TO FLY OR NOT TO FLY
THE DILEMMA OF TRANSFERING
INTERFACILITY PATENTS

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SABAH WOMENS AND CHILDREN HOSPITAL
KOTA KINABALU SABAH
CASE SCENARIO 1

- 45 years old
- BP 160/90 mmhg
- PR 130 bpm
- Requiring urgent neurosurgical intervention

Is he fit for air retrieval?
CASE SCENARIO 2

- 3 months old
- Intubated for severe respiratory distress
- No ICU backup in rural hospital

What would you do if you are called to retrieve this patient?
INTRODUCTION

Aeromedical retrieval is safe

Aeromedical accident is 4.38 per 100,000 flying hours

One accident occurred every 16,721 missions

Mortality rate in flight for transferring critically ill patients is relatively low

16% patients had greater chance of survival when transported by helicopter comparing to ground transport

http://www.modernhealthcare.com/article/20120721/MAGAZINE/120719982
April 18 issue of the Journal of the American Medical Association
SABAH

Located on Borneo island

2nd largest state in Malaysia

It covers an area of 72,500 sq. kilometers

Surrounded by the South China Sea, Sulu Sea and The Celebes Sea
THE CASE

- 3 months old infant
- Cyanotic heart disease
- 1 month in PICU
- Intubated and ventilated
- On inotropics support
- Decided for corrective surgery in Kuala Lumpur by paediatric consultants
THE CASE

BP 65/48 mmhg
PR 150 bpm
SPO2 100%

IVI Dobutamine 20mcg/kg/min
IVI Dopamine 20mcg/kg/min
IVI Noradrenaline 0.1/mcg/kg/min
IVI Midamorphine 0.1mg/kg/hour
HOW TO TRANSFER?

Kota Kinabalu-Kuala Lumpur 1621 km
AIR TRANSFER
Are we out of options?
TURBOPROP C 130
Journey to airport
Arrival at the airport
Oxygen supplies
Power supply failure
3 hours after take off patient deteriorated
DISCUSSION
THE DILEMMAS

1. Should this patient be transferred despite being critically ill?

2. Should have we abandoned the mission knowing there is power supply failure?

3. Should have we proceed to Kuala Lumpur when patient deteriorated?
ALTERNATIVE TRANSPORT

Impossible
No road connections to peninsular Malaysia

Impractical
No service offered
Travel time 7 days
Commercial Flight

Fastest way to travel
Travel time 2 hours
Limited space
Time needed to make arrangements
EC 145

- Expensive
- Limited space
- Unable to fly at night
- Travel time 3 days
- Multiple stops
NOMAD

Expensive
Old plane
Travel time 10 hours
Need to make stops for refuel
PITFALLS

• Timing

• Dealing with other agencies

• Power supply failure
Questions ?
CONCLUSION

• Evaluate the potential risk vs benefit

• Make sure the basics are done well

• Always expect the unexpected
REFERENCE

• Safety of emergency medical service helicopters. [Med J Aust. 2005]


• http://www.modernhealthcare.com/article/20120721/MAGAZINE/120719982

• http://ceaccp.oxfordjournals.org/content/1/1/12.full.pdf
THANK YOU FOR YOUR ATTENTION