

Impact of stroke case study



Introduction

Jithra is now 68 years of age. Her family consists of husband, daughter, nephew and nephew's wife. She has been living with left side hemiplegia caused by stroke since she was 64. As this interview went, Jithra was holding her daughter's hand and slowly elaborated her word by word experience in tears. Before an episode of stroke damaged the right side of her brain and put her in bed for the rest of her life, Jithra was living a life of a healthy person. She stated that poverty and debt were the most important factors that motivated her to wake up at 4: 30 am on regular basis in order to prepare food and beverage for her respective customers who kindly supported her small restaurant. A strong belief that she did not have any health issue strengthened by the fact that an annual physical check-up was so expensive disguised Jithra from realising how essential it was to have her blood pressure and blood glucose level regularly monitored when she aged. As now that she spends her activities of daily living in bed, pressure sore has become the main concern for both Jithra and her family. Though Jithra does not complain of soreness, redness on skin does indicate that some areas need attention. This essay will provide an overview understanding of stroke and its negative effects posed on Jithra. Furthermore, this essay will emphasise on the intervention and prevention of pressure ulcer in depth.

Understand Stroke

According to World Health Organization (2014), stroke occurs when there is an interruption of the blood supply to a part of the brain. Stroke can be divided into two major types. The first type is called haemorrhagic stroke.

This type of stroke accounts for approximately 13 percent of all strokes (Brown & Edward, 2012). It results from bleeding into the brain tissue. The bleeding caused by a rupture of blood vessels results in the leakage of blood into the brain impairing the delivery of oxygen and nutrients. Haemorrhagic stroke can be caused by a number of disorders affecting the blood vessels. Some of which are long-standing high blood pressure and cerebral aneurysms, a thin or weak spot on a blood vessel wall. The weak spots that cause aneurysms are usually present at birth. The development of aneurysms happens over a number of years and don't usually cause detectable problems until they break (Stroke Foundation, 2014). Jithra's daughter stated that Jithra complained of headache and nausea approximately 48 hours, especially during periods of activity, before an episode of stroke occurred. Headache particularly distinguishes haemorrhagic stroke from ischaemic stroke. Its other symptoms also include nausea, vomiting, decreased level of consciousness, neurological deficits and hypertension (Brown & Edward, 2012).

The second type is called ischaemic stroke. It accounts for approximately 85 percent of all strokes. According to Brown and Edward (2012), this type of stroke occurs as the result of partial or complete obstruction, caused by a blood clot, of a blood vessel that supplies blood to the brain. This leads to an insufficient of oxygen supply and glucose needed for cellular metabolism. A clot may be formed by means of embolism or thrombosis. Both types of clotting formations can be differentiated by their characteristics. The term embolism in relation to stroke is characterised by a condition where an embolus is created in one part of the brain or the body, circulates in the

bloodstream, and eventually blocks the flow of blood through a vessel in another part of the brain (Crosta, 2009). This is called embolic stroke. On the other hand, the term thrombosis is characterised by the formation of a clot resulted from fatty deposits or plaque blocking the passage of blood through the artery. This type of clot remains in one area of blood vessels without being carried throughout the bloodstream. This is called thrombotic stroke (Brown & Edward, 2012).

Stroke risk factors

There are multiple risk factors associating with stroke as according with (Brown & Edward, 2012). The risk factors can be classified into non-modifiable risk factors and modifiable risk factors. Non-modifiable risk factors include age, gender, race and heredity. Modifiable risk factors include diabetes mellitus, heart disease, atrial fibrillation, heavy alcohol consumption, hypercoagulability, hyperlipidaemia, hypertension, obesity, physical inactivity, sickle cell disease and smoking.

Jithra, at 68, was diagnosed with hypertension or high blood pressure and diabetes mellitus. Age, hypertension and diabetes mellitus have played a key role in contribution to stroke. ' Stroke risk increases with age, doubling each decade after age 55 (Brown & Edward, 2012, p. 1622).' The rate of atherosclerotic development is usually increased by the stress of a constantly elevated blood pressure. The term atherosclerosis is referred to as hardening of the arteries resulting from the formation of fatty deposits or plaques. The narrowing of the blood vessels is its consequence. The carotid artery in the neck is a common site where these plaques develop and tend to

break away and lodge in the vessels of the brain (Sander, 2013). Likewise, diabetes mellitus increases tendency towards the dysfunction of the inner linings of the blood vessel walls leading to an increase in the tendency towards the development of plaques. In addition, high cholesterol and triglyceride levels are highly likely among people with diabetes mellitus (Brown & Edward, 2012, p. 863).

