# Case study of a man with parkinsons disease

ASSIGN BUSTER

Mr Henderson has arrived in hospital after a history of falls at home and has just commenced a new medication regime.

It is very possible that he may be anxious, worried, frightened as a result of falling at home which also may result in loss of confidence. He may also be apprehensive about his new medication regime. Having been diagnosed with Parkinson’s for 5 years, he more than likely knowns the importance of getting his medications on time, in reducing the symptoms allowing him to maximise his independence. However, it is not for the nurse to presume this and she/he must sit down, talk to him, allowing him time to talk and express his worried and anxieties. This was help to establish a relationship and Mr Henderson will understand that you are there to support him throughout his journal of care. The nurse should also make sure that all members of the multidisciplinary team are aware of Mr Henderson’s condition and if they are not aware of the importance of getting medication on time out with ‘ normal’ drug rounds then they should be informed of its importance and understand the significant consequences resulting from not getting the drugs on time such as reduced independence and prolonged hospital stay. As medications are a large part in maximising independence and mobility and it may be suggested that Mr Henderson receives his medications before getting out of bed in the morning. This will allow time for the drugs to work and therefore enabling him to get out of bed more easily.

‘ Freezing’, a symptom of Parkinson’s’ disease can be distressing for patients. It affects gait initiation, turning and moving through small spaces, such a doors and busy areas. Anxiety can exacerbate freezing and it is vital that the nurse can firstly recognise anxiety, this may be achieve through

effective communication and listening skills and secondly developing strategies to reduce anxiety levels such as allowing him time to talk, listening and taking on board his expressions allowing for a trusting relationship to be developed, helping him to build in confidence and preparing him psychologically for going home. Various strategies have been suggested to assist with ‘ freezing’. Alexander, Fawcett and Runicnan (2006) suggest cognitive techniques in breaking down movement. They suggest breaking down the task of getting out of bed in the morning and describe that patients should bend their knees so that feet are flat on the mattress and they the patient should swing knees in the direction that he wants to turn. The next stage involves clasping both hands and lifting them straight up, straightening the elbows, then turning the head and swinging the arms in the same direction as the legs. Finally the patient can grip the edge of the mattress and adjust his position until comfortable. When Mr Henderson is mobilising then it is important that he does not have any distractions and the nurse or other members of staff should not disturb or interrupt if at all possible as this could lead to ‘ freezing’. The Parkinson’s Disease Society describe cueing strategies as external meaning visual, auditory or preprioceptive or internal meaning cognitive.

Visual cues could be stepping over a cue in the floor, for example tape can be placed on the floor in strips to help initiate in confined spaces when freezing has taken place. Tape can also be placed on the edges of stairs. Mr Henderson may also find useful to imagine he is taking steps up stairs and this may prompt movement. The nurse should ensure that the area is clutter free and this can exacerbate freezing. Auditory cues as the name suggests

would indicate sound used to enhance movement. Metronomes have been described as a useful tool in support gait initiation. Counting out rhythms or singing and walking in time to this can be beneficial. Proprioceptive cues which means taking a step back before starting to walk; rocking gently from side to side or marching on the stop before stepping.

The nurse should ask Mr Henderson if he has experienced falls in the past year and frequency, obtaining as much information as possible about the falls, this can form part of the patients assessment namely a Falls Risk Assessment. Nice (2004) provides clinical guidance on falls risk assessment and suitable referrals should be initiated to the physiotherapist who will help to improve balance and the occupational therapist can help to make Mr Henderson’s home safer place to live by attending a home visit and suggesting suitable aids that can improve safety, maximising independence. One of the most devastating consequences of falling in older people is a fractured neck of femur which can have significant impact on independence and quality of life. The nurse may suggest to Mr Henderson about wearing a hip protector, this again can improve confidence and also help to protect the hip if her were to fall. A full explanation as to why this is being suggested should be provided allowing for informed choice.

Falls can be as a result of loss of balance and posture, freezing, only being able to take small steps, or dyskinesia and it is important to use techniques such as cues to minimise the risk of falls. Also physiotherapy input will help with exercise, improving balance and posture. Multidisciplinary collaborating is essential in proving effective care. The nurse can find out what strategies are being taught to Mr Henderson and the nurse can encourage continuation

of these exercises within the ward environment. It is important to continue to communicate with Mr Henderson allowing for evaluation in care and understanding what strategies are working and ones that are not. Once evaluated alternative strategies may be considered.

