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Cancer Metastasis: The Final Season

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Janelle Wozniak grew up on a small farm in Lachine, Mich. A senior in the Bachelor of Science in Nursing program, she looks forward to graduating in May 2006. As a nursing extern at Bay Regional Medical Center, she has had the opportunity to practice her skills on the cardiology floor and in the critical care unit. After graduation she plans to work as a floor nurse to gain experience before she begins graduate school, where her long-term goal is to become a nurse practitioner or a nurse educator.

Abstract

Cancer metastasis is an altered life process in which the original source of cancer spreads to another part of the body. This altered life process can have a number of effects on the individual involving the four domains of suffering, including physical, psychological, social, and spiritual aspects. These four domains directly relate to the individual's cognition, perception and regulation, which can be described through Sister Callista Roy's theory of adaptation involving the four adaptive modes. Roy discusses how death is unique and every individual goes through the process in a different way, as does the patient described.

Altered Life Process

Cancer metastasis occurs when the original source of cancer spreads to another part of the body. This process begins when a small portion of the original cancerous site breaks off and moves through the body to another site and implants itself. Once a second site has been implanted, tumor formation occurs and once again a small portion breaks off and spreads to another site. The original site is considered the primary tumor and the other areas of the body being affected later are termed secondary tumors. Cancerous cells have the ability to grow in all areas of the body, including different tissues, nerves, vessels, lymph nodes, veins, capillaries, and entire body cavities. Metastasis is a vicious cycle, because once a secondary tumor is formed, it almost guarantees that the spreading of cancer will continue. Therefore, surgical interventions are no longer an option and the only hope for a cure is through chemotherapy, where all cancerous sites would receive treatment (McKinnell, Parchment, Perantoni & Pierce, 1998).

Even though cancer has been known since the time of Hippocrates, metastasis wasn't discovered until 1829. The understanding of cancer has evolved dramatically over the years and the physiological process of metastasis is now more clearly understood. Metastasis is considered a "cascade," involving eight different steps. "These eight steps include disruption of the basement membrane, cell detachment, cell motility, invasion, penetration of the vascular system, circulating cancer cells, arrest, extravasation, and proliferation" (McKinnell, et al., 1998, p. 53). First, the compilation of a variety of cells forms a tumor; some of these cells have the ability to disrupt the basement membrane and invade other areas. In order for such invasion to occur, the cell needs to detach from the primary tumor and move through the extracellular matrix to arrive at other sites. Penetration of the vascular system usually occurs through the capillaries; however, most of these cancerous cells are destroyed once they enter the blood, because of their short life expectancy. Therefore, penetration of the vascular system doesn't necessarily signify metastasis, though sometimes the cancerous cells do survive in the blood. The cancerous cells that survive in the blood adhere to lymphocytes and platelets forming an embolus, which is protected by a blood clot. The new formation of cancer in the blood is continually fed with oxygen and nutrients, which allow it to grow rapidly and ultimately cause various body systems to cease functioning (McKinnell, et al., 1998).

The Effects of the Altered Life Process on the Individual

Individuals living with metastatic cancer experience four different domains of suffering, including physical, psychological, social, and spiritual aspects (Hogan, 1997). The main physical dimension of suffering is pain related to the actual tumors or to the chemotherapy that the patient is receiving. A study by Tanaka, Iwamota, Kaneyasu & Petrini discusses how extremely difficult it is for patients with cancer to deal with the harsh pain because it requires such extreme mental and physical energy that they do not have (1999). Therefore, the study concludes, maintaining the threshold of pain makes it possible to enhance the quality of life experienced by the patients. Other physical complications include extreme fatigue involving cachexia and weakness, as well as immobility. The treatment that individuals receive can also have substantial side effects, such as nausea, vomiting, constipation, cramping, etc., all of which play a large role in the physical discomfort of the individual (Starck & McGovern, 1992).

The psychological dimensions of suffering are unique to each individual, but a common feeling is a loss of control. When one receives the news that there is nothing else that can be done, there is a feeling of despair, loss of strength and integrity, fear, depression, and anxiety. Being overwhelmed with all of these emotions and trying to come to terms with the idea of death is an extremely stressful and devastating experience. The grieving process is unique to every individual and is a significantly stressful addition to all of the physical complications that the individual is already experiencing (Starck & McGovern, 1992). Tanaka et al. discuss how the pain intensity can be directly related to the individual's psychological status (1999). This correlation was also discussed in a care study done by Hanson & Cullihall, where they observed the effects of palliative nursing care on a man with terminal cancer (1996). The man was feeling extremely depressed due to his illness, and caretakers believed that his pain was exacerbated by this psychological experience. The gate theory of pain states that depression opens the gates and increases the perception of pain, which would explain this man's experience.