Impact of Stroke

According to Brown and Edward (2012), stroke is a leading cause of serious, long-term disability. Jithra has been living with left side paralysis since she was 64 as a consequence of stroke. Immobility and the weakness in Jithra's right arm and leg are the key limitations. She relies greatly on her family members when repositioning in bed is attempted and a combination of self-care abilities and activities of daily living, such as eating or drinking, are performed. Dysarthria, a disturbance in the muscular control of speech, is also experienced. Impairment may involve pronunciation, articulation and phonation. This helps explaining why Jithra feels uncomfortable communicating with strangers. As the interview went, a sudden change in emotion was spotted. Persons who have had a stroke may have difficulty controlling their emotions. Emotional responses may be exaggerated or unpredictable (Brown & Edward, 2012, p. 1628). The daughter said that Jithra sometimes cried without any reason. The interchanging between laughing and crying took only minutes to do so. Besides pressure, shearing force, friction and excessive moisture contribute to pressure ulcer formation (Maklebust & Sieggreen, 2001). As mentioned above that Jithra is bed-bound and greatly relies on her family members when repositioning is attempted,

<https://assignbuster.com/impact-of-stroke-case-study/>

manual handling is used in order to lift and move her around the bed. However, the incorrect techniques combined with non-supportive equipment, such as sliding sheet, have put the maintenance of Jithra's skin integrity becomes much more difficult.

Pressure Ulcer

According to Sydney South West (2008, p. 4), pressure ulcers are defined as “ any lesion caused by unrelieved pressure when soft tissue is compressed between a bony prominence and an external surface for a prolonged period.” Factors that influence the development of pressure ulcers include the intensity of the pressure; the length of time the pressure is exerted on the skin; and the ability of the tissue to tolerate the externally applied pressure. Intrinsic factors that put Jithra at risk in developing pressure ulcers consist of advanced age, malnutrition and diabetes mellitus. Extrinsic factors include pressure, shear and moisture Sydney South West (2008).

Intervention

Although the skin remains intact, the appearance of persistent redness, particularly in sacrum, followed by itchy sensation indicates that stage one pressure ulcer has already developed. Stage one pressure ulcer can be intervened as referred to pressure ulcer intervention guidelines (Jones, 2013) by strictly maintaining the skin integrity. This can be done by relieving the externally applied pressure, protecting fragile skin and bony prominence, preventing friction and shearing and protecting skin from moisture.

In relieving the externally applied pressure, a regime of repositioning combined with the use of pressure relieving devices has already been utilised by Jithra's daughter. However, it might not be enough in terms of the frequency. The frequency of repositioning depends on the ability of the tissue to tolerate the externally applied pressure. In this case, Jithra should move or be repositioned frequently enough in allowing reddened area of affected skin to recover from the effects of pressure. A turn clock may be a helpful reminder of correct body positions and appropriate turning times. Additionally, a 30-degree side lying position may well be utilised for Jithra as it diverts pressure from the sacrum. Maintaining a 30-degree side lying position can simply be done by using pillow or foam positioning wedges. However, lying on the side may increase pressure on extremities, especially knees and ankles. Placing pillows between the legs helps preventing opposing knees and ankles from exerting pressure on one another (Maklebust & Sieggreen, 2001).

In protecting fragile skin and bony prominence, an appropriate support surfaces shall be used and yet its cost has to be taken into consideration. Poverty and debt make it very difficult for Jithra to afford buying or renting them. 'Charges can range from \$24 to purchase a foam overlay to a daily rental fee of \$125 for a highly technical therapy bed (Maklebust & Sieggreen, 2001, p. 75).' Regardless of the variations in price, There is no scientific evidence that one support surface consistently works better than any others. Nevertheless, pressure points require protection whether at risk persons are in a bed or on a chair. Using pillows to bridge vulnerable areas, again simple, is an effective way to eliminate pressure. A regime of repositioning, together

with the use of pillows has proved to be highly effective in protecting fragile skin and bony prominence.

In preventing Jithra from friction and shearing, a family education on how friction and shearing occur and correct usage of manual handling techniques and appropriate equipment shall be provided. Shear is greatest when a caregiver drags an at risk person along the surface of the sheets during repositioning or allows the person to slide from high-fowler's position. In order to minimise shearing force, the head of the bed shall not be raised exceeding a 30 degree angle, unless the patient is eating. Furthermore, friction, a precursor of shear, is commonly caused by pulling a patient across the bed linen. Rubbing the protective layer of skin away increases the potential for deeper tissue damage.

