Wound Management

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Case 1

Mr. Will Jakson, a 77-year-old man is admitted to the ward for pain and wound management having recurring pain from his wounds. The patient has diabetic foot ulcer underneath his left toe, arterial ulcer on his lower right leg, and pressure ulcer on his sacrum bone L5, massive bruise over his face due to a recent fall, and has 2nd degree burn on his left arm. Patient has a medical history of Ischemic heart disease (IDH), chronic obstructive pulmonary disease (COPD), Gastro-oesophageal reflux disease (GORD), Postural hypotension, and diabetes. And Patient is taking Telmisartan 40 mg. b.d, Ventolin 4 puffs t.d.s, Esomeprazole 20 mg daily, Lantus 20 units (mane), warfarin 2 mg (daily), Frusemide 20 mg b.d. PRNs, Endone 10mg (tds), Hydromorphone 2 mg (b.d). He is using a wheelchair for mobility. In this case study we will examine the patient’s current condition of wound, discuss in detail the causes and effects of those wounds, and will recommend the treatment for such conditions.

# Patient’s Assessment

Medical history of the patient is discussed above in detail. Patient has total of 4 wounds; arterial ulcer wound on the right leg, diabetic foot ulcer wound below his left toe, pressure ulcer wound on his sacrum bone, and second degree burn on his left hand.

## Arterial Ulcer

Arterial ulcer is developed by poor delivery of blood to lower part of the body. The condition is also called poor perfusion in which lower extremities lack nutrient-rich blood resulting in weak tissue and skin (Spentzouris & Labropoulos, 2009). Due to lack of good blood supply, tissues in the area lack oxygen resulting in killing those tissues. Because of dead tissues, open wound is formed over the skin in that area. In this condition, it is hard for a patient’s body to heal the wound as it lacks adequate blood supply (“Arterial Ulcers,” 2012). Prolonged presence of such wound results into the development of arterial ulcer. Lack of blood supply usually occurs when arteries becomes narrow or completely blocked.

### Treatment, Precaution and Wound Management

Feet should be examined daily for development of any sores or just change in color. Smoking should be quit immediately under such circumstances. Sitting and standing for prolonged period, sitting with crossed legs, and cold temperature should be avoided. Good footwear, which does not put pressure at a certain point should be used (“Arterial Ulcers,” 2012).

## Diabetic Foot Ulcer

High glucose level in blood tightens the arteries and vessels of the body which affects the flood of blood and oxygen throughout the body (Dr. Christian Münter, 2012). Healing abilities of the body fails under such circumstances, patient even loses the ability to feel pain (Vinik, 2008). If not treated in early stages, can result into an infection which will later on become an open wound. Around 15 percent of diabetic patients are affected by foot ulcers.

### Treatment, Precaution and Wound Management

To treat the wound, silver releasing dressings should be applied on the infected area and antibiotics should be prescribed to the patient. Infection should be treated with surgical debridement and be drained properly. Moisture dressing should never be used for DFU, it may result into life threatening situations (Dr. Christian Münter, 2012).

## Pressure Ulcer

Pressure Ulcer or Pressure sore occurs due to immobility, this mostly happens to a person who cannot move easily (Nordqvist, 2017). It effects specially on bony part of body, in our case it develops on the sacrum bone of the patient. Due to his inability to move without assistance, patient stays in one position for a long time. This prolonged stay in one position produces pressure on the sacrum bone affecting blood circulation to lower part of the body (Black et al., 2007). First sore develops on the affected area and if not treated well, it rapidly develops into a wound and ulcer. Bitain with or without the presence silver should be used as they are comfortable dressing and are best solution for the wounds which are at the risk of become deadly infection at grade 3.

### Treatment, Precaution and Wound Management

Pressure should be removed by adjusting the patient’s posture with the help of foam pads or pillows. Mild wound can be cleaned with water and soap but in the case of open wounds with presence of infection, saline solution should be used for cleaning. Frequently moving the patients not only prevent pressure ulcer from developing, but it will be of great benefit in later stages also. Dead tissues should be removed for proper healing and the wound should always be dressed after cleaning. Oral antibiotics and antibiotic creams are also a great help in treating the infection (Nordqvist, 2017).

## Second Degree Burn

Our patient is also affected by a 2nd degree on his left arm. Epidermis and Dermis layers of the skin are effected by Second degree burn and the affected area swells up and appears red. Main characteristics of second degree burn are; deep redness, affected area appearing shiny, and the area is painful to touch (Villines, 2019). It can be caused by many reasons starting from flames, contact with hot object, sunburn, electricity or chemicals. In our case, patient has spilled a hot coffee on his hand which results in second degree burn (Daeschlein G, 2007)

### Treatment, Precaution and Wound Management

First Aid treatment of the wound of a second-degree burn is to apply antibiotic ointments. The wound should be cleaned daily so that dead skin and ointment should be removed properly (Villines, 2019). These processes excel the healing process of the wound.

Patient is also affected with a bruise on his face due to fall and after careful examination it is realized that it is not such a major issue compared to the other wounds the patient had. So, this bruise will not be discussed here in detail.

Case 2

Mr. Miriam Gold, 85-year-old women is admitted to the ward for palliative treatment having swear pain from her wounds. The patient has malignant wound on her left groin, and venous ulcer on her leg. Patient has a medical history of Chronic obstructive pulmonary disease (COPD), Gastro-oesophageal reflux disease (GORD), and Coronary artery bypass grafting (CABG) has performed on the patient. Patient is taking Fentanyl 200 mcg and Midazolam 10 mg. Her malignant wound is releasing a lot of puss and she also have a cervical cancer.

# Patient’s Assessment

Medical history of the patient is discussed above in detail. The Patient has a total of 2 wounds; malignant wound on her left groin which is producing a lot of puss and have very a strong smell, and venous ulcer which is not recovering.

## Malignant Wound

Cancerous cells penetrate the patient’s skin and the vessels supporting the area causing the veins to swell up, this phenomenon results in the death of tissues. An open wound or cavity is formed on the affected surface of the skin. Malignant wound grows with time and characteristics are access bleeding, puss, strong smell, and swear pain effecting the way of life (Wen & Kesari, 2008).

### Treatment, Precaution and Wound Management

Selecting a proper treatment for malignant wound is necessary as the treatment may result into harmful side effects (Wen & Kesari, 2008). In our case as the wound has a very strong smell and is continuously releasing puss, palliation should be preferred and the wound bed should be prepared accordingly. Dead cells and bacteria should be carefully debride to reduce the smell and infection. The patient has a malodorous wound, the main goal in nursing should be the cleaning of wound, removal of debris, reducing the odour.

## Venous Ulcer Wound

Failure or the malfunctioning of venous valves causes pressure in the veins to increase. This pressure results in blood pooling and the veins are stretched and the proteins and nutrient in them leaches to the tissue. This pooling of the blood affects the pumping of blood back to the heart, resulting in the development of Venous Ulcer (Leonard, 2018). In this case, it is observed that the patient has venous ulcer which never got treated at all. This is a very serious issue as this may lead to vein thrombosis and even heart failure.

### Treatment, Precaution and Wound Management

As it is observed that the wound is not healed, medical personnel should make sure that the wound is infection free so that the healing process starts. The wound should be moist, and the dressing should be changed (Leonard, 2018). Compression therapy should also be provided. The patient should be kept in a warm environment.

# References

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