Introduction

This reflective case study will provide an account of the nursing management of a Mr Singh a 79 year old gentleman who developed a pressure sore whilst a hospital inpatient. The aim of the case study is to enhance the reader's knowledge of the importance of a structured approach to the management of the complex problems he presents with. The factors that affect wound healing will be discussed; the nursing process the use of assessment tools and good practice guidelines will also be explored. The care delivered will be analysed and ethical considerations will also be identified. A rationale will also be given for the choice of dressings used in managing his care. It is hoped that the acquisition of knowledge and skills obtained undertaking this case study and following reflection on the care provided, that effective strategies will be recommended in my place of work in order that future practice can be improved.

Clinical Issues

With a large body independent and governmental evidence supporting the need for post stroke assessment and management for the secondary prevention of cerebrovascular events (Department of Health, 2007; Royal College of Physicians, 2008; National Institute for Clinical Excellence, 2008; Price and Keady, 2010; Furie et al., 2011) it is an important part of the assessment process for factors that increase the risk of further health problems to be identified and managed. In essence it is essential for healthcare providers to not only manage and assess the impact of the initial stroke but there is a necessity for further assessment and interventions to be identified to support individuals to maximise their vascular health to reduce the risk of future vascular events (Price and Keady, 2010).

For Mr Singh the nursing assessment has highlighted three main issues that increase the risk of further health complications and they are his advancing age, his smoking and his weight. In respect of his age this is not an element that can be addressed through nursing or medical intervention as it is something that is not modifiable; however the two main health complications of his smoking and weight can be assessed and strategies implemented in an attempt to maximise his health potential.

In relation to the smoking issue there are clinical and nursing tools available to assess the impact and level of dependency; for example the Cigarette Dependence Questionnaire (Huang, 2010) provides a theory based approach to assessing a smokers level of dependency on cigarettes in an attempt to develop cessation plans, unfortunately the validity of this particular tool is difficult to assess as the sample size was relatively small (N = 256) and it was based on a Taiwanese population where transferability to British culture may affect outcomes.

From a nursing perspective it is important to understand the smoking behaviour and gain understanding of the individual's perception and description of their own smoking patterns so that intervention strategies can be utilised for maximum effect. Ridner et al (2010) identifies that the issue of smoking has become far more complex than individuals being a smoker or non smoker; individuals may only smoke 'socially' or smoke without the knowledge of family or friends and failure in understanding actual smoking behaviour may impact on the nurses' ability to deliver effective smoking cessation health promotion.

Once a nursing assessment has taken place of Mr Singh's smoking habits and levels of dependency then nursing interventions may be tailored accordingly; for example whilst on the ward Mr Singh could be offered first line treatment such as nicotine replacement therapy to assist with the physiological withdrawal of smoking as it is documented by Aveyard and West (2007) following a meta-analysis of more than 100 randomised controlled trials that all forms of nicotine replacement therapy are roughly equally effective in aiding long term cessation.

It is important for the nursing assessment to consider the effect Mr Singh's smoking behaviour has had on his vascular health and consideration should also be made to how his smoking behaviour prior to the stroke and subsequent admission to hospital will impact on his treatment whilst an inpatient. A consideration for example is the direct relationship between airflow (ventilation) and blood flow (perfusion), normally there is a balance between these two factors however the balance can be impaired significantly through a history of smoking or pulmonary problems, obesity or prolonged periods of immobility (Tortora and Grabowski, 2002); issues that are all relevant in the case of Mr Singh.

With restricted blood flow (perfusion) there is a decrease in oxygenation and nutrition to cells within the body and if this is not monitored closely by nursing staff then this can result in damage to tissue and organs which can impact significantly on Mr Singh's already compromised

health. It is also important to recognise also that oxygenated cells are important factors in the healing process and the control of infection (Whitney, 1999).

From a nursing perspective the nursing staff should develop a care plan to maximise perfusion to Mr Singh's vital organs; even though he has factors that may impact on outcomes, this may involve the nursing staff monitoring circulation and oxygenation levels, monitoring skin integrity, monitoring the quality of peripheral pulses and the administration of oxygen if required.

Further nursing assessments require completion to explore Mr Singh's current weight issues. It has been identified that he is obese and NICE guidance (2006) indicates that a medical evaluation is required to identify patients who are at risk of obesity related medical complications. This assessment should include a careful history, physical examination (including determination of BMI) and laboratory tests to identify eating and activity behaviours, weight history and previous weight loss attempts, obesity-related health risks, and current obesity-related medical illnesses.

One key issue is the cultural, language and traditions that may impact on the nursing staff's ability to implement nursing care. Mr Singh is a Sikh of Indian origin and it is noted that English is not his primary language for communication. This may present some difficulties particularly if the nursing team comprises predominantly of English speaking practitioners. If information is not disclosed and comprehended by Mr Singh this may impact on his recovery and ability to be pro active in his care and treatment.

