

DRUG RELATED PROBLEM ASSOCIATED WITH THE TREATMENT FOR CONGESTIVE HEART FAILURE (CHF) AND ACUTE MIOCARDIAL INFARCTION IN PGI CIKINI HOSPITAL

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ABSTRACT

Congestive Heart failure (CHF) is the condition where the heart gets the failure to pump out the blood. The deviation of this heart function is caused by the coronary atherosclerosis that disturb the cardiac contraction through the miocard infarct and iskemia. The patient Mr. AS, age 55 years old entered the PGI Hospital Cikini on 9th of February 2014 with the chronic miocard infarct diagnose (*coronary heart disease*), Congestive Heart Failure, breathless, sweetly, sleep disorders, get tired easily, nause, vomiting, and swelling on feet. Patient has treated with heparin, KSR, Digoxin, ranitidine, ascardia,

lactulac, plavix and durefo for hospitalized. Basically, there are 2 interventions that have been done during the clerking of this patient, those are inappropriate dosage regimen (the dose is too low) and drug interaction (ranitidin and ascardia; durefo and digoxin; plavix and heparin; heparin and ascardia; digoxin and ascardia; plavix and digoxin).

KEY WORDS: Congestive Heart failure, AMI, Interns and PGI Cikini Hospital.

1. INTRODUCTION

The proportion of the people who in age more than 60 years old in the world gain faster than people on the other age. It is estimated that the growth of the older attain the 694 million or 233% in 2025 from 1970. In 2005, it is estimated that there are about 1,2 billion people who are in age more than 60 and in 2050 it will become 2 billion with 80% who stay in the growth country. Indonesia will become the 5th country after China, India, Uni Soviet, and America with the biggest number of population of older with approximately 20 million older in 2020.

The result of this research shows that 78% of older suffer at least 4 kinds of disease, 38% suffer more than 6 diseases, and 13% suffer more than 8 kinds of diseases. The great quantity of the disease that suffered sometimes makes the doctor difficult in making right diagnose and give the rational treatment. So, sometimes it found that the doctor give the over prescription or give the inappropriate drugs to the older.

Congestive Heart failure is the condition where heart gets the failure in pump out the blood in order to fulfill the needed of the cells of the body on the nutrient and oxygen accurately. This problem caused the spaced of heart space (Dilatation) in order to receive the blood even more to be pump out to the whole body or caused the heart muscle become stiff and thick. Heart can only pump out the blood in a short time and the weaken heart wall cannot pump out the blood hardly⁴. The heart failure commonly find in the older population and on miocard infarct with the damage of persistent heart muscle. According to the cohort prospective study in community bases on the heart failure sufferer, more than a half of the patients (55%) have the protected systolic function and the number of death caused by the diastolic heart failure (16% in 6 months) comparable with number of death that is caused by the diastolic heart failure. The number of the trouble in the form of the decreasing of life quality and the practice tolerant and also the hospitalization number and the cost of the health treatment for every person to the systolic and diastolic heart failure has been found same.

In choosing the appropriate drugs on the patient or in common term P-Drugs is started with determined the group of the effective drugs and next choosing one or more appropriate drugs to the patient. To choose the P-Drugs it should be based on scientific consideration, including the effectively consideration, safety, appropriateness, practically and the cost. And also it should be consider the kinetics aspects and the drugs dynamic⁶. The Minessota Pharmaceutical Care has identified there are 5333 of *Drug Related Problems* (DRPs) in 9399 regular patient (not only older patient). The result of the research shows that more than 1400 patients have more than one category of *Drug Related Problems* (DRPs) during the treatment.

2. Case Presentation

Patient Mr. AS, age 55 years old entered the PGI Hospital Cikini on 9th of February 2014. He entered the PGI Hospital Cikini on 9th of February 2014 with the chronic miocard infarct diagnose (*coronary heart disease*), Congestive Heart Failure, breathless, sweetly, sleep disorders, get tired easily, nause, vomiting, and swelling on feet The patient was treated to PGI Hospital cikini, the patient also has the history of CHF and he got the swelling on his

foot. The patient didn't get the allergic with the previous treatment or the inherit disease. Patient has a history of CHF and had been treated with digoxin, KSR, and furosemid. Results of the last chek up, actually patient also has suffered AMI .

3. Clinical Evaluation

In this case patient has treated with heparin, digoxin, ascardia, plavix (clopidogrel), durefo and lactulac syrup. Heparin was used as the anticoagulant to prevent the thrombus. Digoxin as the positive inotropic was used to increased the power of the contraction of heart muscle where on the patient of congestive heart failure cannot pump out the blood in precisely amount so it cannot be fulfill the tissue perfusion. While antiplatelet ascardia and plavix was used for reducing the miocard infarction and lower the risk of heart attack, but use both of these drugs cause bleeding. Ascardia can increase gastric acid therefore patient received ranitidin. Patient also has treated with durefo a diuretic which can cause hypocalemia and increase digoxin toxicity. Because of that, in order to overcome the hypocalemia, the patient had given with KSR (potasium).

4. Dose and Indication³

In this case patient has treated with heparin at the dose 10.000 IU, KSR at the dose 600 mg q.d, digoxin at the dose 0.25 mg qd , ranitidine at the dose 50mg 2 x 1 iv, . Ascardia at the dose 80 mg qd, plafix at the dose 75 mg qd, durefo 40 mg qd, and Lactulac syrup at the dose 30 ml qd.

5. Result of the Laboratory

The result of the laboratory has shown the abnormality those were hemoglobin 15,8 g% (normally: 12,4–14,9 g%), kreatinin 1,6 mg/dL (normally: 0,6 – 1,1 Mg/dl), Ca 8,3 mg/dL (normally: 8,8 – 10,3 Mg/dl) and CKMB 13 u/i (normally: <10 u/i).

6. Drug Related Problem (DRP)

6.1.DRP 1 : Regimen of dose

The dose of the drugs are too low that is on ranitidine prescription 2 x 50 mg in a day, according to Aine Burns (Renal Drug Handbook, 2009), it should be 3 x 50 mg in a day. It is suggested to the doctor to re-evaluate again the dose of the therapy in using ranitidine. It is done the check list also on the nurse continuity.

6.2. DRP 2 : Drugs Interaction

Ranitidine can increase the effect or the ascardia level. Ranitidine is indicated to peptic ulcer and duodenal ulcer because it can inhibit the secretion of gastric acid. The aspirin acetylates cyclooxygenase enzyme and inhibit production of endoperoxides enzyme so aspirin dissolution can decrease. Durefo a diuretic can cause hipocalemia condition, increase plasma level of digoxin and induce intoxication of digoxin, but luckily patient was given KSR tablet for reducing the side effect. Plafix and heparin, if its given equally can increase the risk of bleeding or increase the effect of heparin. Digoxin with ascardia can rise plasma level or effect of digoxin. Plafix and digoxin if it given equally can increase the effect of digoxin.

6.3. DRP 3 : others

On book of the list of the drugs sometimes the nurse did not take the note that had been given to the patient or dose that had been given. So it is suggested to the nurse to always took a note of what has been given to the patient. It has been monitored of the note of the nurse on the book of the drugs list.

7. CONCLUSION

Based on the result of the practice of clinic secretariat at the ward of lungs disease at PGI Hospital Cikini, it can be conclude that there was DRPs (*Drug Related Problems*) such as doses was too low that was on the ranitidine prescription and drugs interaction between ranitidin and ascardia; durefo and digoxin; plavix and heparin; heparin and ascardia; digoxin and ascardia; plavix and digoxin.

3

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