

## IMPACT OF POOR KNOWLEDGE, ATTITUDE AND PRACTICES ON CHRONIC HYPERTENSION

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### EXECUTIVE SUMMARY

This was a 75-year-old, parity 2 Malay lady with sudden onset chest pain. She was diagnosed with hypertension and ischemic heart disease 7 years duration and paroxysmal atrial fibrillation for 5 years duration. Patient was diagnosed as fast atrial fibrillation secondary to unstable angina. Multiple risk factor involved as patient has poor blood pressure control, knowledge, attitude and practice towards pharmacological and non-pharmacological management of her illness and poor psychosocial support. Electrocardiogram finding showed patient was having fast atrial fibrillation. She received aspirin and anti-hypertensive medications for acute management and fast correction potassium with potassium chloride, warfarin and haematinic as inpatient management. Patient was discharged once haemoglobin stabilized with no electrocardiogram and echocardiogram abnormalities. She was advised to adhere to warfarin diet and not skip any medications. Home visit findings revealed patient had poor adherence to cardio-protective lifestyle and has significant history of cardiovascular events. Her home environment is also non-conducive and injury prone for this patient who is on warfarin treatment. The prognosis is fair as she acknowledge her illness however has poor knowledge on the nature of the disease, risk, compliance and significance of medication as well as healthy lifestyle to prevent complications of the illness.

**Keywords:** Fast Atrial Fibrillation, Unstable Angina, Paroxysmal Atrial Fibrillation

## 1.0 Medical History

### 1.1 Chief Complaint

Mrs. N, 75 years old Malay lady with underlying hypertension and ischemic heart disease for 7 years duration and atrial fibrillation for 5 years duration presented with chest pain for one day duration.

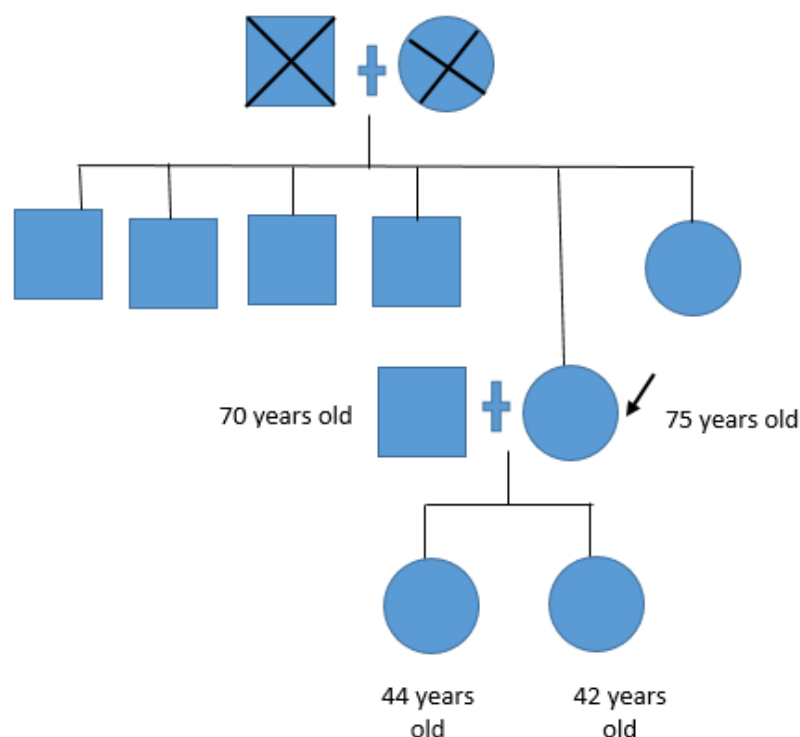
### 1.2 History of Presenting Illness

On the day of admission, at early morning, around 6am, she suddenly felt chest pain while lying on the bed. The left sided chest pain was sudden, crushing in nature, not radiating elsewhere and continuous in nature. There were no aggravating or elevating factors. The pain score was 5/10. She took sublingual Glycerine Trinitrate one tablet at that time but the pain did not subside. This is not the first time he experienced chest pain. She was well before but for the past six months, she had been having on and off chest pain and shortness of breath. The chest pain had the same characteristic as chest pain on the day of admission. The shortness of breath usually came together with the chest pain. No audible breath sound heard during shortness of breath. The frequency was at least once per week. She did not seek any medical attention previously because the symptoms will go away every time she took sublingual Glycerine Trinitrate one tablet and rest. However, the main reason she did not seek medical attention was because unavailable of transportation and her spouse did not aware she having the symptoms when alone at home. The symptoms were associated with palpitation, orthopnea, chest tightness and cough. She experienced orthopnea for pass 2 months as she needs at least two pillow when lying down and felt breathless when lying without pillow. The cough was on and off for one week duration with minimal amount of whitish sputum. She also complained of reduce effort tolerance when walking up stairs. Otherwise, there was no paroxysmal nocturnal dyspnoea, shortness of breath, light headiness, loss of conscious, nausea, vomiting, fever or lower limb swelling.

