

Handling Medical Emergency Conditions During Hajj Flight in a of Syncope Pilgrimage: a Case Report

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Abstract Background: The role of airplane transportation is very vital in supporting the smooth implementation of the Hajj pilgrimage. Objective: This case report study aims to capture the handling, service, and supervision during the Hajj flight. Results: In the case report of Mrs. M, aged 65 years, an Indonesian Hajj pilgrim from Madiun experienced syncope on the plane during landing. The pilgrim did not receive attention from the medical team or other passengers. Fast-track officers entered the plane that had landed to conduct a screening inspection of the pilgrim's condition. Fast-track officers found a pilgrim in a weak condition who was then subjected to anamnesis and physical examination. The pilgrim was evacuated using a wheelchair, while at the garbarata the fast-track team promptly checked the clinical condition of the pilgrim, vital signs and blood sugar. Vital signs found blood pressure: 160/121 mmHg, saturation: 88% on room air and random blood sugar: 120 mg/dL. The estimated evacuation process time of fifteen minutes conveyed by the fast-track team to the cabin crew was in accordance with the SOP flow for evacuating sick passengers on the plane. During the evacuation process at the airport at that time there was no doctor on duty and no ambulance driver, so the process of evacuating patients into the ambulance was hampered. Conclusion: Handling of medical emergencies on Hajj flights has not been implemented and understood by officers or Hajj pilgrims and is not yet equipped with sufficient fleet.

Keywords Disabled Hajj Pilgrims, Management of Hajj Pilgrims



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1. Introduction

Hajj, one of the largest annual mass gatherings, relies heavily on efficient transportation systems to accommodate millions of pilgrims. Air travel, a primary mode of transport during Hajj, demands specialized management

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due to the unique needs of elderly pilgrims, who dominate these flights and face elevated health risks. Despite the use of platforms like Siskohatkes to register pilgrim data, gaps persist in providing real-time, detailed health information, heightening the risk of in-flight medical emergencies. The confined cabin environment and limited medical resources further complicate emergency responses, underscoring the need for improved health monitoring and preparedness to mitigate risks during these critical journeys¹.

In-flight medical emergencies, such as nausea, fainting, and respiratory issues, are common yet challenging to manage due to the lack of standardized protocols and data collection by airlines. While fatalities are rare (less than 1% of cases), incidents like the 2023 Southwest Airlines pilot emergency and the 2015 death of American Express CEO Ed Gilligan highlight the severe consequences of delayed or inadequate care. Limited access to rapid treatment mid-flight exacerbates these risks, particularly for pilgrims with pre-existing conditions. These challenges emphasize the urgency for airlines to adopt systematic guidelines and enhance collaboration with medical professionals to address emergencies effectively².

Effective emergency management also hinges on timely identification of medical crises, often initiated by passengers or companions rather than cabin crews. However, a lack of awareness among travelers and insufficient airport infrastructure—such as constrained evacuation routes and inadequate medical facilities—delays critical interventions. Addressing these gaps requires a coordinated approach, including passenger education, optimized emergency workflows, and investments in airport healthcare infrastructure. Future studies should focus on improving evacuation protocols and ensuring seamless transitions from in-flight emergencies to ground-based medical care, safeguarding pilgrims throughout their journey³.

2. Methods

Research Design

This paper is a type of case report created to identify the problems of hajj pilgrims with medical emergencies on hajj flights during the 2024 hajj disembarkation period.

Location and Time of Research

The preparation of the paper was carried out on June 1 - July 13, 2024 at Juanda International Airport.

Instruments and Materials

The tools and materials needed in the preparation of the paper include handphone, pens, paper, secondary data accessed through the Ministry of Health's SISKOHATKES website.

Research Procedures

The preparation of the paper is carried out through the following steps:

- Determine the problems of the hajj pilgrims.
- Collect secondary data accessed through the Ministry of Health's SISKOHATKES page.
- Conducting examinations on prospective hajj pilgrims, including:
 - Autoanamnesis
 - Observation of pilgrim evacuation
 - Synchronization of data on the SISKOHATKES page with the current condition of the hajj pilgrims
- Preparation of written reports

3. Result and Discussion

Case Report

A. Identification

- Name: Mrs. M
- Gender: Female
- Age: 60 years
- Address: Madiun

B. Anamnesis

- Auto-anamnesis
 - Chief Complaint (during airplane landing):
Weakness
 - Present Illness:

The patient reported weakness during the flight. She also complained of loss of appetite. The patient briefly fainted as the plane was landing. The fainting episode occurred while she was still conscious and lasted momentarily. After the incident, she regained consciousness and walked unsteadily to the restroom. Fellow passengers nearby were unaware of the incident. Prior to fainting, the patient experienced dizziness, sweating, and generalized weakness. She also reported a productive cough with white sputum for the past two weeks, which was intermittent. No chest pain, fever, nausea, or vomiting. The fast-track team immediately retrieved the emergency kit and approached the patient. Due to limited space, the team requested ten minutes from the airline to evacuate the patient for further examination outside the aircraft. The patient was evacuated using a wheelchair. At the jet bridge, the team promptly assessed her clinical condition, vital signs, and blood glucose. She was then transferred to an ambulance, given oxygen, and an IV line was established.

- Past Medical History:
 - No history of fainting.
 - Hypertension (+), uncontrolled.
 - No history of diabetes mellitus, pneumonia, or stroke.
 - No prior hospitalizations.
- Medication History:
 - Amlodipine 5 mg, taken irregularly.

- Family History:

Denies family history of hypertension, diabetes mellitus, or stroke.

