

Everyday Medical Accident Case Studies

Case 1: Domestic Kitchen Knife Finger Amputation Accident

— Based on a household incident in Mapo-gu, Seoul, May 2025 (*Emergency Medicine Specialist's opinion & Fire Department EMS field response records*)

1. Incident Overview

- **Type of Accident:** Partial finger amputation caused by a kitchen knife during cooking.
- **Casualty Details:** 30s female, distal index finger amputation; transported to ER, underwent replantation surgery.
- **Details:**
 - Date/Location: May 20, 2025, 6 PM, kitchen of an apartment in Mapo-gu, Seoul.
 - Accident: While chopping vegetables, tip of right index finger severed (~2 cm).
 - Patient Condition: 35-year-old woman, heavy bleeding with risk of shock. Severed tissue preserved in good condition.

2. Sequence and Features

- Occurred during onion chopping when knife slipped.
- Accident caused by haste and lack of attention.
- Patient initially immersed hand in cold water, worsening bleeding.
- Family called **119** and applied first aid.
- Severed finger was placed directly on ice, risking tissue damage.

3. Initial Response Procedures

- **Recognition (patient/family):** Confirmed bleeding, called 119, attempted hemostasis.
- **First Aid (family/119 dispatcher):** Compression hemostasis, preservation of amputated part under phone guidance.
- **EMS Arrival (119 paramedics):** Professional pre-hospital care, patient transported to a hand replantation hospital.

4. On-Site Rescue & Emergency Response

- Applied clean cloth pressure bandage, elevated hand above heart.
- Amputated part wrapped in moist gauze, sealed in plastic bag, stored in ice water (not direct contact with ice).
- **119 Paramedics:** On-site care, stabilization, hospital transfer.
- **Emergency Room:** Hemostasis, tetanus vaccination, surgical preparation.
- **Plastic Surgery:** Digital replantation with vascular and nerve repair.
- **Family:** Provided immediate first aid and psychological support.
- **119 Dispatch:** Guided emergency measures by phone, dispatched ambulance.

Case 2: Heat Stroke from Extreme Summer Heat at Construction Site

— Daegu, July 2025 (*Ministry of Labor & KOSHA field investigation, medical records*)

1. Incident Overview

- **Type of Accident:** Severe heat stroke caused by prolonged outdoor work in extreme heat.
- **Casualty Details:** 3 workers affected, 1 admitted to ICU.
- **Details:**
 - Date/Location: July 15, 2025, 2 PM, construction site in Suseong-gu, Daegu.
 - Weather: 38°C, 80% humidity, heat index ~42°C.
 - Victims: Male workers in their 40s–50s, severe dehydration and hyperthermia.

2. Sequence and Features

- Work continued despite heat warning due to schedule pressure.
- Workers performed 3 continuous hours without hydration.
- First worker collapsed unconscious, followed by 2 more sequential cases.
- Lack of shade/rest facilities prevented adequate cooling.
- Co-workers moved victims to shade and called **119**.

3. Initial Response Procedures

- **Recognition (co-workers/site manager):** Noticed unconscious worker, halted operations.
- **First Aid (co-workers/manager):** Moved to shade, loosened clothes, provided fluids.
- **Professional Care (EMS/hospital):** Cooling therapy, IV fluids, intensive monitoring.

4. Emergency Treatment & Hospital Care

- Immediate relocation to shade, removal/loosening of clothing, cooling with water.
- Conscious workers given water and electrolyte drinks.
- **Site Manager:** Stopped work, directed first aid, called 119.
- **Co-workers:** Provided cooling and assisted with hydration.
- **EMS:** IV infusion, body temperature monitoring, hospital transfer.
- **Emergency Room:** Intensive cooling, electrolyte correction, monitoring.
- **KOSHA:** Investigated worksite and reviewed safety violations.

Related Case: Fatal Heat Stroke at Busan Construction Site — July 2024

- 60-year-old worker collapsed at Yeonsan-dong site, body temperature 40°C, suffered cardiac arrest and died.
- Similar features with Daegu case: hottest time of day (2–3 PM), outdoor construction, older worker, >40°C body temperature.
- Ministry of Labor highlighted both cases under the **Serious Accidents Punishment Act**, stressing employer liability for heat safety measures.

Case 3: Anaphylactic Shock from Food Allergy

— Seafood restaurant, Haeundae-gu, Busan, September 2025 (*Allergy/Immunology medical records & ER response*)

1. Incident Overview

- **Type of Accident:** Acute anaphylaxis due to shrimp allergy.
- **Casualty Details:** 20s female, lost consciousness and had respiratory distress; recovered after epinephrine injection.
- **Details:**
 - Date/Location: September 10, 2025, 7 PM, seafood restaurant, Haeundae, Busan.
 - Trigger: Shrimp ingestion (unknown allergy).
 - Symptoms: Hives at 5 min, respiratory distress/unconsciousness at 10 min.

2. Sequence and Features

- Sudden severe allergic reaction during a company dinner.
- Patient unaware of shrimp allergy.
- Initial itching escalated rapidly to systemic reaction.
- Companions immediately called **119** and kept her awake until collapse.
- Restaurant staff identified and stopped offending food.

3. Initial Response Procedures

- **Recognition (patient/companions):** Identified urticaria and respiratory symptoms.
- **Emergency Call:** 119 called, food stopped.
- **Professional Care (EMS):** Epinephrine injection, airway management, ER transport.

4. Emergency & Intensive Care

- Patient placed supine, legs elevated.
- **EMS:** Epinephrine 0.3 mg IM (thigh), oxygen, IV fluids.
- **Companions:** Reassurance, maintained consciousness, identified allergen.
- **Restaurant Staff:** Assisted with 119 call, provided food details.
- **ER:** Antihistamines, corticosteroids, monitoring.
- **Allergy Department:** Diagnostic testing, prevention counseling.

Case 4: Head Trauma from Staircase Fall

— Subway station, Gyeyang-gu, Incheon, October 2025 (*Neurosurgery medical records & Subway Safety Team report*)

1. Incident Overview

- **Type of Accident:** Stair slip and fall, head impact, concussion.
- **Casualty Details:** Male in his 60s, temporary unconsciousness, scalp laceration, mild intracranial hemorrhage.
- **Details:**
 - Date/Location: October 3, 2025, 9 AM, Gyeyang Station, Incheon.
 - Accident: Slipped on wet stairs, struck occipital head.
 - Condition: 65-year-old male, brief unconsciousness, 5 cm scalp laceration, confirmed minor brain bleed.

2. Sequence and Features

- Occurred on wet stairs after rain.
- Direct occipital head impact against stair edge.
- Bystanders immediately called **119** and stabilized head/neck.
- Regained consciousness after 2 minutes but complained of severe headache/dizziness.
- Station staff applied pressure dressing to scalp wound.

3. Initial Response Procedures

- **Witnesses:** Found fallen patient, called 119, immobilized head/neck.
- **First Aid (staff/witnesses):** Consciousness check, bleeding control, stabilization.
- **Professional Care (EMS):** Cervical spine immobilization, transport, CT scan.

4. Emergency & Neurosurgical Care

- Head/neck immobilized, continuous monitoring of consciousness.
- Scalp wound compressed with sterile gauze, vital signs monitored.
- **Witnesses:** Initial discovery, 119 call, stabilization.
- **Station Staff:** First aid, site control, guided EMS.
- **EMS:** Cervical collar, stretcher transfer, ER transport.
- **ER:** Scalp suturing, brain CT, neurological exam.
- **Neurosurgery:** Intracranial bleed management, ICP monitoring, rehabilitation planning.