### 1.3 Past Medical and Surgical History

She was diagnosed with hypertension and ischemic heart disease at Hospital Tuanku Ampuan Najihah since 7 years ago in 2011. She first presented with chest pain and was admitted for one week duration in 2011. Angiogram was done and she was told that one of her heart vessel was blocked. On the same year, she undergo surgery to place stent in the heart at Institut Jantung Negara. In 2013, for past 5 years she was diagnosed with atrial fibrillation and was on Warfarin since then. Currently, she is under follow up medical department Hospital Tunku Ampuan Najihah for her ischemic heart disease and atrial fibrillation. She claimed to be compliance with her hospital follow up. For the past 6 months, she develop on and off chest pain and shortness of breath at least once a month which she did not take any medical attention as the symptoms relieve with rest or one tablet sublingual GTN. Regarding her hypertension, she does not monitored her blood pressure at home. She has follow up every three months. The last blood pressure during her follow up early this year was 150/82 mmHg. Her blood pressure was poorly controlled as it was between 138/80 mmHg and 150/82 mmHg for the past two years. For her hypertension, she was under follow up of Klinik Desa near her house. She had missed a few appointment of her Klinik Desa follow up due to frequent needed of visits which trouble her as she had transportation issue.

### 1.4 Family History



There were no significant histories in the family.

### 1.5 Social History

She does not smoke, take recreational drugs or drink alcohol. She is a passive smoker as her husband smoked for more than 10 years. Currently she lives with her husband in Kampung Merual, Seri Menanti. She lives in double story traditional village house with 3 bedrooms. Her room is on the second floor.

### 1.6 Occupational History

She used to work as a cooker in a preschool before retiring 20 years ago. Her husband is a retired soldier. Their income monthly is RM1000 which comes from her husband's pension. She informed that the income was just enough for both of them to get by but her husband still works odd jobs to make ends meet. Thus, she admitted to having financial crisis as she need more money for her house renovation and transportation. Both her daughters live in Kuala Lumpur as banker with their respective family. They only visited during festive season.

### 1.7 Drug History

She is on Tablet Cardopril 100mg OD, Tablet Digoxin 250mg OD, Tablet Warfarin 1 mg OD, Tablet Isosorbide Dinitrate 10mg TDS, Tablet Bisopropol 2.5mg OD, Tablet Simvastatin 40 mg OD, Tablet haematenic 5mg OD, Tablet Omiprazole 20mg OD, Sulingual Glycerin Trinitrate PRN and Tablet Vasetral 10mg OD. She is compliances to all her medication. She has no known drug or food allergy. She denied taking any traditional medication.

## ***1.8 Physical Examination***

### ***1.8.1 Vital Signs***

Pulse rate : 89 beats per minute, irregular rhythm  
Respiratory rate : 20 breaths per minute  
Blood pressure : 121/63 mmHg  
Temperature : 37.0 C  
SpO2 : 98%

She only has irregular rhythm. Other vital signs are normal.

### ***1.8.2 Anthropometry***

Height: 158 cm  
Weight: 50kg  
Body Mass Index: 20.08 kg/m<sup>2</sup>  
She has a normal body mass index.

### ***1.8.3 General Inspection***

Patient was a Malay lady, lying comfortably supine on the bed. She was conscious, looked pink on room air. She was not in pain and not tachypnoeic.

### ***1.8.4 Peripheral Examination***

Her hands were pale but warm. Capillary refilling time was less than 2 seconds. Her pulse was irregular in rhythm and good in volume. There was no peripheral cyanosis. She was not jaundiced. Skin turgor was normal. No sunken eyes noted.

### ***1.8.5 Cardiovascular Examination***

On inspection of the nails, there were no finger clubbing and cyanosis. Her palms were pale. No signs of infective endocarditis (splinter haemorrhage, Osler's node, or Janeway lesion) were noted. There was no tendon xanthoma. Patient has normal pulse rate with irregular rhythm and normal volume. There was no collapsing pulse, radial-radial inequality and radio-femoral delay. Her blood pressure is normal too. There is no pallor sign in conjunctiva. Jugular venous pressure was not elevated. The carotid pulse is palpable on both sides.