The social dimension of suffering generally receives less attention; however, it is an area that deserves recognition. People living with cancer seem inevitably to move into a new world. When individuals are no longer healthy, their life suddenly becomes filled with appointments, treatments, and ill days. They lose the normalcy of life that they once lived. They no longer go to work, have a social life, or discuss events in the lives of family and friends. All of a sudden, everything is focused around their illness and they seem to lose a sense of identity, because they feel as if they are solely and completely linked to the illness. Many may feel pitied by those around them and neglected by those who deny the severity of the illness. Therefore, it is always extremely important to be aware of each individual's experience and realize that even though it may be difficult to see a person suffering, it is important to be there for support (Starck & McGovern, 1992). Tanaka et al. address the importance of palliative care to provide support to terminally ill patients and their families (1999); the study found that the greatest factor affecting the patient was the moral support from family and friends. As Kubler-Ross stated, "we cannot help the terminally ill patient in a really meaningful way if we do not include the family (1993, p. 139).

The spiritual dimension of suffering is also an area that goes under-recognized. This area focuses on the individual's need for meaning when a terminal illness makes an individual experience loss. During these times, it is important to help the terminally ill find meaning and discuss their feelings and beliefs about death. Acceptance of impending death allows them to make the most of the time they have left (Starck & McGovern, 1992). Hanson & Cullihall found that establishing a trusting and helping relationship with the patient and family allowed for an open discussion regarding their fears and concerns (1996). A variety of listening skills, communication techniques, reflection, open-ended questions, and touch were used to make patients and families feel comfortable talking about their emotions (Hanson & Cullihall, 1996).

Though physical ailments seem to receive the most attention, it is critical that all of these domains be considered when caring for terminally ill individuals, in order to enhance their quality of life.

Theory to Describe the Individual's Response to the Altered Life Process

As Sister Callista Roy stated, "There can be no greater threat to a person than the fact of imminent death" (Roy, 1984, pp. 498-99). Kubler-Ross was the first to address death and dying by formulating stages, which provided individuals with an understanding of the typical behaviors during the dying process. Roy's theoretical works, which followed shortly after Kubler-Ross's, focused primarily on the theory of adaptation and the importance of life closure (Roy, 1984).

Roy discusses how all individuals experience health, illness, and death in their lifetime. Once terminally ill individuals accept that death is inevitable, they can begin to work on life closure. During life closure individuals take on a new role where they become aware of all the things that have occurred in their lifetime and they try to formulate some type of conclusion. Life closure involves all four adaptive modes, including physiological functioning, self-concept, role functioning, and interdependence (Roy, 1984). These four adaptive modes relate directly to the four domains of suffering, which were discussed previously.

I had the opportunity to care for an individual who was experiencing life closure and I gained a new-found respect for those who experience it. I provided care for a 74-year-old Caucasian male who had been diagnosed with cancer metastasis five months previously. An x-ray of his lungs had revealed the presence of cancer and an MRI had revealed widespread metastatic disease and a right temporal intracerebral hemorrhage. He had stopped practicing as a physician approximately three months previously, because of the progression of his illness. During the time that I cared for this man, he was extremely fatigued and unresponsive to verbal cues. He had a PEG tube in place, but the feedings had been discontinued. The family was against radiation treatment, and was considering the possibility of hospice.

This individual experienced altered regulation, cognition, and perception related to decreasing physiological functioning, self-concept, role functioning, and interdependence. His physiological functioning had been clearly decreasing with each passing day. He was only receiving D5 normal saline with 30 meq of Potassium at 80 ml an hour for hydration. He was incontinent of urine and stool. He was unable to move himself, so repositioning was performed every two hours. He was receiving Nystatin 200,000 u/2 ml TID swish and swallow (antifungal), Decadron 4 mg/ml Q6H IV push (corticosteroid to manage his cerebral edema), Accupril 10 mg/tab per tube (antihypertensive), Dilantin 400 mg/16 ml QD (anticonvulsant), Zofran 8 mg/tab Q8H PRN po (antiemetic), Lortab 5 mg/tab Q4-6H PRN po (analgesic), Ativan 2 mg/ml PRN IV push (anticonvulsant), and Lortab 10 ml Q4-6H PRN per tube (analgesic) (Hopfer-Deglin & Hazard-Vallerand, 2003). These medications were being used to regulate a number of physiological mechanisms including pain, cerebral edema, blood pressure, seizures, nausea, and oral candidiasis. Lab values involving electrolytes, blood indices, kidney functioning, nutritional status, and Dilantin levels had all been monitored up until recently. Now that this man was at the end of life, the lab values were no longer pertinent and it would be inhumane to continually poke him for these tests. Though his physiological functioning was decreasing, he was still capable of breathing on his own and his vital signs had been stable.

