Title page

Wound management

Medical history

The patient is a 68-years old man who developed ulcers on both legs. The patient suffers from acute arterial ischemia that appears on the legs and swift inception is linked to the embolic occurrence. The patient remained smoker and is socially active. The plaque has settled on the arterial walls and they float around the smaller blood vessels. The condition reflects that ulnar artery and palmar arch are affected. The nature of the wound indicates that it is round shaped and caused by putting pressure on hand that damaged the skin. The ulcer is painful and drains a larger amount. Acute arterial ischemia causes tissue necrosis and required immediate amputation. The symptoms and signs are not quite visible in case of hand wound. The injury is associated with intense spasm including the distal arterial tree. It causes coagulates blood that gets darker and coarser in the pattern. Larger patches of staining appear that causes blistering and liquefaction. If not treated appropriately this leads to reperfusion injury. The fungal infection is apparent in the injury. The visible mold or plaque is formed that can spread to other parts. Viral infection reflects the serious implications of this wound. This is caused by certain bacteria that are capable of growing at other parts of the body.

Wound management principles stress on understanding the physiology of the wound and anticipate the process of healing. Normal stages of wound healing are identified and adequate care standards are adopted for managing the injury. Provision of adequate care and treatment is critical for attaining the quality of care and minimizing the extent of pain. Various methods are constructed for stimulating cellular adhesion. The management principles stress on identifying the right dressing including; silver dressing, soft silicone and scaffolding (Daunton, Kothari, Smith, & Steele, 2012).

Evaluation of wound

Wound bed status exhibits the time framework established for assisting practitioners in examining and managing patient with a wound. This emphasizes on treating the patient as a whole by implementing wound bed preparation care cycle. Bed preparation stresses on Tissue, Infection, Moisture and wound Edge (TIME). As the wound is acute so the practitioner follows a well-defined process. This involves coagulation, inflammation, the proliferation of cells and epithelialisation. TIME framework is considered as an effective method for treating the patient that has experienced serious wound injury. It determines the barriers of the healing process and removing them that promotes the overall health status of the patient.

Wound characteristics based on the TIME framework are explained. Time: the examination of the wound indicates that the cell debris will influence the process of healing. Infection: high bacterial counts are recorded that causes prolonged inflammation. Protease activity is also linked with the growth of bacteria in the wound. Moisture: imbalance shows that excessive fluids have resulted in maceration of the wound margin. Edge: the non-responsive wound cells are capable of causing abnormality in the cellular matrix and abnormal protease activity. The wound occurred due to the limited or curtailed blood supply.

Wound measurement uses scale photograph for identifying the exact affected area. Ultrasonic digitizer provides a clear view of the wound. It is critical to measure the width and breadth of the wound. This required examining the edges of the wound and writing description. The redness and the puffiness are defined.

Skin conditions reveal that the area is reddened and black. There is swelling and skin lesions are visible. The skin is shiny and not normal. Patches appear on the edges. Wound exudate depicts that it appears to be grey or black in colour. Swelling is apparent around the wound and in case of pressure, the condition will get worst. The wound doesn't seem to be bleeding and is sunken in appearance.

Healing process

Physiology of healing process identifies the stages that are initiated with the inflammatory stage. The aetiology of the wound indicates that comorbid alignments lead to chronic wounds including immune suspension, pyoderma and ischemia. The pathophysiology indicates that the wound affects the dermis and epidermis of the infected area. The wound is classified on the basis of discolouration, swelling, warmth and hardness. Stage 2 of the assessment depicts that wound penetrates the skin. In the next stage, the thickness of the wounds is identified that does not penetrate through the white membrane. The fascia separates the skin from the fat of the deepest tissue. The fourth stage finds if the wound causes damage to the muscle bone and tissue or not.

The stages of wound healing are identified in the physiology. Inflammatory start begins a few days after the injury. The wounded area attempts to restore and return to its normal stage through improved blood supply and circulation. Thromboplastin and platelets are responsible for making the clot. The redness and healing are recorded that are seen as visible indicators of the immune response. The bacteria is cleaned with the white blood cells. The second stages of the healing process include the proliferation stage that constitutes of three weeks or more. The severity of the wound affects the stage and process of healing. The fibroblasts are special cells that work for filling the wounds. New blood vessels are also developed in this stage (Naylor, 2013). Maturation and remodelling is the last stage that constitutes two years. The alteration in the shape of the wound is the sign of active healing.

Evaluation of wound management plan

The wound care department of the hospital provides instructions to treat the wound appropriately. The assessment of the injury provides information (started III wound on hand, started from the small wound and progressed). The possible solutions for the case involve wound Vac placement and complex dressing change. Complex wound requires more care. The nursing staff needs to adopt appropriate steps to prevent any complications (Sood, Granick, & Tomaselli, 2014). The pre-procedural care involves the teaching of steps that help nurses to manage wounds. Wound care dressing requires appropriate procedures and adequate care. The initial step includes using an adequate hygiene process such as washing hands and wearing sterile gloves. The second step is to clean the wound with warm water. The nursing staff must take care that the wound does not bleed more and clean it gently. Negative pressure wound therapy helps to manage the wound effectively (Hioldens, 2015). Hydro-conductive dressings also provide immediate results and are easily managed. Only professionals can manage the wound with proper care and treatment.