There was no scar or deformity in the precordium. Apex beat was normal and felt in the left fifth intercostal space on midclavicular line. There was no parasternal heave. On auscultation, dual rhythms, S1S2 was heard and there was no murmur or additional sound. There was no pitting oedema on the leg.

### ***1.8.6 Respiratory Examination***

She was not having respiratory distress. Both lungs were moving symmetrically during breathing. Her chest wall was well built and did not have any deformity. There was no any surgical and traumatic scar. Trachea of the patient was centrally located. Chest expansion was normal and symmetrical bilaterally. Apex beat was at 5th intercostal space along the

midclavicular line. Percussion was resonant bilaterally. Air entry was equal and normal bilaterally. No added sound such as rhonchi or crepitation was heard.

### 1.8.7 Abdominal Examination

On far inspection, abdomen was symmetrical and not distended. Her abdomen moved with respiration. Umbilical was centrally located and inverted. There were no scar and visible mass on patient's abdomen. On superficial palpation, it was soft and non-tender. No mass was detected on deep palpation. Both liver and spleen was not palpable. Both kidneys were not ballotable. Shifting dullness and fluid thrill test were negative. Bowel sound was present and normal. There was no renal bruit. There was no pedal oedema noted.

### 1.8.8 Central and Peripheral Nervous System Examination

Pupillary reflex was present and normal in both eyes. All cranial nerve was intact.

On examination of upper limbs, on inspection, there were no scar, fasciculation, involuntary movement or tremors noted. There was muscle wasting noted. The tone was normal in both upper limbs. The power was 5/5 on both limbs. Reflex, sensation and proprioception were intact.

On examination of lower limbs, on inspection, there were no scar, fasciculation, involuntary movement or tremors noted. No muscle wasting noted. The tone was normal. The power was 5/5 on both limbs. Reflex, Babinski sign, sensation and proprioception was intact.

## 1.9 Clinical Diagnosis

Fast Atrial Fibrillation secondary to Unstable Angina with underlying Paroxysmal Atrial Fibrillation

### 1.10 Investigation

**Full blood count: to look for any raise in white cell count could suggest infection.**

		Result	Normal range	Units
WBC		5.6	4-10	(x 10 <sup>9</sup> /L)
RBC		3.02	3.8-4.8	(x 10 <sup>12</sup> /L)
Hb		9.1	12-15	(g/dl)
Hct		27.6	36-46	(Ratio)
MCV		91.4	80-96	(fL)
MCH		30.2	27-32	(pg)
MCHC		33.1	31.5-34.5	(g/dL)
Plt		272	150-400	(x10 <sup>9</sup> /L)
RDW		15.3	11.6-14.0	(%)
MPV		7.6	7.9-10.8	(fL)
Neutrophils	H	3.3 (59.5%)	2.0-7.0	(x 10 <sup>4</sup> /L)
Eosinophils	H	0.2 (3.4%)	0.1-0.5	(x 10 <sup>4</sup> /L)
Basophils		0.0 (0.7%)	0.0-0.1	(x 10 <sup>4</sup> /L)
Lymphocytes		1.4 (25.2%)	0.8-4.5	(x 10 <sup>4</sup> /L)
Monocytes		0.6(11.2%)	0.08-1.0	(x 10 <sup>4</sup> /L)

**Impression:** The haemoglobin level is markedly reduced with drop in haematocrit as well.

**Liver function test: as a baseline investigation**

	Results	Normal range
Total protein	63.3 g/l	(66-87)
Albumin	31.6 g/l	(35-50)
Total bilirubin	18.1 umol/L	(<21)
Alkaline phosphatase	46 U/L	(53-128)
Alanine transaminase	5.3 U/L	(<42)

Impression: The total protein and albumin level is slightly reduced.

**Renal profile: as a baseline investigation**

Urea	3.8 mmol/l	(2.8-7.2)
Sodium	142.4 mmol/l	(136-146)
Potassium	2.9 mmol/l	(3.4-4.5)
Chloride	106.5 mmol/l	(101-109)
Creatinine	45.2 mmol/l	(45-84)

Impression: the potassium level has a significant drop from the normal range.

**Cardiac enzyme**

Lactate dehydrogenase	99.23U/L	(<247)
Creatine Kinase	25.98 U/L	(25-200)
Aspartate Transaminase	12.27 U/L	(<35)

Impression: patient's cardiac enzyme is normal.