This individual's cognition was declining. He rarely responded to verbal cues, except for an occasional brief smile or opening of his eyes. When he was touched, he would sometimes respond with slight movement of his hands or feet, but the movement couldn't always be directly related to the stimulation. He was unable to express any of his desires or concerns at this point, which made it extremely difficult when trying to provide comfort measures. Since the pain experience is truly individualized, it was difficult to understand what this man was feeling. Even the simple task of repositioning can be complex when trying to assess all the possible areas of discomfort, since the patient is unable to inform you.

Self-concept, role functioning, and interdependence all relate directly to the perception of the individual. Role functioning is a major factor that contributes to an altered self-concept and therefore an increased need for interdependence. Though I was unable to discuss these issues with the individual, his wife was present for the entire afternoon and I was able to really learn about him through her. He had loved his profession and had kept working as long as possible. He also loved his wife, his two children, and his many grandchildren. He had been a master in the garden and managed to grow beautiful combinations of flowers. In fact, some of his masterpieces were placed strategically in his room by his bedside. His wife informed me that these were the final production of the season and she really wanted him to enjoy them. I found this comment to be sadly ironic, since in a sense, this was his final season as well.

This individual's wife spoke with me for a while about how this illness had affected both him and the entire family. She informed me how his roles as a physician, father, gardener, and friend had all changed drastically, but stated that he was an extremely strong man. She discussed with me that her husband, in a sense, had already known the outcome before even hearing the results of the x-ray, five short months previously. His wife seemed very sad, but she expressed to me that he did not want to die like this and she found comfort in the fact that there would be no more suffering. Making the role transition can be extremely difficult for a patient, but family, friends, nurses, and doctors all play a crucial role in promoting adaptive behaviors. "As no two individuals live their life in the same manner, no two life closers will perform life closure in the same way" (Roy, 1984, p. 501). Therefore, it's critical to provide that support to both the patient and the family, because disruption and disorganization affect both of them (McCorkle, Robinson, Levine & Nuamah, 1998).

Though this individual's wife seemed extremely strong, I knew support was a critical issue. And when I was in the room performing care for her husband, I always spent time with her as well, even if it was just a few moments. Grbich, Parker, & Maddocks discuss how the entire family is considered the unit of care, not just the sick person (2001). I felt it was critical to pay particular attention to his wife because no one else was there throughout the afternoon. He was becoming extremely weak and slept most of the time, and when he was awake he was unable to speak with his wife. Just to allow his wife the time to converse and express herself seemed to be very beneficial. Grbich et al. discuss how healthcare providers consider emotional distress a natural response that occurs when loved ones are dying and believe that the patients will find some type of coping mechanisms on their own (2001). The most difficult part for the family is simply standing around helplessly, watching their loved one die and not being able to do anything about it. This is when it is key for the healthcare providers to provide interventions, such as talking, laughing, and encouraging the loved ones to take some time for themselves. Even if it is just going to the cafeteria for a coffee, they should be encouraged to do that so they can get even a few moments away from the patient's bedside (Grbich et al., 2001). This patient's wife spent the entire afternoon by his side, and once early evening came, she decided to go home and get some rest. It seemed as though she knew her limitations and didn't allow herself to focus only on her husband, but remembered that she needed to consider her health and well-being also.

Aesthetic Experience

I chose to reflect on this experience with a poem, which I retrieved from the website entitled Writing.com. The author was identified only by her first name (Lissa), but her poem painted a vivid picture of what it was like to be at this individual's bedside. I really liked how the poem seemed as if it could have been from the patient's wife's perspective, yet it captured the uniqueness of the patient and really expressed how much he was loved:

The Flowers are Crying

Quiet. . . still
Heavy air suspended,
Soft light reflecting shadows.
Orchids and wax flower and roses. . .
The flowers are crying.
Soft dew drops intended to keep petals fresh
In a room where nothing has life.

Memories flash:
Bright pictures in a new book,
Laughter and music filling the air,
Soft hands brushing off tears.