This issue is supported in the literature with studies highlighting that there are five main cultural relate communication issues, which are defined as being; differences in the explanatory models of health and illness, differences in cultural values, cultural differences in preferences (male/female carer, doctors and nurses), racism and perceptual bias and finally linguistic barriers (Schouten and Meeuwesen, 2006). All these factors have a significant part to play in how care is delivered to an individual who is culturally different to the care provider and literature supports that care providers; such as nurses, find language barriers a source of stress within the workplace (Bernard et al., 2006).

Wound Management

In addition to the clinical features identified following Mr Singh's post stroke admission there was documentary evidence that a 'red area' on his hip had been identified but no further

action had been taken. Four days later a large cavity or pressure sore had developed and this was accompanied by Mr Singh reporting pain.

Baronoski and Ayello (2007) suggest that the process of quality wound care should commence on the patients admission, unfortunately in this instance although an area of concern had been identified no further action had been taken which has resulted in Mr Singh developing a significant wound to his hip.

The evidence base acknowledges that skin integrity issues are common place after stroke particularly if there have been impairments in mobility (Sackley et al., 2008) and that one-tenth of hospitalized stroke patients will develop pressure sores (Stein, 2008).

Schultz et al (2003) suggests that in chronic wounds the events that lead to repair can become disrupted, the case of Mr Singh is an example of this, what started off as a small area of redness highlighting an issue regarding pressure and the potential for change to the integrity of the skin became a more serious issue as the healing process is impaired possibly by factors such as Mr Singh's weight and poor mobility, perfusion to the area due to vascular problems, his ability to understand what was happening; all contributing factors that predispose his vulnerability to the integrity of his epidermal and dermal tissue (Bowler et al., 2001).

The management of pain in wound care is an important factor in the healing process as it is suggested that there are harmful effects of unrelieved pain which may include increased pulse, blood pressure and cardiac workload (Taylor, 2010); factors that are not desirable for Mr Singh particularly as he has recently experienced a stroke.

Pediani (2001) suggests that from a study of 5150 hospital patients 61% of this population suffered pain due to wounds and the levels of pain were rated to be either moderate or severe in 87% of this population, from this comprehensive study it has been concluded that pain serves as a protective function in most cases as it warns the patient of problems and will draw attention to the need for further assessment.

Due to the communication and cultural issues it is important that a comprehensive assessment of Mr Singh's pain is completed and this can be achieved by utilising specific pain measurement scales such as pain observation tools like the CNPI (Feldt, 2000) or tools where Mr Singh can point to a score chart or even to drawn faces highlighting degrees of pain (Hockenberry, 2005); the outcome can then determine the level of intervention required so that medications and analgesia can be prescribed to reduce the pain experienced by Mr Singh.

The use of assessment tools in wound care is not unusual as a format to obtain a standardised view on what the clinical issues are; examples of such tools used in wound care include; the 2001 Bates-Jensen Wound Assessment Tool (Harris et al., 2010); the Waterlow Score (Waterlow, 2005) and also the Applied Wound Management Continuums (Grey et al, 2009). The literature indicates that there is no clear evidence that assessment tools currently used accurately predict risk (Lomas, 2009) however nurses clinical judgement should be viewed as more effective than assessment tools alone (Gould, 2004; RCN/NICE, 2005) .

Most assessment tools are reported to be of poor quality in respect of methodological rigour, sample sizes and populations, and outcome measurement, resulting in them being susceptible to bias (McGough, 1999); in summary assessment tools should be utilised as an aide memoire and should not replace clinical judgement (Royal College of Nursing, 2001).

NICE (2005) suggest that the use of modern dressings support healing and examples of these interventions include; alginate dressings, hydrocolloid adhesive dressings, hydrogel and foams in preference to basic dressing pads and gauze which do not support healing in the same way.

For Mr Singh; the grade of his wound may require a high absorbency dressing to ensure that the dressing can absorb the exudates levels and not allow any further spread to peri- wound skin (Wicks, 2007) additionally the nursing team should refer for advice from experienced practitioners such as a wound care specialist nurse to ensure interventions are evidence based and effective.

The Wound – Professional, Ethical and Legal Issues

Mr Singh had not been admitted with a wound and the evidence suggest that it developed as a result of the acute hospital environment and staff members perhaps not conducting a thorough assessment of the risk factors (obesity, perfusion and vascular complications, poor mobility) that would determine if Mr Singh was at high risk of developing complications with his skin integrity.

Record keeping and communication is also to be examined in this case study. The NMC (2010) provide registered nurses with concise guidance regarding their responsibility and accountability to patients in ensuring record keeping and documentation is of a high standard.

Record keeping ensures there is documentary evidence that assessments, care planning, relevant information, the care continuum and that reasonable steps have been taken to provide care for the patient have occurred (Wood, 2003).

It is noted in the case study that Mr Singh has expressed a preference for his wife and Daughter-in-Law to deliver personal care, therefore an opportunity for the professional to assess and monitor the integrity of Mr Singh's skin has been removed by this delegation of care; communication should be increased between the parties to ensure nothing is missed.

The nurse could have asked Mrs Singh if she noticed and marks or red areas on her husband's skin when she was helping him to change his Pyjama's; If communication is difficult because of cultural and language barriers then meetings and conversations with family should be held with interpreter support to ensure information is passed and received with understanding.