Excessive moisture may be the result of sweating, wound drainage, soaking during bathing and faecal and urinary incontinence. Moist skin is five times as likely to become ulcerated as dry skin. The intervention guidelines suggested that protecting skin from moisture can be done by using continence management systems, using barrier skin cream to prevent skin maceration and keeping the site clean and dry. Living in a hot and humid country like Thailand may put Jithra at a higher risk of developing pressure ulcer due to sweating. Thailand normally has its temperature sitting at around 30 degree Celsius. Two fans, together with the application of baby powder are used in maintaining the dryness of Jithra's skin.

Recommendation

According to Jones (2013), it is highly recommended that risk assessments must be done on Jithra by using the Waterlow scale. In doing so, her body mass index is required. The scale will give a score which helps identifying if Jithra is at risk, high risk or very high risk in developing pressure ulcers. Therefore, repositioning regime can be precisely arranged in order to ensure optimum pressure redistribution. Manual handling, together with the use of equipment such as hoists or slide sheets, effectively helps avoiding shear and friction. Education on the use of the mentioned equipment shall also be provided. A dietician shall be involved in discussing knowledge of healthy diet and considering the need for food fortification and nutritional supplements. Make sure that Jithra consumes adequate fibre and well hydrated as she is more prone to constipation due to immobility.

Conclusion

This can be concluded that the maintenance of skin integrity plays a key role in avoiding the development of pressure ulcers. Being rich or poor might not be the factors in treating and preventing pressure ulcers. This essay has shown how beneficial it is to have carers or family members who strictly put pressure ulcer intervention and prevention guidelines into practice to look after Jithra. The mattress that Jithra lays her body on might not be the best that the family can afford but frequently turning and maintaining dry skin have proved in lowering the risk of developing pressure ulcers. Only stage one pressure ulcer developed though, Jithra has been suffering from disability for 4 years.

References

Brown, D., & Edwards, H. (Eds.). (2012). *Lewis's medical-surgical nursing: assessment and management of clinical problems*. NSW, Australia: Elsevier Australia.

Crosta, P. (2009). What Is Embolism? What Are The Different Types Of Embolism?. *Medical News Today*. Retrieved from <http://www.medicalnewstoday.com/articles/153704.php>

Jones, D. (2013). Pressure ulcer prevention in the community setting. *Nursing Standard*, 28 (3) 47-55. Retrieved from <http://web.a.ebscohost.com.ezproxy.holmesglen.vic.edu.au/ehost/pdfviewer/pdfviewer?vid=3&sid=87c6951d-c6be-44c5-8985-c35d1918eb04%40sessionmgr4004&hid=4207>

Maklebust, J., & Sieggreen, M. (2001). *Pressure Ulcers: Guidelines for Prevention and Management* (3rd ed.). Pennsylvania, USA: Springhouse Corporation.

O'Neill, P. A. (2002). *Caring for the Older Adult: A Health Promotion Perspective*. Pennsylvania, USA: W. B. Saunders Company.

Sander, R. (2013). Prevention and treatment of acute ischaemic stroke. *Nursing Older People*, 25(8), 34-39.

Scott, K., Webb, M., Sorrentino, S., & Gorek, B. (Eds.). (2006). *Long-term care assisting: Aged care and disability*. NSW, Australia: Elsevier Australia.

Stroke Foundation. (2014). Types of Stroke. Retrieve from <http://strokefoundation.com.au/what-is-a-stroke/types-of-stroke/>

Sydney South West Area Health Service. (2007). Pressure Ulcer Prevention and Management. Retrieved from <http://www.sswahs.nsw.gov.au/pdf/policy/pd2008008.pdf>

Watkins, C., & Leathley, M. (2010). Setting the scene. In Williams, J., Perry, L., & Watkins C. (Eds.), *Acute Stroke Nursing* (pp. 1-16). Retrieved from <http://0-onlinelibrary.wiley.com/alpha2.latrobe.edu.au/store/10.1002/9781444318838.ch1/asset/ch1.pdf?v=1&t=ht43cw4l&s=1791526b00be208b196d718b1c2189904267ad40>

World Health Organization. (2014). Stroke, Cerebrovascular Accident. Retrieved from http://www.who.int/topics/cerebrovascular_accident/en/