

CLINICAL CASE CONFERENCE

Executive summary

In this present research report; guidelines, proper medications, better services are analyzed in order to treat chest pain in patient's heart and to eliminate problems of short breathing. Drugs like antidepressants, artery relaxers are advised to mitigate the issues. Diagnosis of different tests of radiation and imaging is done to know present conditions of chest of patients. Finally, some recommendations are suggested along with long and short-term outcomes to improve the health condition of the patient.

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1. Introduction

1.1. Details of Patient

According to the case study, the male patient is 73 years of old who used to live with his wife and introduces a presentation of chest pain in central position of heart. This gives him a feeling of discomfort because he received radiation somehow by any means to both of his arms. He has attended in a service of storage and security within the medical field where he complained about his chest pain and problem of short breathing. He has administered sprays of glyceryl trinitrate (GTN) for two times which gave him a relaxation from angina and helps to widen his blood vessels.

1.2. Biographical data

He received pulse orientation of about 75 and scoring of consciousness level due to traumatic injury in terms of Glasgow coma scale (GCS) is 15. Rate of oxygen levels present in right atrium (RA) of chest is -97% which is very poor and an indication of unstable condition. Blood pressure rate is quite high as it is 128/75 and temperature is 36.3 mg. He takes clopidogrel to prevent heart attacks and reduce chest pain of about 300 mg. Moreover, GTN helps in improvement of chest pain whereas blood vessels are filled up with TROP T proteins which prove a negative outcome.

1.3. Current medical history

The patient has done an X-ray of chest pain to detect his hypertrophy in the right atrium (RAH) and an angiogram in computer axial (CT) to know his current status of coronaries of blood vessels. Prescription of the patient consists of Clopidrogel, a drug which helps in formation of blood platelets and in turn, eliminates blood clots thereby opening the blood vessel of chest. Liptor is medicated to prevent high range of cholesterol and metoprolol for the prevention of angina as well as to controls high pressure of blood. Aspirin is also enlisted in the medication list to control heart strokes and attacks.

1.4. Past medical history

According to the past scenario, the patient had diabetes mellitus which is diabetes type 2 and a coronary disease in blood arteries (Fairbrother *et al.* 2016). He also was a patient of IHD which is ischaemic heart disease. Due to his condition of hypertension (HTN) he had a risk in coronary artery before 12 years of his present age.

2. Discussion

2.1 Anatomy, physiology, and pathophysiology of the patient

The patient has central chest pain and a disease in the coronary artery. He has a feeling of discomfort due to radiation from X-ray on his both arms. He has an administration of GTN sprays twice in a day which gave him a relief from chest pain and widens the blood vessels present in the heart. According to his past history, he was a patient of diabetes mellitus, hypertension (HTN), and IHD disease in the heart. While as per to the current scenario, he receives clopidogrel of about 300 mg of the amount which prevents him from blood clots in the heart. He also used to take Lipitor, Metoprolol, Aspirin and many more to control as well as reduce heart pain, heart attacks and prevent angina. After understanding his past and present structure of biology, it is very much clear that he is such a patient who is suffering from coronary heart disease and acute chest pain central position of the heart.

2.2. Nursing management

(IS)BAR approach: The nurses should use medical assessment of (IS) BAR approach to help the patient to live a disease free life. The first and foremost strategy of (IS) BAR is to develop a standard in order to build strong communication between patient and nurses. This tool finds useful in improving the health of the patient and to enhance the satisfaction of patient as well as the clinician. Apart from this, *Situation* of the case study is ineffective as well as inadequate communication between the clinicians related to healthcare and physicians of patients. As a result, this leads to such a condition which decreases the life quality of the patient (Dwarswaard, Bakker, van Staa & Boeije, 2016). Moreover, it helps to increase not only costs of healthcare but also hospitalization of patients.

Background underlines that the patient has arrived to take security as well as storage of services (SAAS). Healthcare clinicians identified chest pain along with short breathing problem in patients. Identification of medicine like GTN sprays two times helps to improve chest pain; therefore, it helps to widen the blood vessels and thereby opening it in the heart.

Assessment outlines about biological data which he receives after administration of GTN sprays. He reported that his GCS is about 15 and the oxygen level in the right atrium is noted as - 97% with the rise in blood pressure level as about 128/75. Temperature is about 36.3 mg and improvement of chest pain occurs after the switches to GTN sprays.

Recommendation for further improvement includes angioplasty, stenting which will help to keep arteries in the open condition. It is important to maintain triglycerides, lipids, and lipoproteins which are the major sources of cholesterol to reduce presence of fat in patient's body (Fisher *et al.* 2014).

Interdisciplinary team involvement and primary health care strategies

The interdisciplinary team includes caregivers other than main doctors. In this case, members were involved in RAH-Xray and CT angiogram, health instructor and dietician. According to Fonseca *et al.* (2016), an exercise of 30 minutes helps to reduce risks of cholesterol as well as risks in blood sugar effectively. This integrated team contains a strategy which contains a healthy diet to maintain the healthy weight and experience enough sleep by the patients. It also helps to manage stress level and depression in patient. Screening of diabetes is also enlisted in team management of health care as it develops and promotes health.