Postural hypotension should be monitored/assessed for patients with Parkinson’s as this increases the risk of falls as a result of dizziness or fainting in the drop in blood pressure. The patient should be supine for at least 10 minutes before taking a supine blood pressure reading. Then another reading should be taken within 3minutes of him standing up from the supine position. The nurse should be aware the dizziness the patient may experience when standing up should be standing next to him when she does the reading. If there is a significant fall in systolic blood pressure, by 20mmHg or goes below 90mmHg then this would indicate that the person has postural hypotension.

Strategies can be adopted to improve the deficit before considering pharmacological methods such as recommending gradual compression stockings to improve venous return and therefore blood pressure. For them to work efficiently they much be measured and fitted to ensure the correct pressure is applied to the legs and ensuring that Mr Henderson is achieving recommended fluid intake of 1500-2000ml per day.

If Mr Henderson is in a bay of beds for example 6 beds, then his location within the room should be considered in relation to the toilet. The bed should be relatively close to the toilet, if his fluid intake perhaps is being increased then frequency to micturate will potentially be increased. Mr Henderson is

experiencing reduced mobility then bed position should be definitely considered to minimise the risk of unnecessary bowel or bladder incontinence. A commode may be considered and placed discretely closer to his bed for the evening or provision of urine bottles and buzzer placed in a position that is easily available.

Appropriate footwear should be consider, the nurse should ensure that the are well fitted and not falling off increasing the risk of falls. The nurse should also check his feet or ensure there are no problems such as ingrown toe nails or blisters. The nurse should also ensure that Mr Henderson’s vision is examined or glasses should be worn at all times if required as this could result in unnecessary falls.

1299 words

Parkinson’s Disease Question 2b

Within the substantia nigra and basal ganglia there is progressive degeneration of cells which produce the neurotransmitter dopamine. The substantia nigra is a strip of dark pigmented cells located in the midbrain and the basal ganglia are collections of nerve cells located in near the base of the cerebrum. When motor impluses are initiated in the motor cortex, they need to be modified by the basal ganglia and substantia nigra by modifying motor activity, posture and making fine adjustments to movement. This is contained within the extrapyramid motor system and within the system there is normally a fine balance of neurotransmitters dopamine and acytylcholine.

Dopamine is inhabitory and acytylcholine is excitatory. Due to the reduction in dopamine there is excess of the excitory neurotransmitter acytlecholine resulting in excitable muscle tone and the symptoms associated with Parkinson’s disease.

Mr Henderson’s has begun a new medication regime using co-careldopa used to regain and maintain the balance between dopamine and acytlecholine.

Dopamine cannot be given on its own as it will fail to cross the blood-brain barrier (BBB). The BBB is a physiological barrier that prevents substances from getting across from the blood stream and into the brain. Instead of dopamine, the drug levadopa is used which can cross the blood brain barrier and is then converted into dopamine. The dopamine then acts on dopamine receptors in the extrapyraminal motor system to maintain the neurotransmitter balance and therefore control the Parkinson’s disease symptoms.

When levadopa is administered it is broken down in the gut and liver by an enzyme called dopa decarboxylase, therefore combined with levadopa is a drug that inhibits the enzyme from breaking down levadopa is used which will lengthen the effects of levadopa meaning that less drug is required. This drug is called dopa decarboxylase inhibitor (cardidopa)

This combination of levadopa can be provided as a preparation of one drug called co-careldopa or Sinemet (the brand name)

There may be side effect such as nausea and vomiting, postural fall in blood pressure, constipation, and red stained urine. Mr Henderson must be made made aware of these side-effects and should inform the nurses when he is experiencing them. Domperidone can be used as an anti-emetic to stop the side-effects of nausea and vomitting. Blood pressure should be monitored for signs of postural hypotension and if required a medication review may be required, the nurse may ask the patient not to sit up or stand up too quickly.

Parkinson’s Disease 2c