertained to EDs from 2003 to 2012

Methods

- The outcome of injury was categorized into 4 grades: death; grave injury, permanent injury or others
- The level of hospital was also documented: medical center, regional hospital, or district hospital
- The type of error was categorized into 3 groups: (1) Diagnosis errors (2) Performance errors (3) Other errors

Results

- the annual risk of malpractice litigation was 0.63%
- Seven cases (11.1%) resulted in an indemnity payment, with a mean payment of $134738
- Most verdicts (56 [88.9%]) were settled in favor of the clinician

Results

Table 1
Demographic data and characteristics of medical litigation cases in Taiwan

		All claims, n = 63	Indemnity paid, n = 7	No indemnity paid, n = 56
Patient type	Nontrauma	41 (65.1)	3 (42.9)	38 (67.9)
	Trauma	15 (23.8)	4 (57.1)	11 (19.6)
	Pediatric	7 (11.1)	0	7 (12.5)
Level of hospital[a]	Center	19 (28.8)	3 (42.9)	16 (27.1)
	Regional	40 (60.6)	4 (57.1)	36 (61.0)
	District	7 (10.6)	0	7 (11.9)
Court that made the final judgment	Supreme	12 (19.1)	3 (42.9)	9 (16.1)
	High	16 (25.4)	0	16 (28.6)
	District	35 (55.6)	4 (57.1)	31 (55.4)
Appraisal results[b]	Appropriate	42 (71.2)	0	42 (80.8)
	Controversial	8 (13.6)	0	8 (15.4)
	Negligence	9 (15.3)	7 (100)	2 (3.9)
Incident-to-litigation closure (mo)		57.7 ± 26.8	70.6 ± 26.4	56.2 ± 26.6

Data presented in parentheses represent a percentage of cases (%) or as mean ± SD.
[a] Two patients sued 1 center hospital and 1 regional hospital; 1 patient sued 2 regional hospitals.
[b] Four cases without indemnity paid were not sent for medical appraisal.

Results

Table 2
Indemnity claimed and paid, stratified by patient outcome

	Indemnity claimed, n = 63				Indemnity paid, n = 7	
Patient outcome	Death, n = 38	Grave, n = 12	Permanent, n = 12	Other, n = 1	Death, n = 5	Grave, n = 2
Total amount	213.1 ± 167.2	447.4 ± 398.8	149.6 ± 154.3	168.4	68.7 ± 29.3	299.8 ± 37.0
Interment fee	10.5 ± 8.4 (81.6%)	–	–	–	9.84 ± 9.43 (80%)	–
Medical expenses	6.8 ± 9.9 (39.5%)	304.8 ± 285.4 (66.7%)	48.98 ± 52.84 (50%)	–	1.5 ± 2.0 (40%)	186.4 ± 66.7 (100%)
Salary loss	19.22 (2.6%)	239.2 ± 185.2 (41.7%)	155.2 ± 244.8 (41.7%)	101.7 (100%)	–	12.0 (50%)
Economic support damages	73.3 ± 77.4 (60.5%)	–	10.0 (8.3%)	–	11.8 ± 6.6 (40%)	–
Noneconomic damages	145.2 ± 136.6 (92.1%)	131.5 ± 83.5 (75%)	47.3 ± 37.7 (75%)	66.7 (100%)	55.5 ± 26.3 (100%)	53.3 ± 18.9 (100%)

Data are represented as median dollars (1 unit = 1000 US dollars) ± SD. Data presented as a number within the parenthesis represent the percentage of plaintiffs that claimed this type of indemnity in the mean amount presented. For example, 39.5% of plaintiffs on behalf of deceased patients claimed medical expenses, the mean amount of said expenses totaling $6800 ± $9900.

- Almost all of the cases (93.7%) were sent for medical appraisal at least once during the trial
- Most cases (71.2%) were deemed as appropriate, 8 cases (13.6%) were considered controversial, 9 cases were deemed to be negligent

Results

- The most common conditions involved in the alleged malpractice claims were infectious diseases (27.0%), along with central nervous system (CNS) bleeding (15.9%) and trauma cases (12.7%)

Table 3
Disputed diseases in medical claims categorized by type of error

Type of error	No. of cases (n = 63)
Diagnosis error	33 (52.4%)
CNS bleeding	8
Meningitis	5
Ischemic stroke	4
Trauma (testis rupture, fracture, liver rupture, pneumoperitoneum)	4
Infectious diseases	4
Aortic vascular lesion	3
Drug or procedure complications (CNS bleeding, hemothorax)	2
Myocarditis	1
Testis torsion	1
Hepatoma	1
Performance error	24 (38.1%)
Infectious diseases	7
Trauma (cervical spine fracture, multiple trauma, blunt eye injury)	4
Respiratory failure	3
Pancreatitis	3
Ischemic stroke	2
CNS bleeding	2
Hemolytic anemia	1
Cardiogenic shock	1
Seizure	1
Out-of-hospital cardiac arrest	1
Other errors	6 (9.5%)
New onset disease not related to initial ED visit	4
Fall related to inadequate protection	1
Drug-induced anaphylactic shock	1