2.3. Medical management

Medical management is required to provide primary care, care during emergency, care of cardiac and other care to patients in order to develop his health problem.

Primary care has some roles and responsibilities which are as follows:

- To identify signs and symptoms of heart diseases to reassure minor pain of chest
- Reassess the chronic pain as and when required and monitor it to coordinates and continue care of patient (Chew *et al.* 2016)

Care of hospital emergency are:

- Immediate diagnosis in positive state and initiate treatment to continue care regarding angina

- According to Gagnier et al. (2014), rapid communication system is essential to develop treatment.

Cardiac care towards angina is as same as of hospital care during emergency. Others care includes rehabilitation with cardiac care and psychiatric referral.

Pharmacological treatment

This includes medications for certain drugs to treat chest pain as for example aspirin, artery relaxers, drugs of thrombolytic, thinners of blood and GTN to control hypotension.

Non-pharmacological treatment

Ventilatory supports provide supplements of oxygen and to assist ventilation to patients. Ultra filtration is used to eliminate excess salt as well as fluid in the blood vessels of the patient (Jokanovic *et al.* 2016).

Pain management

Treatment with nitroglycerin tablet at least once in a day under the tongue is prescribed to prevent chest pain. Examination of patient under emergency department is to diagnose with the help of ECG, X-Ray, CT and many more. Prescribing GTN helps in resolving hypotension.

2.4. Evaluation of Diagnostics Tests

After diagnostic tests of RAH X-Ray the patient has two evaluation, in first evaluation, the area under characteristic curve of receiver operating (AUC) is 0.922 and 0.908 for classic as well as modified model respectively (Le, Eldi & Hissaria, 2017). Both reports of RAH-Xray and CT angiogram showed that still, the patient has clots in blood vessels.

2.5. More clinical interference

The patient with the help of interdisciplinary management has underlined a report which states that he had done an X-ray of the chest in order to detect the present status of right atrium which analyzes air infection if any present between the spaces around pneumothorax. He also has done angiogram of coronary by computer axial testing (CT) to know the formation of blood clots. Besides aspirin, Lipitor he needs to take now some more drugs to prevent chest pain. This includes blood thinners like Coumadin, apixaban, dabigatran (Meller *et al.* 2015). Others consist of artery relaxers like nitroglycerin, thrombolytic drugs like alteplase, antidepressants such as imipramine, desipramine, amitriptyline and many more (Magee *et al.* 2016).

2.6. Psychosocial and Socio-economic Aspects

Coronary artery disease (CAD) and chest pain include stress, anxiety, depression and many more. The patient often shows bilateral trapezius of tension in muscle with high levels. This is due to somatization disorder which is responsible for acute pain in about 80% of cases (Roche *et al.* 2015). Iatrogenic complications, as a result, may appear which limits treatment in patient. Sometimes chest pain is linked to psychiatric issues which signs of depression and strokes in heart. As per citation provided by Roche, Laschinger & Duffield (2015), 25% of cases reported that chest pain is major symptoms of psychiatric disease that appears due to this stress reason or depression.

Professionals belong to primary health care and promoters of health are aware where socio-economic factors are shaped with respect to perceptions of signs and symptoms of chest pain (Sahay, Hutchinson & East, 2015). Variations regarding barriers, denial, expectations of low outcomes and confusion of diagnostic are deprived of angina patient.

2.7. Ethical and Legal aspects

Clinicians need to take palliative care which is a comprehensive approach in order to treat and diagnose physical suffering of the patient. It prescribes proper medication for pain with little threats that hastened death. Medication use is intended in such a way that it treat chest pain and give relief from discomfort. Improvements in respect to care quality of patient, stay length, safety and security of patient and also mortality is translated into important savings which have an approach to promote health care. As *Act of Affordable Care 2010*, controls risks of high pressure of blood in the patient and counseling on the daily use of aspirin (Smith & Springer, 2017). According to *Act of health equity and accountability 2018*, it helps to reduce inequities of health in patient. This underlines the issues occur due to major chest pain (Tait *et al.* 2016).

2.8. Educational consideration of Patient

As per case study, patient is suffering from subsequent heart attacks or strokes and angina. In angina, organs require both oxygen nutrients to carry it on blood. Coronary arteries are present on heart surface which forms smaller blood vessels within muscle (Ung, Salamonson & Gallego, 2016). During heart blockage, ruptures of fatty plaque occur due to blood clotting on it

thereby blocks artery. This gives a feeling of discomfort to patient. Pain of chest may be squeezing, pressure, pain of burning and fullness in chest. Ischemic pain in chest is not felt however, it occurs across chest where radiation regarding pain spreads to neck, throat, teeth or lower jaw of patient. Timing is lasted for 2-5 minutes (Harvey & Kitson, 2015). Associated symptoms other than short breath include nausea, vomiting, sweating, clammy skin, irregular rate of heartbeat, fainting, indigestion, tingling sensation and so on. Cardiac risks features of pain are smoking, high cholesterol diabetes which is already present in the patient.

