Mobility in stroke rehabilitation assignment

The purpose of this assignment is to identify the nursing role in the mobility rehabilitation of a patient who had a lacunar ischaemic stroke affecting the right corona radiata. The nursing care and the interdisciplinary management of the impairment will be critically evaluated as well as the patient progress during the stay in the hospital. The patient that will be discussed in this assignment was given the pseudonym of Martha. Martha is a 76 year old female who had a lacunar ischaemic stroke of the ight corona radiata.

She has relevant past medical history of hypertension. on admission, Martha was presented with weakness on her left side in both her leg and arm with sensation preserved and no cognitive impairments. The corona radiata is a white matter that contains both descending and ascending axons that carry information from and to the brain cells that make up the cerebral cortex, an area of the brain that is responsible for the processing of conscious information and where the orders to initiate voluntary movements (walking, tapping your foot) first originate (Similima, 2011).

These areas of the nervous system activate muscles all over the body to move. Therefore if the corona radiata is affected by a stroke, movement will be interrupted. The type of stroke that affects the corona radiata is called “ Pure motor stroke” and is the most common type of lacunar strokes, accounting for more than 50% of all cases (Similima, 2011). Pure motor strokes cause partial or complete weakness in the face, arm and leg on one side of the body. It can occur in any of these areas, alone or in combination with either of the other two.

Most commonly, pure motor strokes cause either a combination of arm and leg eakness, sparing the face (this is the case of Martha), or a combination of arm, leg and face weakness. By definition, there is no loss of sensation anywhere in the body, no visual or speech symptoms or higher cognitive impairment (Wityk and Llinas, 2007). The hemiplegia is one of the most common neurological impairments following stroke and it needs to be managed by every member of the medical team “ all patients have the benefit of the range of expert advice needed for high quality care” (NHS, 2010).

Multidisciplinary teams (MDT) need to bring together staff with the ecessary knowledge, skills and experience to ensure high quality diagnosis, treatment and care. The MDT meeting is about considering the patients individual case not Just about treating a stroke. To support this, an MDT should take account of the patient’s views, preferences and circumstances wherever possible when consulting on the care that is most appropriate for the patient’s condition. MDT’s should be alerted if there are significant changes to their recommendations and the reason for this is so they have the opportunity to review and build upon each case

The aim of the Multidisciplinary approach to a patient who suffers from a motor impairment is to “ maximise functional ability by providing time, space for activities, aids and equipment, preventing injury and promoting safety’ (Woodward and Mestecky, 2011). When caring for a patient it is of the utmost importance to ensure there is no further injury, therefore the communication within the team is crucial. Every member of the team should

know what the patient is able to do and how they should be cared for to gain the best rehabilitation.

Martha’s case was approached this way and her status was discussed twice daily in the handover. Also during the day it is the nurse’s duty to speak the physiotherapist and get her recommendations. When possible, I found very helpful going with the physiotherapist and doing the daily exercises together enabling me to get a better understanding of Martha’s condition and Martha seemed to like the added support. This also gave Martha more confidence around me when doing transfers as sometimes it can be very scary for a patient trying to mobilise when suffering from hemiplegia.

Along this the Multidisciplinary meetings were done twice a week with the consultant, the hysiotherapist, the occupational therapist, the ward sister and myself or the nurse who was on duty looking after Martha. Correct positioning and early mobilisation of a patient following stroke is important in preventing potential complications arising from impaired movement which can develope changes in muscle tone such as spasticity. Around 19% of patients suffer spasticity following a stroke associated with pain and which interferes with rehabilitation interventions (Woodward and Mestecky, 2011).

On admission the physiotherapist performed the Modified Ashworth Scale and Martha scored 1 which eans that there was slight increase in muscle tone. This was manifested by a catch and release or by minimal resistance at the end of the range of motion when the affected part(s) is moved in flexion or extension (Bohannon and Smith, 1987) (Woodward and Mestecky, 2011). From the beginning Martha used to hate being in bed and after being

assessed by the physiotherapist making sure she was safe to do so she used to spent most of the time sitting in the chair provided.

She was educated to sit well back and in the centre of the chair placing the affected arm well forward n a pillow with the feet flat on floor and knees directly above the feet. She was very comfortable in that position and she always had the nursing bell close to her and used to call us if the pillow fell down or when similar issues arose. However, there were times that Martha was feeling tired and she had to spent longer periods resting. While in bed she usually prefer lying on her affected side so she could be more independent.

She liked having two pillows for the head and the affected shoulder was moved well forward placing the good leg forward on a pillow and another pillow placed behind her back. Although her preference was lying on the affected side, after being educated of the complications of immobility she didn’t have any problem to lie on the non affected side, especially during the night. The affected shoulder was placed forward with arm on pillow and the affected leg backward on a pillow. Plus an extra pillow was also placed behind her back.