For Mr Singh to have developed such a significant wound in such a short period of time raises the issue of medical negligence and if scrutinised it is ultimately the responsibility of the professional nurse to justify why they have or have not taken a particular course of action (Wood, 2003).

Consequentialist theory in ethical reasoning identifies that the rightness or wrongness of an act should be judged solely on whether the consequences produces more benefits than disadvantages (Seedhouse, 2005). In this case example it is evident that the consequences of the nursing staff not assessing and communicating on the issue regarding Mr Singh's skin integrity has resulted in the development of a large and painful wound, the consequences of the (lack) actions have meant health compromises for Mr Singh, increased care needs and intervention, probable prolongment of hospital admission, risk of infection in addition to the professional consequences to be faced by the nursing staff and the NHS Trust as employers.

Deontological theorists would argue that what matters most in this situation was not the resulting wound encountered by Mr Singh but the fact that the nursing team acted according to a perceived duty or responsibility; however this ethical standpoint cannot be adopted as Mr Singh did not develop the wound regardless of all nursing policy and procedure being followed but rather as a direct result of what was not done rather than what was done.

Patient Health Promotion and Education to Prevent Future Wound Development

Downie and Tannahill (1996) suggest that health promotion comprises of efforts to enhance positive health and reduce the risk of ill health and for Mr Singh this means that support and education for him and his family to maximise their knowledge and understanding of what is required to support the healing of his current wound and to be aware of measures that can be adopted to reduce the risk of him developing wounds and pressure sores in the future.

Patients with pressure ulcers and wounds are to be actively encouraged to mobilise or change their position frequently to promote healing (RCN and NICE, 2005) and ensure other areas of the skin remain intact. If Mr Singh experiences difficulty mobilising or is required to remain in bed for long periods then it is advocated that regular turning and movement, supported with a pressure relieving mattress maximises skin potential and is an effective method in preventing ulcers and skin wounds from occurring.

Nutritional advice and dietary education should be provided to Mr Singh as optimising the tissue environment for wound healing by encouraging nutritional balance is advocated (RCN and NICE, 2005); this may entail a referral to the specialist dieticians. Mr Singh is obese and part of the assessment process should include the completion of a screening tool like the MUST (Malnutrition Universal Screening Tool; MAG, 2003) that will identify under or over nutrition and from there nutritional strategies for weight loss involving nutritional supplements, nutrient limited diet and energy limited diet can be considered (Shewmake and Huntington, 2009).

It is important for health promoting advice and health education to be communicated to Mr Singh and his family to insure they are able to make an informed choice about health behaviours and be able to develop an understanding of what their role is; therefore steps must be taken to facilitate this process by maximising understanding by including a translator to be present during these exchanges. Additionally the transition from hospital to community should provide the opportunities for support to be arranged on discharge for Mr Singh and his family to ensure any health issues requiring ongoing interventions are addressed and that any further health promotion and education is continued throughout the recovery process.

Wound Care – Developing Clinical Practice

Once Mr Singh has been assessed to be medically stable and discharged home then ongoing support would be provided by the community nursing service in an attempt to continue the dressing and assessment of Mr Singh's wound.

Community nurses visit patients at home and do not have access to the resources and supplies that a hospital based nurse may have and in light of current cuts within the NHS nurses are under greater pressure to deliver the highest standard of care for the lowest cost. It is also important to acknowledge that wound care products are costly and are sometimes available to patients on a prescription only basis in the community thus incurring a financial charge to the patient.

It is with this in mind that a literature review was conducted to obtain a clearer perspective of whether tap water could be used by nurses for wound cleansing in the community setting rather than pre packed sterile water currently; tap water is commonly used in the community due to ease of accessibility and low cost, however this is not widely advocated and controversy surrounds this practice (Fernandez et al., 2007).

It has been suggested that there is a lower risk to the patient of infection when tap water is used compared to saline water (Fernandez, 2008) however this data was developed by the assessment of chronic wounds and did not highlight the difference in acute wounds.

The evidence base identified focused mainly on quantitative rather that qualitative data with the use of convenience sampling (Teddlie and Yu, 2007) undermining reliability and the sample groups used comprising greatly on hand wounds (Valente et al., 2003) which also impacts on rigour and reliability. In light of the review however the evidence does support the benefits of using tap water for cleansing wounds however with the main bodies of research being conducted in the hospital setting more qualitative data is required in a community based environment.

Conclusion

Wound care is a complex and time consuming issue which requires high levels of assessment and knowledge particularly in relation to good practice in nursing care for wounds. It is imperative that nursing practitioners engage in good practice that prevents the occurrence of wounds and pressure sores in the first instance. In developing knowledge about contributing

factors to the development of wounds and the complex nature of the patients' health needs supports the concept of preventative wound care. If wounds do develop then nurses knowledge surrounding management and treatment should reflect standards of good practice and clinical guidance to ensure patients receive evidence based interventions in an attempt to resolve and treat wounds efficiently and effectively.