**Coagulation Test**

PT SEC	22.9sec	(9.2-12.1)
PT INR	2.08	(25-200)
APTT	60.40sec	(31.3-44.8)

**Stool Occult Blood**

Stool for Occult Blood    NEGATIVE

**Echocardiogram**

Ejection Fraction:        59%  
 Dilated Left Atrium at:    4.8 cm.  
 No obvious hypokinetic

**Oesophagoduodenoscopy (OGDS)**

Normal findings with fundal petechiae.  
 No ulcer, no active bleeding.

**Chest X-Ray**

Clear lung field with cardiomegaly.

**ECG**

Fast atrial fibrillation  
 Heart rate: 160 beats per minute  
 ST depression at II, avF and v3-v6

### **1.11 Clinical Management**

On presentation, she was having left sided chest pain with associated palpitation, shortness of breath and orthopnoea.

Management of this patient can be divided into 2 parts – acute management for the chest pain and long term management for her underlying atrial fibrillation with warfarin medication.

Acute management:

- a) Crushed Aspirin 300 mg stat
- b) IV Digoxin 0,25 mg stat
- c) IV Tramal 50mg stat
- d) IV Mexolon 10mg stat
- e) S/C Avixtra 2.5mg stat
- f) T. cardiprin 100mg OD

Inpatient Management:

- a) Fast correct potassium with 1g KCl
- b) Continue T. Warfarin 0.5g OD (however if Hb continues to drop, warfarin is to be withheld and patient be referred to surgical team)
- c) Continue T. Haematinics
- d) Close monitoring on Haemoglobin (Hb) trend and serial ECG.

Patient was discharged on day 4 of admission once Hb has stabilize with no ECG and echocardiogram abnormalities. She was also tolerating orally and ambulating well with no symptoms of first presentation. She was advised on adhering to warfarin diet and to not skip on any of the medications. She was given follow up two weeks later and subsequently one month later.

## **2.0 Assessment Of Patient's Environment And Lifestyle**

### **2.1 Physical environment**

The home visit was done on 1st June 2018. She stays at Kampung Merual, Seri Menanti. It is an area that is situated 15-20 minutes' drive away from Hospital Tuanku Ampuan Najihah, which is the nearest hospital. The road from the house to the nearest town or health facility either at Johol or Kuala Pilah is very winding and steep. However, the condition of the road is good and not bumpy.

Patient does not have any car as means of transport except for a motorcycle that her husband owns. The motorcycle can only be used for short-distance travels such as to the nearest klinik desa or to their neighbour's house. In any case of emergency, patient has to contact her neighbours to rent their car and their help to drop off at the hospital. Due to this condition, she always think twice before going to hospital as she does not want to burden her neighbour. When she has occasional chest pain, instead of going to hospital she will try to bear it or only takes Panadol and rests. She admitted sometimes her neighbours do not help her as they will give a lot of excuses to lend their cars. Therefore, she decided not to depend on them



frequently. She only asks them for favour during emergency situations. On the day of admission, she started to experience chest pain at 5.00 am. At first, she refused to go to hospital as there is no transport however, her husband insisted to bring her. Her house is about 500 meters away from the main road. The road to her house is small and only fits one car. Thus, this can delay the movement of the car in case emergency. Regarding the public transport, there are transit buses that pass by. Unfortunately, the interval of time for the bus reach is every 1 hour. There is very few taxis pass by the main road.

The house is clean and organized but is cluttered here and there. The ventilation is poor and the lighting is subpar unless there is extra sunlight. The house is very spacious as it was passed down from her parents who had a big family of 7. There is a living room, a kitchen, 3 bedrooms, a common toilet and bathroom. The bedrooms are only used by her children and grandchildren who comes back for festive seasons. Otherwise, she and her husband sleep in the beds that have been placed in the living room as it is difficult for them to walk long-distance. It is equipped with basic facilities such as electricity and water supply. The water supply was supplied by Syarikat Air Negeri Sembilan Sdn Bhd (SAINS).

Despite having her house clean and tidy, it is not age-friendly as there was a steep stairs leading to the second storey which is no longer in use and neglected with dust and insects such as termites. The floor is also poorly cemented with irregular and sharp edges which can easily cause injury or falls. According to her, she recently fell and injured her elbow. Fortunately, no fractures were noted. As patient is an elderly, fall is a serious problem that needs to be prevented as it can cause hip fractures.

## **2.2 Psychological environment**

We were welcomed by the patient. She invited us to enter the house and visit the facilities in the house. The ambience of her house and the neighbourhood was calm and quiet.