Another action taken postulated to be secondary to promotion of anti-gravity muscle activity in the trunk and lower limbs, maintenance or improvement in soft tissue and Joint flexibility, modulation of the neural component of spasticity through prolonged stretch and ltered sensory input, reduction of lower limb spasms and positive psychological effect (Stevenson VL, 2010). At the beginning this was Just carried out by the physiotherapist with the

nurse’s help for safety reasons. Active movements were also performed to increase strength, re-educate movement patterns and improve cardiovascular fitness.

Active movements should be encouraged because the effects are greater than those seen with passive exercise alone. These benefits have been seen in studies of people suffering from a stroke (Stevenson VL, 2010). Marthas rogress was incredible and when she left the hospital she was able to walk with a walking stick and the supervision of her daughter or with a zimmer frame and the Modified Ashworth Scale score was O. This was an achievement as when she came she wasn’t able to mobilise at all.

Another complication that can occur as a consequence of having a mobility reduction is the damage of the skin integrity therefore several tools were done to assess this risk. Within the first 6 hours of admission every patient needs to be assessed using the waterlow assessment and the MUST nutritional screening, also the skin needs to be inspected. Martha got a waterlow score of 17 on admission which placed her at high risk of developing a pressure sore, she was continent of faeces and urine and no pressure sore was found on admission.

The taken actions according to NICE guidelines 2005 were to provide her an air mattress, to place her in a position chart ensuring that the prolonged pressure on bony prominences was minimised and ensuring the correct usage of manual handling devices in order to minimise shear and friction damage. Two sliding sheets were provided and the bony prominences were kept from direct contact from one another by using pillows in between them.

At the beginning Martha found very difficult to get used to sleep on an air mattress because of the noise but the benefits of using it were explained and she agreed to use it.

By talking to her I discovered that she loved listening to music when she was going to sleep and the following day when her family came to visit her, the difficulty of sleeping because of this device was discussed and they brought Martha's iPod with her favourite music which helped her to sleep peacefully through the night. Having a good night sleep is very important for any patient, specially for those who re having rehabilitation as they require a lot energy and strength.

Additionally skin inspections were done regularly and Martha, as she wasn't mentally impaired was taught how to inspect her skin. She was shown what the high risk areas were (heels, sacrum, ischial tuberosities, elbows, temporal region of skull, shoulders, back of head and toes) and early signs of skin integrity deterioration (persistent erythema, non- blanching erythema, blisters, discolouration, localised heat, localised oedema and localised induration) (NDNQI, 2013). Regarding general hygiene, Martha required assistance due to her mobility impairment.

Such care was provided regularly according to the RCN guidelines that recommends that skin cleansing should be done with mild detergents using warm water to minimise irritation and drying and particularly over bony prominences should be avoided (RCN, 2009). Martha was always very helpful and used to do as much as she could by herself, at the beginning she required more assistance but by the end of her time at the hospital we Just

needed to supervise her when going to the shower and she used to do everything by herself. She usually liked to have her shower after the physiotherapist session and his preference was respected as much as possible.

Also she didn’t like to use the hospital clothes which according to her “ made her look less sick” so the family brought her own clothes. The MUST score obtained was 1 on admission. Adequate nutrition is required by the body for maintaining tissue integrity and preventing tissue breakdown (NPUAP, 2009) Due to this score Martha was put on food chart which helped us monitoring her food intake along with daily weight measurements and she was also referred to the dietician on the day of admission who put her on food supplements and which were discontinued when Martha started having a etter food intake.

The family was made aware of the importance of having a good food intake and they brought Martha her favourite cakes and homemade food. At the beginning Martha needed assistance with feeding herself as she wasn’t able to cut her food, opening leads etc. Assistance was given regularly and the kitchen staff was made aware about her requirements, therefore before serving her food they always used to come and talk to us first as it can be very frustrating not being able to feed yourself and have the food in front of you.

Martha had a good progression during her tage in the hospital and she put on 3kg, her food intake was appropriate and she didn’t develop any pressure ulcer. When the mobility of a patient is reduced the risk of VTE (Venous

Thromboembolism) increases and therefore in a patient who suffers from hemiplegia after stroke should be assessed for this risk and preventive measurements should take place. According to The National Institute for Clinical Excellence (NICE, 2010), recommendations are that all patients should be assessed for risk of developing thrombosis (blood clots) on a regular basis.

Martha was assessed on admission scoring 8 using the adapted tool rom Autar 2003 (Version 2PT 5/12) She was assessed again 24 hours after admission and when her mobility was better she was reassessed scoring 5. Because of the risk of developing a WE Martha was put on Enoxaparin and all the effects and risks were explained. Current NICE guidance suggests LMWH (Low Molecular Weight Heparin) prophylaxis for acute medical patients at WE risk unless there is a high bleeding risk (NHS, 2012).