The possible complications about dressing involve delay in healing. Chronic wounds present a more alarming situation as the wounds can lead to further complications such as foot ulcers and other skin diseases. The common medicines and drugs used for wound dressing include Vancomycin IV, Lidoderm 4%, silver sulfadiazine, and lidocaine topical. One possible outcome of post-procedure is wound failure to progression. When the wound fails to progress, it results in delayed healing, wounds breakdown, and deterioration. Right assessment of wounds is important. Treatment often helps to manage wounds effectively and on time. The psychosocial impact of delayed healing and prolonged recovery is negative on the patient and the family. The patient gets restless and aggressive at times (Dreifke, Jayasuriya, & Jayasuriya, 2015).

Provision of health education

Wound education is provided to the patient for self-management. This is crucial for ensuring that the patient follows the procedures that will ensure his recovery. The process will explain steps that the patient will take for managing wound at home. The patient will be advised to avoid walking or doing activities that demand more physical input. Self-management is an effective intervention employed for reducing the adverse impacts of ulcer wounds. The patient is taught preventive behaviours that are effective for the patient cohort. Increasing patient knowledge about the wounds and adherence to therapy promotes chances of timely recovery. The content used for sharing information includes written verbal and visual material. Education is provided about the use of medicines, dressing, washing and avoiding activities that could worsen the condition of the wound (Nather, Hong, Lin, & Sakharam, 2011).

A comprehensive care plan is established and shared with the patient. The plan explains the procedures that the patient will manage himself. This plan includes information about the dressing, a way of treating the wound, dosage and time for taking medication (Nather, Hong, Lin, & Sakharam, 2011). Dietary guidelines are also provided to the patient that will increase the process of healing. The instructions include; gently washing the leg, with mild soap recommended by the physician. The prescribed soaps are Dreft and Ivory Snow. The patient will be advised to use lukewarm water when he is treating the wound. The patient is advised to examine the legs and the affected area daily and observe if any change takes place. The observations taken for reporting changes include redness, harshness or increased warmth. The patient is advised to take the medications and apply lotion or cream twice a day.

Guidance about natural intervention is also provided to the patient that include the use of amino acids that increases the process of healing. The patient will use Omega 3 fatty acids in the diet because it also improves the recovery of the wound. Consumption of vitamin A will increase the process of tissue and skin repair. Vitamin C is effective in eliminating the risks of slow healing. The patient is provided with the knowledge on factors that could slow healing such as stress, diabetes, neglecting daily medication or excessive washing (Naylor, 2013).

Pain management

Pain management is another critical stage in improving the health of the patient who has experienced ulcer wounds. Managing pain in ulcer wounds is important because it can slow the process of recovery. It is crucial to determine the quality and intensity of pain. Use of proper medications and drugs reduce the extent of pain. The medications like ibuprofen are used for five days that lessens the intensity of pain. The common medicines used for curing the patient with ulcer wound include anti-biotic. This is effective when the patient has developed an infection. The regular doses of paracetamol are advised with the frequency of 500mg x 2. This reflects that the right dosage is to take the medication two times a day (Daunton, Kothari, Smith, & Steele, 2012). Lidocaine patch over the wound is also a useful intervention for providing relief from the pain (Hampton, Kerr, & Crossley, 2015).

Dressing creams and ointments are also used for controlling pain in patients. The common ointment used for managing pain is local anaesthetic cream EMLA 5%. The medication is effective for the removal of pain before the procedure and improves the healing process. Creams are applied to the affected area two times a day for keeping the wound protected from the environment and infections.

References

Daunton, C., Kothari, S., Smith, L., & Steele, D. (2012). History of materials and practices for wound management. *Wound Practice and Research, 20* (4).

Dreifke, M. B., Jayasuriya, A. A., & Jayasuriya, A. C. (2015). Current wound healing procedures and potential care. *Mater Sci Eng C Mater Biol Appl, 48*, 651–662.

Hampton, S., Kerr, A., & Crossley, M. (2015). *Summary of five case studies on the treatment of venous leg ulcers with a new two-layer compression system in a community setting.*

Hioldens, J. (2015). Top tips for a skin graft and donor site management. *Wound Essentials, 10* (2).

Naylor, W. (2013). Malignant wounds: Aetiology and principles of management. *Nursing Standard, 16* (52).

Nather, A., Hong, N. Y., Lin, W. K., & Sakharam, J. A. (2011). The effectiveness of bridge V.A.C. dressings in the treatment of diabetic foot ulcers. *Diabetic Foot & Ankle, 2* (1).

Sood, A., Granick, M. S., & Tomaselli, N. L. (2014). Wound Dressings and Comparative Effectiveness Data. *Adv Wound Care (New Rochelle), 1; 3(8)*, 511–529.