2.9. Discharge planning

In regard to cardiologist review, the patient should seek emergency care as early as possible during immediate conditions of chest pain as it is exertional and he has radiation in his both arms. Course of high range of inhibitor of proton pump therapy is assisted as it helps in identification of the signs as well as symptoms of chest pain and heart attack (Hunink *et al.* 2014).

In the words of Varcarolis (2016), planning of stress test enables the patient to improve health condition by the aid of physical groups. It tests about risks related to heart failure or attacks and provides guidelines by which a person may be healthy again and live a stress-free life.

3. Evaluation of medical and nursing management

3.1. Rationale for current nursing practice with theory of nursing management

According to nurse management, nurses have to first draw out the factors responsible for causing chest pain, therefore by applying this, signs and symptoms of the patient are analyzed. Next life quality of the patient is seen as a feeling of discomfort which crushes chest pain in the heart. Radiation is also received by X-ray on both of his arms. It may be also on the jaw, teeth. If any other symptoms are present in patient's cases other than short breath or dizziness. Nurses along with physicians and clinicians have also underlined timings of treatment to reduce central chest pain.

3.2. Nursing evidence relationship to patient

An evidence consists of primary care shows AUS of about 0.90 with respect to primary care in chest pain and emergency department results in about 0.91 and cardiology as around 0.79 (Apna, 2018). The patient also receives abnormalities in ECG as it is the same in the patient of the case study. He also receives drugs like nitroglycerin to treat and prevent chest pain in a central location of the heart and have a problem of heart stroke as well as short breath. Diabetes, retrosternal pain in chest is also common among the both cases. However, this is patient of 40 years of age while patient stated in case study is 73 years (Health, 2017).

3.3. Critique of management

The cardiac experiences of chest pain in patient are not only traumatic but also stressful where management of nurses in healthcare plays an important role to improve treatment and prevent issues of chest pain and heart attacks. The research provides some therapy which is very useful to reduce risks of coronary disease in arteries. The model of nurse's care to patients has helped a lot to overcome stress level and diseases in patients. Not only this, it also helps to take a test and diagnose them with proper medications with primary care as well as hospital care during immediate condition. Drugs like aspirin, thrombolytic medications, and antidepressants have helped to treat the patient to recover and lead a healthy life.

3.4. Recommendation for Alternative nursing care

Recommendations are as follows:

- The process of assessing, diagnose and improves planning of healthcare to implement and evaluate problems of patient
- Tasks must be done within 30 minutes during emergency cases to reduce the intensity of chest pain and promote ability in order to function
- Organization of self-report of the patient to detect as well as measure pain
- In case of selection of rating scale of pain, visual activity of patient must be taken into consideration regarding signs and symptoms
- During breakthrough pain, association with activities in a spontaneous way is important to take into notice

- Expectation to find pain markers in psychosocial aspects must be avoided to provide ethical guidance to patients

3.5. Linking theory and practice

Theory of nurses is linked with the role of treatment in patient which provide proper guidance to cure and prevent chest pain as well as from minor and major heart attacks. Practices of nurses have helped immensely to diagnose results of CT, RAH X-ray respectively which provide fruitful results to offer treatment in order to mitigate the challenges faced by the patient during acute chest pain in the central position of the heart. Drugs are possible to eliminate risks factors of the patient like aspirin which provides significant aspects both based on pharmacological as well as non-pharmacological treatments. Management of pain is useful to reduce pain in chest effectively and efficiently, therefore, it becomes possible to lead a healthy life by following these guidelines of the nurses.

4. Conclusion

4.1. Summary of the case

The patient as per the current case study has suffered a risk of coronary heart disease who also seeks problems of short breathlessness. Due to this, there is a huge increase in his blood pressure of about 128/75 and oxygen concentration of -97% on the right atrium on the periphery of the heart. In the past history⁷, he was a diabetic patient with risks of hypertension and RCA stent as about 12 years before. While current status underlined that he started to take antiplatelet drugs like clopidogrel in order to mitigate his issues and prevent from acute chest pain as well as to reduce threats of heart strokes.

4.2. Long and short-term outcome

The strategy to reduce chest pain in pneumothorax includes ventilation process in the long-term to monitor and control over inhalations of patients which will help him to remove the problem of short breathing. Inhalation of about 8 times of counts will helps to expand breaths at the same time (Health, 2017). It is essential to straighten the back while at posturing to maintain the tightness of the chest in order to remove chest pain. From the above analysis, it could be

mention that uses of proper diet and seeks to proper medication guidelines will help to treat chest pain and helps to lead high quality life without any stress.

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