Results

- Most of the medical errors were diagnosis related (71.4%), although there was performance error in 2 cases (28.6%)

Table 4
Patient outcome and medical errors in cases with indemnity paid

Case no.	Disease	Patient outcome	Medical error
1	CNS bleeding	Death	Misdiagnosis of CNS bleeding after heparin usage in a brainstem stroke patient with progressive deteriorating consciousness
2	CNS bleeding	Death	Delayed diagnosis of traumatic epidural hemorrhage in a patient with scalp laceration and persistent headache
3	CNS bleeding	Grave	Delayed diagnosis of traumatic epidural hemorrhage in an alcohol intoxicated patient without full consciousness
4	Traumatic small bowel rupture	Death	Misdiagnosis of pneumoperitoneum by computed tomography in a patient with rib fracture and hemothorax
5	Procedure complications	Death	Failure to recognize and treat delayed hemothorax that occurred 1 d after chest tube insertion in a patient with persistent chest pain
6	Hemolytic anemia	Death	Failure to order O-negative blood in an acute anemic patient with uncertain blood type; failure to supervise management of intern
7	Respiratory failure	Grave	A 75-min delay for specialist consultation in a difficult to intubate patient

Results

Table 5
Patient outcome in cases with identified medical errors but no indemnity payment

Case no.	Disease	Patient outcome	Medical error
1	Sepsis	Death	Delayed administration of antibiotics in rapidly deteriorating septic shock patient
2	Sepsis	Death	CNS bleeding, induced by fall related to inadequate protection; died of sepsis 2 mo postadmission
3	CNS bleeding	Death	Delayed diagnosis of CNS bleeding in patient with traumatic right subdural hemorrhage postoperation
4	Sepsis	Permanent injury–retarded growth	Inappropriate monitoring of intravenous puncture site resulting in secondary infection
5	Traumatic optic neuropathy	Permanent injury–decreased vision	Delayed consultation with ophthalmologist
6	Testis torsion	Permanent injury–orchiectomy	Delayed diagnostic examination and consultation for testis torsion due to misdiagnosis in cases with atypical presentation (testis pain for 3 d)
7	Ischemia stroke	Permanent injury–aphasia	Delayed consultation with neurologist in patient presenting with aphasia

- the result of the medical appraisal was negligence in 2 cases, controversial in 3 cases, and appropriate in 2 cases

Discussion

- the estimated annual malpractice litigation risk for EP's was 0.52% in the United States (0.63% in Taiwan)
- 88.9% were settled in favor of the physicians, which is similar
- In Taiwan, the average indemnity paid for cases that ruled in favor of the plaintiff was $134738 (difficult to directly compare)

Discussion

- almost 90% of the claims were dismissed without indemnity paid
- When indemnity was paid, the amount was only 48.0% of the indemnity claimed
- The threat of malpractice lawsuits simply leads physicians to practice defensive medicine, which raises the cost of health care.

Discussion

- The fear of malpractice litigation may arise from indirect costs including time (57.7 ± 26.7 months), emotional stress, added work, interrupted schedule, and reputational damage.
- In none of the examined cases did the judge adjudicating the appeal reverse the decision of the initial judge

Discussion

- approximately 80% had poor prognosis of either death or grave injury
- the indemnity paid in grave injury was 4.36 times higher than in expired cases → creates moral and economical conflicts
- further discussion and investigation should be made

Discussion

- the diagnosis error percentage was 52.4% for all included cases (US 37.0%-77.14%) performance errors (38.1%) was higher (US 17.5%-23.16%)
- high-risk diagnoses account for 63.75% to 66.44% of all ED closed medical claims (only 31.8% in our study)
- the most common diagnoses in US are fracture, cancer, meningitis, myocardial infarction, and appendicitis

Discussion

- Only 8.3% of cases with alleged performance error and 21.2% diagnosis error were deemed negligent by medical appraisal → there is a gap in the understanding of the definition of standard of care between health care providers and plaintiffs in Taiwan
- Through public education, improving and clarifying the definition of the standard of care → could prevent future frivolous medical litigation

Discussion

- In the cases with delayed diagnoses: symptoms were initially masked by additional clinical symptoms → Potential lethal diseases should be always considered
- The delay in ordering a specialist consult was determined to be medical error → Awareness of this issue can help EP's evaluate and assess the risks of liability

Limitations

- we analyzed cases based on verdicts rather than medical charts
- detailed demographic factors of the plaintiffs and defendants were not provided in the verdict
- the number of cases was still limited
- additional national studies of malpractice claims should be initiated

Conclusion

- EPs in Taiwan have similar medico-legal risk as American EPs, with an annual risk of being sued of 0.63%
- 90% of EPs win their cases but spend 57.7±26.7 months
- mean indemnity payment was $134738
- Cases in which indemnity was paid were mostly categorized as having diagnosis errors