Stockings were not put on her because according to the Clots in Legs or Stockings after Stroke (CLOTS) trial 1 GECS (can even present a greater risk to patients f skin breaks, blisters, ulcers and skin necrosis (CLOTS Trial Collaboration, 2009). Early mobilisation is fundamental to prevent WE along with more risks and that is why this patient was mobilised as soon as possible with the physiotherapist support (NICE, 2010). A very weak arm due to its considerable hanging weight, is at risk of stretching the shoulder Joint structures and developing a partial dislocation or ‘ subluxation’ (Turner-Stokes and Jackson, 2002).

Shoulder subluxation is considered a problem because it Many studies have suggested that trauma to the shoulder Joint can be prevented by roper

positioning and handling. The shoulder should be protracted, the arm forward, the wrist in neutral or slight supination and the fingers extended. Another important aspect that needs to be considered is not to pull from limbs when doing transfers, especially from the affected one. Therefore Martha and family were educated not to do so. An arm sling was provided to her to support the affected arm.

However, the sling was only used while doing transfer. When she was sitting on the chair a lap tray was provided positioning the arm away from the body, discouraging dduction and internal rotation and allowing bilateral upper limb activities (Turner and Jackson, 2002). Martha didn't develop a shoulder subluxation during her stage in the hospital. This was confirmed by an X-Ray that was taken to ensure there was no underlying problems. However she had pain on the shoulder and that is why this X- Ray was performed initially.

Hemiplegic shoulder pain, or post – stroke shoulder pain, occurs in at least 30 percent of patients although another estimate placed it at 70 percent . Post – stroke shoulder pain can adversely affect both length of in – patient ehabilitation and overall functional outcome (Woodward and Mestecky, 2011). Martha was on regular paracetamol but she wasn't put on NSAlD's from the beginning. When she started to feel this pain the consultant was informed who requested an X-Ray, the physiotherapist and the rest of the team were also made aware of the troubles.

The consultant also put the patient on PRN Ibuprofen which was very effective in reducing the pain levels. I consider that the approach to this risk wasn't the most effective one as Martha suffered from shoulder pain and it

can be an area to improve for future patients. However the communication within the team was very successful and the problem was solved in a short period of time. Another recommendation for the future supported by evidence based documentation could be the practice of passive movements which improve the spasticity (Lynch, et al. 005). After suffering a stroke the person can suffer an alteration on the body image understanding as such as the beliefs and feelings about how our bodies look and function. This is influenced by what we think we should look like, and how we think our bodies should “ perform”. In Martha’s case the main issue for her was the loss of unctionality of half of her body. Martha went from being able to perform all the activities of the daily life by herself to require assistance for most of them.

Successful adjustment and adaptation to this new situation depend on how well the acquirement of the new knowledge is and skills needed in order to get on with her life. (Woodward and Mestecky, 2011). The rehabilitation team role was crucial here because we needed to teach her new skills and this was achieved by good coordination and communication within the team. It was very important to proceed in the same way and reinforce the knowledge. As supportive measures a board was used to remind Martha the steps she had to follow and also it was very helpful for her family as they knew which was the appropriate way to help her mother.

Also setting realistic goals was very positive for her as every day she had a new challenge to achieve and that kept her motivated. Motivation also plays a vital role in with the way in which a patient evaluates their chances of successful rehabilitation and that this is influenced by social or external

factors (Woodward and Mestecky, 2011). Martha as already mentioned was always motivated to improve her skills and his had a very positive impact on her evolution. Also she had a very good support from her family who was always there to help her and a good support from the health team.

After 5 weeks of rehabilitation Martha was discharged being able to perform the activities of the daily life by herself, walking with a walking stick and assistance from her daughter or with a zimmer frame. She went to a nursing home for a couple of weeks while they were adjusting her house for her (she lived with her daughter). After she was seen by the team (consultant, physiotherapist) as an outpatient and she also came to visit the team to the ward. Reference list Bader , M and Littlejohns, L (2004) AANN Core Curriculum for Neuroscience nursing. th edition. Missouri. Saunders Bohannon, R. and Smith, M. (1987). “ Interrater reliability of a modified Ashworth scale of muscle spasticity. ” Physical Therapy 67(2): 206. Jun Hao Pan, Xin Yuan Song,; Sik Yum Lee, Timothy Kwok, (2008) Longitudinal Analysis of Quality of Life for Stroke Survivors Using Latent Curve Models. Stroke. Lynch, D; Ferraro, M; Krol, j; Trudell, C M; Christos, P and volpe, B T . (2005) “ Continuous passive motion improves shoulder Joint integrity following stroke” Clinical rehabilitation. Available at: http://cre. agepub. com/content/19/6/594. full. pdf *html (Accessed 9 March 2013) National Institute of Clinical Excellence (2010) Venous thromboembolism – reducing the risk: full guideline. Available at: http:// www. nice. org. uk/nicemedia/live/12695/47200/47200. pdf (Accessed 8 March 2013) National Institute of Clinical Excellence (2001) Clinical practise guidelines, Pressure ulcer risk assessment and prevention, recommendations 2001.

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