She is married and blessed with 2 children. Currently, she only stays with only her husband in the large house. She is in a good relationship with her family members but there are family conflicts that patient refused to elaborate further. Her husband is cooperative but there are occasional conflicts as well. Whenever her husband is free, he will accompany her to attend her follow-up. But most of the time, he is busy trying to make ends meet, so she ends up postponing her follow-ups. Both her daughters stay in Selangor and only come back home during festive season. She looked sad when talking her children who do not come home frequently. However, she denied any feelings of anger as she understands that both of her daughters have their own family. She shed some tears as she said that she understands that her children are busy but wishes to have more of her children and grandchildren take care of her.

She maintains good relationships with the neighbours. Occasionally, her neighbours keep her company when she is alone at home through phone calls and also willingly help to send her to places that are far away. However, previously she had a little argument with her neighbour regarding the transportation issues. She managed to solve it without any fights.

Her husband is the sole breadwinner. Their monthly income is from the pension money of her husband which is enough to sustain the expenses of two of them. In term of financial support, she mentions that the pension money is just enough to get by. She does not have enough to renovate parts of the house or try to get rid of termites that are infested in her house that make



the second storey dangerous to walk in. Her two daughters also send her some money every month.

Most of the time she spent her time alone in the house. If she bored, she will make a phone call to any of her neighbour. That is her main way to socialize. She used to frequently attend meetings and joined activities in her village. But since her condition getting worse she started to miss all the meetings. In our perspective, she seemed to be alone and had less people to talk with. Her husband rarely home and her children only visit only during festive season. She also felt that her children are not calling her enough to show that they care for her.

### **2.3 Behaviour and lifestyles**

She avoids green leafy vegetables as she is on warfarin diet. She admits to not controlling her diet well. She sometimes cook but most of the dishes are oily and fried as they are easier to cook. For breakfast, she usually will drink 'teh tarik' and fried rice. She makes sure that her meals contain vegetables that are non-green but she admits to taking very less fruits. She never controls the salt in her cooking as she is used to salty food and it is also her husband's favourite. Most of the time, her husband buys their food from the stall instead of cooking.

Other than doing housework, she seldom does exercise such as jogging. She has an ideal BMI. She rarely does any effort-requiring activity in fear of leg pain. She is not smoking and never consumed any alcohol.

She is compliant to the medication as she was advised by doctors previously. However, she is not sure of the uses and dosage of the medication she takes. She was even confused regarding the purpose of the medication and the timing of consumption.

## **3.0 Belief and Understanding of Illness**

### **3.1 Knowledge on disease**

Mrs. N has a moderate understanding regarding her cardiovascular illness. She recognizes symptoms of myocardial infarction such as chest tightness or pain and its pattern. However, she thought that mild chest pain is due to tiredness and only need some rest. Therefore, she tends to ignore the pain. At the same time, she is also confused by the pain that could be possibly caused by her gastritis problem. She is partially aware of lifestyle factors that are important to reduce cardiovascular risk but does not adhere to it strictly. She did know that the unstable angina occurs due to narrowing of the blood vessels at the heart due to atherosclerosis. She seems did not know the complication of the unstable angina such as stroke and atrial fibrillation. She did not aware the negative behavioural modification to prevent the progression of the disease such as healthy diet and having an active lifestyle. She is also informed that sublingual glyceryl trinitrate (GTN) acts as a reliever in case of any attack.

She is also informed that she has a high risk of bleeding as she is on warfarin. Thus, she takes extra precaution in avoiding places that has potential to cause a fall such as the steep stairs. However, she mentions that sometimes, she is unable to avoid when she is doing housework

and there is no one to help her. She was also not informed that hypertension could potentially cause cardiac problem.

### **3.2 Belief**

She believes in her current management because she has trust in the treating doctors to help prolong her life and also the medicine they prescribe. However, she never tried traditional medicine as she was unsure will traditional medicine help in her condition. She also never tried 'bomoh' practices and mentioned that hospital standard of care is what she believes in.

### **3.3 Practice**

She is compliant to her medication but admits to postponing and missing her follow ups to the Klinik Desa. This is because she is only able to go when her husband is free. However, he is often busy doing odd jobs to earn extra income. They initially plan on postponing the follow up but end up forgetting in the long run. She has poor practice on healthy diet as she often cooks oily food as it is less effort consuming. She also bought food from the stall which she admits to have high salt content as Negeri Sembilan delicacies often do.