Tears fall unabated now,
Unnoticed. . .
Damp traces reflecting soft light,
Soft light reflected in drops of dew.
Dew drops clinging desperately to petals,
Clinging desperately to memories.
The flowers are crying
With me.

("The Flowers," 2003)

The first three lines of the first stanza really addressed the environment that this individual was currently in. The room was very quiet and very still; the only sound to be heard was the slight buzzing from the fluorescent light above the sink. Though this light was on, it provided only partial lighting to the room and cast shadows in a number of directions. Some light was coming through the blinds, but they were almost completely shut, allowing only the smallest hint of sunshine to seep in. The next four lines of the first stanza pay particular attention to the presence of the flowers by the patient's bedside. The flowers are the main hint of life in his room and the poem almost makes it sound as if the flowers are grieving the loss of their faithful gardener. I can still see those flowers in my mind very vividly, as they were placed strategically for the patient to see. Though they were in clear view, he no longer had the energy to keep his eyes open to admire them. His wife sat to his left and the flowers were to his right; he was surrounded by beauty, but he no longer had the vigor to admire it.

The second stanza could be looked at from two different perspectives, the patient's or his wife's. Both may have experienced a flashing of old memories and the pondering of new ones that they wouldn't be experiencing together. The final line of the second stanza paints a vivid picture of the affection I saw the patient's wife show towards him. She was always touching him, either stroking his hair, touching his face, holding his hand or wiping away tears. She always seemed so attentive to his needs, even though he didn't say a word. It was almost as if she could just see it in his eyes and she knew what he was thinking. I'm sure he misses being able to hold and comfort his wife like he did not so long ago, but now she is the strong one comforting him, as she holds on to the memories.

The third and final stanza seems like the final season for the flowers, as well as for the faithful gardener. I picture him dozing off, comfortable in his bed at the hospital with his wife right by his side. Her tears fall unnoticed in the dimly lit room, or maybe just unnoticed by her husband, because the flowers with dew on their petals are crying with her and both are holding on desperately to the memories of the husband and the gardener.

Client's Experience

Every interaction that takes place between two people affects both of them at some level. I don't believe that my interactions with this individual made life-altering changes, but I do believe that I had an effect on his cognition, regulation, and perception while I was caring for him. I cannot be completely sure about the experiences of this individual related to cognition, but I can formulate the possibilities. This patient was not at a level where conversing was an option, but I knew that there was a very intelligent man inside that weak, frail body, a man who once took part in thought-provoking conversation. I always spoke to him about the tasks that I was performing and I would carry on one-way conversations, so that he was aware of what was going on. If another student nurse assisted me with repositioning, I always introduced the student to him and explained what we would be doing together. Though his wife was present for most of the day and I spoke with her often, I always tried to involve her husband in our conversations as well. The use of humor seemed to have an effect on him and a small, brief smile let me know that he was, in fact, listening to what I was saying. I always informed him of what was going on around him and though it may seem like a small insignificant part, I believe that it's very important to keep the patient involved.

Regulation was a major part of this individual's care. It was always critical to maintain his hydration status, provide pain management, address incontinence issues, provide repositioning, perform oral care, etc. Regulation seems to be a priority when caring for individuals with terminal cancer and it's really important to provide those comfort measures. Prior to this patient's illness becoming more severe, lab work was being completed regularly, but now that was no longer occurring. As this man neared the end of his life, the number one priority was to maintain his comfort status. The perception of the individual is the only way to get an accurate understanding of what the individual is experiencing related to pain and discomfort, which can sometimes be difficult, as in this case.

This individual's perception was not always clearly evident. Since he was unable to voice his concerns, it was difficult to really evaluate his comfort status. I always paid particular attention to his facial expression during repositioning, his oral care, as well as his overall appearance as he was resting. Since my perception of his discomfort could very well be inaccurate, I always utilized his wife for input regarding his normal behaviors. She was able to inform me if something was out of the normal for her husband, since I had been with him for only one day and she had been with him for a lifetime.

Personal Experience

I truly enjoyed providing care for this individual because when someone really needs your care during a time that is so extremely stressful, it feels very rewarding to be the one to help him/her. It's impossible not to pour your entire heart into this type of care when you can see the misery that these individuals are living every minute of the day. Being able to provide even the simplest things brings immense joy and really makes you appreciate how wonderful life is. Hearing this man's wife talk about him was heart-warming, inspiring, and made me once again realize why I decided to go into nursing. There will always be days that involve difficult and ungrateful patients, but then there will be that one special patient who makes it all worthwhile.

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