- Social & Habitual History:

Denies exposure to cigarette smoke or burning fumes.

C. Physical Examination

- Vital Signs:

- Blood Pressure: 160/121 mmHg
- Pulse: 88 bpm
- Oxygen Saturation: 88% on room air
- Temperature: 36.5°C

- General Status:

- General Appearance: Weak
- Consciousness: Alert and oriented
- GCS: 456

- Head/Neck:

- Eyes: Conjunctiva non-anemic (-/-), sclera non-icteric (-/-), pupils isochoric 3mm/3mm, RCL (+/+), RCTL (+/+).
- Mouth: No dry mucosa, no cyanosis, no pursed-lips breathing.

- Thorax:

- Heart: No barrel chest, no trauma, normal fremitus, symmetrical chest movement, S1S2 single regular, no murmur or gallop.
- Lungs: Vesicular breath sounds +/+, no wheezing, rhonchi (+/+).

- Abdomen:

- Bowel sounds: 15x/minute, no trauma, soft, no superficial or deep tenderness.

- Extremities: Warm, dry, reddish extremities, no edema, CRT <2 seconds.

- Random Blood Glucose: 120 mg/dL

D. Diagnosis

Post-syncope + mild-moderate dehydration + pneumonia

E. Management

Ambulance Care:

- Oxygen via NRBM at 10 L/min
- IV Ringer's Lactate 500 cc

F. Case Problems

- a. Lack of medical team's knowledge regarding in-flight emergency protocols.
- b. Other-passengers were unaware of the patient's condition.
- c. The fast-track team was understaffed (only 1 nurse and 1 clinical clerk), as another nurse and clerk were transferring another patient, delaying evacuation to the ambulance.

Medical Case Report of Mrs. M, 60-Year-Old Hajj Pilgrim

During the pre-departure medical screening for Hajj, Mrs. M, a 60-year-old woman, reported no complaints. Symptoms began two weeks prior with a cough. She later experienced weakness, fainted during airplane landing, regained consciousness, and walked unsteadily to the restroom. During the flight, she also complained of dizziness, sweating, and generalized weakness. Her medical history includes uncontrolled hypertension, and she admitted to irregular medication use. The working diagnosis includes post-syncope with mild-moderate dehydration and pneumonia.

General Overview of In-Flight Medical Emergencies

In-flight medical emergencies typically fall into two categories: health-related or injury-related. Health issues range from flight anxiety, dizziness, and syncope to severe conditions like heart attacks or anaphylaxis. According to ICAO-Indonesia guidelines, basic medical assistance on flights is provided through First Aid Kits and Emergency kits. These kits include antihistamines for allergic reactions, analgesics for pain management, medications to stabilize irregular heartbeats, and tools to assist breathing. Some passengers also carry anti-nausea medication or glucose to address low blood sugar².

Initial Response Protocol

The first step in managing an in-flight emergency is identifying the affected individual. This is rarely initiated by cabin crew alone but often reported by the passenger themselves, a travel companion, or ground personnel (ICAO-Indonesia) ². In this case, the patient did not immediately notify the cabin crew after regaining consciousness, and nearby passengers were unaware of her condition. She only reported her symptoms when the fast-track team inquired about passengers' well-being. The primary goals of syncope management are to prolong survival, prevent injury during episodes, and reduce recurrence⁴.

Challenges in Managing In-Flight Emergencies During Hajj

Though medical incidents during flights are relatively common, severe emergencies are rare during Hajj flights. The confined cabin space, limited resources, and unique stressors—such as prolonged waiting times, crowded conditions, elderly passengers, altitude changes, and cabin pressure fluctuations—heighten risks to pilgrims' physical and psychological health.

Syncope Management in Flight

Syncope is frequently reported during flights. For unconscious passengers, the recommended protocol includes placing them in a supine or Trendelenburg position, potentially requiring relocation to the aisle or galley with legs elevated. Supplemental oxygen and blood glucose checks (via glucometer) should be prioritized. If the passenger does not recover within 15–30 minutes, ground medical support must be contacted. In this case, the patient had already regained consciousness by the time the fast-

track team arrived, eliminating the need for positional intervention. Her random blood glucose level was normal (120 mg/dL), ruling out hypoglycemia as a cause of syncope.

Evacuation and Referral Challenges

The fast-track team's 15-minute evacuation estimate aligned with SOPs for managing ill passengers. However, unclear referral criteria often result in most in-flight emergencies being referred to hospitals. Effective referrals require coordinated teamwork among doctors, nurses, and ambulance drivers. Unfortunately, during this incident, no doctor was on standby, and the ambulance driver was occupied with another patient. To address such gaps, it is critical to ensure a doctor is part of the fast-track team on duty and to increase ambulance fleet capacity and drivers per shift.

Recommendations

1. Medical Team Readiness: Ensure a physician is on standby for fast-track teams.
2. Ambulance Resources: Increase the number of drivers and ambulances per shift.
3. Protocol Clarification: Establish clear referral criteria to optimize decision-making during emergencies.
4. Crew Training: Enhance cabin crew awareness and training to promptly identify and escalate medical incidents.

4. Conclusion

Hajj is a large-scale event that is prone to disasters and chaos so that it can ensure the safety of many people. Such events require a proper emergency plan to reduce the risk of rescue. One evacuation plan that needs to be studied further is evacuation when an emergency occurs during a hajj flight. Hajj flights require more handling, service, and supervision compared to regular flights. Things that are needed in handling emergencies during hajj flights are the availability of complete emergency kit equipment, the speed and responsiveness of the health team, and sufficient fleet.

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