## **4.0 Impact Of Illness On Patient And Family**

### **4.1 Patient**

Our patient thinks that her condition affected her as she was unable to carry out heavy-lifting involved activities such as gardening, cooking and buying groceries. Besides, she was unable to climb stairs due to her illness and weakness in lower limbs. She would need to climb 5 steps of stairs which was very steep to reach her room where it is in the old house. Hence she currently sleeps in the living room which do not require her to climb stairs. She will avoid aggressive exercise because she thinks that those activities might lead to another angina or can cause fall. She also seems loves to take nap after lunch time and only stays in her house during daytime.

She accepted her illness and conditions she was facing as a normal condition for someone in her age. She was happy that her husband and children were well and healthy. However, she felt sad that her children were living far away from her and they only come back during festive season. She wanted to travel to Kuala Lumpur to visit her children but she is physically unable. She longs for companions as she was always alone at home. She decided to stay with her daughter at Kuala Lumpur however, her husband insisted her to stay here as he loves their house now. At the same time, she also afraid of burdening her daughters when they moved to their house. She understands her children have their own lives to tend to but she could not help feel empty and sad when she thinks about her children and grandchildren. She loves to stay at house rather than walking around to their neighbours' house.

She did not find herself having problem in socializing with other people. She was able to mix well with neighbours and relatives. She would go to mosque sometimes, pray and chat with other villagers. However, after the latest admission, she is forced to miss her terawih prayers which are her only chance in socializing as she is unable to walk long distance. She would be

very happy when her children and grandchildren come back to visit her. However, since she had this disease, she socialises less and choose to stay at home as she will become lethargy to walk.

#### **4.2 Family**

Her family income is supported by her husband's pension which around RM1000 only. Her husband normally helps at neighbours' houses for some cleaning job to earn extra money. However, the job depends on demand. Her children would buy daily necessities for them every time when they are visiting. Due to her illness, the burden has increased. The family's budget becomes tight as more money needed for transportation of patient to health facilities. Extra money was also needed to buy daily food because she only cooks rice for each after her admission. Besides that, they did not have enough money to buy sphygmomanometer to help monitor her blood pressure. Her husband tried applying support from welfare through the head of the village. However, his application was rejected. They were hoping that there will be other organizations to help her in her financial conditions.

Her illness had caused increased in responsibility to her family. Both her daughter lived in Kuala Lumpur, and they usually visit during festive season. When she was admitted, only her eldest daughter able to visit her. She had to travel from Kuala Lumpur to visit her mother. The other daughter was unable due to time and money constriction. Her husband had to travel to and fro hospital by motorcycle to take care of her. They only have a motorcycle thus this make the journey more difficult especially when it is raining.

The husband was frustrated because of the patient's illness. The patient needs her husband attention more than ever. They always end up in argument. However, the husband still takes care of the patient. He had to spend more time doing odd jobs to support the family finance. This had made him more tires as he also need to take care of the patient at the same time.

### **5.0 Evaluation Of Patient's Needs For Supportive & Community Care**

#### **5.1 Personal support at home**

Regarding Mrs. N's home condition, she sleeps in living room in different bed with her husband. The reason of not sleeping in her room is because her room requires her to climb stairs which is very steep and it might cause her to fall. Besides that, there is cement slab with uneven edge and irregular surface in between the living room and the entrance of the house. This is very dangerous for both old folks and she also mentioned that it had caused her to fall once long time ago. However, she did not acquire any injury and no changes had been made to the floor. She was not using any walking stick as she claimed that she was still able to walk stably without any external support. There is non-slip bath mat inside the toilet and the bathroom which is a good way to prevent her from falling. However, the mat has been worn out and it slides sideways sometimes. The bathroom lighting was dim, and it is not convenient for them. The water in the bath tub was infrequently changed but the water was clear and no mould were noticed in the bath tub and the surrounding area. Her toilet bowl is a sitting type which is convenient for her to use but it is dysfunctional as it an old one and she must repair it herself for it to be able to flush. We would suggest adding handrails in the bathroom to ensure more safety. Moreover, she stays home alone most of the daytime as her husband will go out

to help at neighbours' houses. Normally, she cooks rice and her husband will buy some dishes for their meals.

### ***5.2 Personnel at work place***

Mrs. N is not working.

### ***5.3 Community care***

She had never been visited by any students before. Besides that, she does not receive helps from any associations or organizations. Although she claimed that she is grateful for the pension money, she was still hoping that there is some support available from hospital or any organizations in order for her to have some spare money for home renovation and getting a new transport.

## **6.0 Evaluation of Communication**

### ***6.1 Between patient and family members***

The communication between Mrs. N and her family is poor. Her husband is aware of her condition but takes no extra effort to take care of her at home as he is often bus with his odd jobs. He also tries his best to bring her for follow ups but is unable when he has work. Although her children are living far from her, they recently called to check up on her after the latest admission. However she sadly mentioned that they only called once and never did as often anymore. Her children also have the intention to bring her to Kuala Lumpur to stay with them, but She worries about her old house in Kampung Merual, she could not bear to leave the house as it was a family heritage. During our home visit, she was cautious in conversing with her husband as she mentioned that they recently has an argument and she was frustrated about it.

### ***6.2 Between patient and health workers***

The communication between Mrs. N and the health workers in Hospital Tunku Ampuan Najihah is fair. Although doctors explained about her condition, complications and managements to her husband and herself, she did not fully understand. She did not ask for any clarifications as she thinks that it is complicated and not helpful in improving her conditions.

### ***6.3 Between health facilities***

The distance between Hospital Tunku Ampuan Najihah and her home which is Kampung Merual is about 20 minutes far by driving. There's a nearer Klink Desa which she goes to for follow ups. The referral system between these facilities is good as patient was given a referral letter for the transfer of health care to Klinik Desa after the latest admission.

## 7.0 Wellness Diagnosis

Fast atrial fibrillation secondary to unstable angina with underlying paroxysmal atrial fibrillation with significant past history of coronary arterial disease has been on warfarin for 5 years and uncontrolled hypertension. Patient also has poor knowledge regarding pathophysiology, complication and risk factors of her illness which reflects on her poor attitude and practice towards a more cardio-protective lifestyle.

The positive contributing factors seen in this patient are patient and her family are aware of her illness and significance of compliance to medications. However, the negative contributing factors includes only the patient and her husband live in the house with no transportation and far from their children. Besides, she is compliance to warfarin diet however not adherent to healthy lifestyle in order to protect her from cardiovascular event. For this patient, the prognosis is fair as she acknowledges her illness however she has poor knowledge regarding her illness with poor compliance towards a more controlled hypertension status. Her prognosis worsen depending on the progress of the illness and complications that can develop subsequently.

## 8.0 Wellness Discussion

This is a patient with 7 years history of hypertension, ischemic heart disease and atrial fibrillation who presented with symptoms complaining of chest pain, palpitation, mild shortness of breath, chest tightness, orthopnoea and cough. Patient had undergone Percutaneous Coronary Intervention in 2011 for one vessel disease. According to the Clinical Practice Guideline (CPG) of Malaysia, these symptoms are clearly suggests that patient has a cardiovascular illness with significant comorbidities which determines the aim of treatment hereon. According to Clinical Practice Guideline (CPG) of Malaysia, risk factors that predispose to the development of Atrial Fibrillation is increasing age (age 75 or older), hypertension and ischemic heart disease, among the many, which is present in this patient's case. The age of 75 or more is considered as major risk factor while the others are clinically relevant 'non-major' risk factors.

**Dietary Modifications:** Patient was given dietary advices regarding her warfarin diet as she is in warfarin treatment. She was counselled on avoiding like spinach, broccoli and lettuce which she often includes into her cooking during times that food was not bought from outside. She understood the importance of adhering to this dietary regime and the risks that come with failed warfarin treatment especially fall injuries that can subsequently lead to haemorrhages. According to World Health Organisation in 2006, a reduction in dietary salt from the current intake of 9-12 g/day to the recommended level of less than 5-6 g/day will have major beneficial effects on cardiovascular health along. Accordingly, she was also told to reduce salt intake to control her hypertension that can exacerbate her current condition.

**Healthy Lifestyle Modification:** Patient was advised to increase mobility after taking into account of her cardiovascular risk factor and to prevent cardio-embolic events. However, this has been difficult for patient to follow as she is dyspnoeic and has joint pains that hinder her from taking up exercise. Encouraging this patient to actively move is very dangerous considering that she is alone at home with no other supervision and fall injuries can easily

take place especially in the condition of her house environment which includes uneven floor surface and steep stairs, as well as the absence of any railing that can act as a support. The condition of her bathroom also worries that patient as she feels like she might slip and fall due to the slippery floors.

**Pharmacology:** Patient was on multiple anti-hypertensives, warfarin tablet, proton pump inhibitor for her gastritis and sublingual GTN prior to admission. It is wise that the patient was started on warfarin therapy at the first onset of atrial fibrillation as indicated in the CPG Malaysia, antithrombotic therapy must be considered in all patients with AF especially with acute or active thromboembolic event as seen in this patient where she had one vessel disease. Upon admission, patient was found to be anaemic thus she was started on haematinics. Otherwise, she was continued on her previous medications but was monitored closely on her haemoglobin and rhythm monitoring with serial ECG. As indicated in CPG Malaysia on management of Atrial Fibrillation, rhythm and rate control is one of the main principles of management for this patient. Acute management was done as indicated in the CPG wherein urgent intervention and immediate hospitalization must be done in patients who either have critical perfusion or ongoing chest pain as seen in this patient as she presented to the Emergency Department complaining of unresolved chest pain.

**Social support:** Patient is currently unemployed and her husband who is an ex-soldier is the sole breadwinner using the pension attained from his previous work. He also works odd jobs as alternative source of income to help sustain the financial demand of the family.

Apart from that, behavioural management was done on counselling both the patient and her husband on being compliant to the medications especially warfarin and the importance of not skipping on follow ups. However, there are some areas of significance that were not given enough weightage. Despite being counselled, patient was not given clear explanation on the use of the medication, side effects, long term complications, precautionary steps and prognosis. This can be evidentially seen from the visit in which patient was confused about her medications and had a hard time pointing out the use of them. This may affect the compliance in the long term as the patient may not take it seriously without knowing the severity of the uncontrolled disease and possibilities of complications. From the home visit, it is also enlightened that the condition of her house is not favourable to her condition which makes it accident prone in this patient who is also under blood thinning treatment. She also has emotional complications that were failed to be addressed. The lack of company and a smooth-sailing relationship with her only guardian, her husband aggravates her already sick health by causing emotional strain which could eventually lead to depression if not taken seriously. The home visit done also enlightened that despite being able to afford healthcare, patient and her husband still face financial strain and have tried alternative ways to get financial aid but to no avail. Her hypertension is also poorly controlled due to her inability to be able to attend follow ups caused by transport problem. The lack of knowledge regarding hypertension also is the reason why she does not practice home blood pressure monitoring. Upon enquiry, she is unable to buy the blood pressure monitoring as they just have enough of income just to get by but patient is willing to change her habits if she can get one for free from the health care facility.



## 9.0 Wellness Intervention

Apart from the pharmacological and dietary modification intervention, a few other measures should be taken into consideration. First of all, patients lack of knowledge regarding her condition and comorbidities should be tackled. Patient should be counselled together with her husband and children on her conditions in understandable language so that she and her family are well informed regarding the risk and complications such as stroke. Family members could help in translating the explanations to her in a more understanding way. They should also be informed about the medications especially the dosages, side effects and precautionary steps. They should also be told about red flag symptoms to look out for so that immediate treatment can be delivered without the occurrence of any serious complications. For her emotional conflicts, it can be further assessed with the Geriatric Depression Scale to further assess if patient could be having depression. Alternatively, she should also be encouraged to share her feelings with her family so that the burden of this condition does not cause a strain on her mental health. Encouraging patient to get involved with Pusat Rehabilitasi Warga Emas would be a great way for patient to create new relationships and socialize. Patient's husband should be encouraged to reduce stall-bought food and try to prepare home-cooked meals with less salt and saturated fat content which correlates with the dietary modifications as per advised. It should also be brought to light for patient's children that the house environment needs to be renovated for the safety of the patient to ensure an environment that is injury-free can be created, more so as patient is often left alone in the house when her husband goes off for work. Patient should be alerted to BAKAS for bathroom inspection and construction of a new bathroom if existing one does not meet requirement. Patient can also be helped financially by channeling her towards the right path in obtaining financial help from organizations such as Zakat. If still rejected, patient's family should be alerted regarding that matter for a consensus that can benefit all. Lastly, transportation problem for the patient could ultimately result in the delay in treatment. The head of the village should be alerted regarding this patient's problem and encouraged to try to provide social support for the wellness of this patient. Improvement on her financial status could also help in attaining a new mode of transport if patient is able to get financial aid.

## 10.0 Conclusion

Mrs. N, a 75 year old Malay lady with underlying hypertension for 7 years with associated risk factors such as history of ischemic heart disease and previous atrial fibrillation presented with chest pain with tightness, palpitation, dyspnoea, orthopnoea and cough. She also has poor knowledge regarding her condition and medications, poor social support of having no company besides her working husband and absence of transport to help her ambulate in case of emergency. Corresponding with her poor knowledge, patient has poor attitude and practice towards a cardio-protective lifestyle which caused her to develop this condition recurrently warranting multiple admissions. She was advised for follow up in the next two weeks and subsequently one month later.



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