Nursing Process Paper

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N30030 – Adults

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Client Profile

W.B is 63 year old, 154 pounds male, who was admitted to Mercy Medical Center on 9/20/11 with admitting diagnosis of Metastatic Melanoma, Weakness. W.B has a history of COPD, CABG, spinal cord compression, and laminectomy on T-10. Patient was a paramedic for over 30 years prior to retirement. The patient first noticed a black area on lower lip which was removed and was later discover the cancer had spread to other parts of the body including lungs, spine and liver.

Admitting Diagnosis

Metastatic Melanoma

Is a type of cancer which is defined as malignant neoplasm, a disease of the cell in which normal mechanisms for the control of growth has been altered and can spread to new surrounding tissues and areas of the body. Specifically this type of cancer is a version of skin cancer. Skin cancer is the number one most common cancer in the United States according to the CDC and caused by uncontrolled growth of abnormal cells to a specific layer of the skin. The United States alone has more than 1 million new cases are diagnosed each year according to the CDC and estimated 1 in 5 Americans will develop skin cancer in their lifetime. (Siegal, 2010) There are several types of skin cancer that are determined by the type of cells. The three most common are basal, squamous carcinoma and malignant melanoma with the first two making up 90% of the cases. (Black & Hawks, 2009)

Malignant melanoma cancer of the melanocytes is the most deadly type of skin cancer and is getting more common than 1 in 100 people worldwide are expected to develop this cancer in a lifetime. It is thought to be caused by overexposure to the sun's UV rays. Especially any

sunburn and blisters from being in the sun without protection. Along with the sun there are other risk factors that also increase your risk of acquiring cancer such as fair complexion, light skinned, red and blond haired freckled, excessive childhood exposure to sun that resulted in blistering, history of melanoma. Manifestation of melanoma is a skin legion observed over a period of months. If it doubles in size in 10 days could mean inflammation and could also grow slowly as well. Asymmetry, border notching, color variegation, with black, brown, red, or white and diameter. Other changes such as bleeding, itching, ulceration, and palpable node are also noted. Survival rate is related to size of tumor 10 year survival rate for less than 1mm in depth, large than 4mm depth 10 year survival rate is decrease to 40% and is fatal in the end. (Black & Hawks, 2009)

Medical management would consist of early detection and education is the key along with adjuvant chemotherapy and radiation. Educate on the use on using sunblock and staying out of the sun between the hours of 10am and 4pm for less exposure to uv rays. The fairer skin is at the most risk for development of skin cancer due to their complexion. Avoid tanning bed which is shown to cause skin cancer. A test was performed with college students and using gender, perceived risk and sunbathing practices. The results were women were more knowledgeable but engaged in the practice more due to the perception a tan makes the look more athletic and attractive. (Siegal, 2010)

There are a variety of vaccines being investigated for use and some show promising results. Surgical removal is best option available at this time. Currently no cure at this time just treatments and surgery to try to remove the cancer but there is the risk of it spreading to other parts of the body. (Black & Hawks, 2009)

Additional History

Coronary Artery Bypass Graft (CABG)

Is a surgical procedure that involves bypassing a blockage in the coronary artery by using other harvest sites veins and arteries to bypass the blockage and allow flow through the coronary artery. During a normal surgery the patient will have a midline chest incision so the heart and aorta or visible. The heart is stopped and patient is put on cardiopulmonary bypass. After the surgery the heart is restarted and patient is taken off bypass machine. The patient will spend a few days in an intensive care setting and then get transferred to a less acute floor for the rest of recovery. The patient can recover and go home to finish the recover from the surgery or may be a candidate for rehab to help with the recovery process. The surgery does not cure atherosclerosis just prolongs the life of the patient but there is documentation for improvement of life from the surgery. The patient will have to make some changes in lifestyle including monitoring weight, eating right, exercise, quit smoking, decrease stress level and good support system. (Black & Hawks, 2009)

Chronic Obstructive Pulmonary Disease (COPD)

Copd is a combination of three areas of chronic obstructive bronchial, emphysema, and asthma. Bronchitis results from inflammation of the bronchi which then leads to increase in mucus production, and cough. If patient has a ration of less than 70% on forced expiatory vital capacity then patient is said to have obstructive bronchitis. Which is characterized by an increase in size of sub mucous glands which then increases mucus production, increase in goblet cells, and impaired cilia function reduces mucous clearance. This can increase the chance for infection due to the decrease ability of the cilia to protect the lungs. Emphysema is a disease

where the alveolar walls are destroyed and leads to permanent over distension of the air space and obstructed due to changes. This can lead to difficulty in expiration in emphysema result of destruction of the alveolar walls and loss of lung coil. (Black & Hawks, 2009)

Symptoms include ongoing cough, shortness of breath, wheezing, and chest tightness. May also have swelling in legs, bluish color in lips. The main group of people at risk for copd is smokers and a family history of copd. Treatments include bronchodilators, flu vaccine, oxygen therapy, pulmonary rehab and in extreme cases lung transplant. Prevention would include quit smoking, getting the flu and pneumonia vaccine, and avoid lung irritants along with proper diets and exercising. (Black & Hawks, 2009)

Spinal Cord Compression in Cancer Patients

Spinal compression is cause by direct pressure to the spinal cord or due to a compromised vascular supply. Back pain is going to be an early warning sign and should send up a red flag if the patient has not had any compliant of pain in their back 95% of patients get back pain as a symptom. The tumor growth depending on speed of growth can cause permanent damage very soon after discovery of back pain which can lead to irreversible symptoms such as incontinence of bowel and bladder and neurological issues and later resulting in loss of motor and sensory deficits. (Black & Hawks, 2009)

Treatment involves use of a XRT treatment which is a type of radiation treatment that the tumor can be resistant to and there is a maximum number of treatments due to radiation. An alternative is a laminectomy to try to decompress the spinal cord and give relief. There is also a less invasive treatment that involves using steroids to decrease the inflammation and give

possibly give some relief in pain. This treatment is more of a short term action that is mainly done toward the end of life. (Black & Hawks, 2009)

Assessment Data

W.B is a 63 year old male DNRCCA with history of 2-3 pack a day smoker with an admitting diagnosis of metastatic melanoma cancer and a history of COPD, CABG, spinal cord compression, and laminectomy on T-10. (See admitting diagnosis and additional history for more information) W.B is alert and oriented x4, HOH, regular decreased clear lung fields and does get short of breath with exertion on 3 liters nasal cannula with positive bowel sounds. Patient was incontinent of urine on the shift with no bowel movement. No edema noted and pedal pluses of +1 and +2 radials. Patient is up with one moderate assist to the chair. W.B could perform about half of his bathing and need help with legs and back. Patient gets very tired and fatigued when moving around even from bed to chair. Peripheral IV in right hand dated 9/20/11 #22 with normal saline at 75ml per hour. W.B had a rash on upper part of back from shoulders down to scapula area of back. Main complaints from patient were pain in back and itching around rash area patient has allergies to Talwin, Iodine, and Codeine. Patient is currently receiving chemo medications and radiation therapy.

Temperature 97.7 oral

Heart Rate 101 monitor

Blood Pressure 114/77 left arm

Respiration 20

Oxygen Saturation 93% on 3 liters nasal cannula

According to W.B cancer started on lower lip and was removed in a surgical procedure. The cancer was found to have metastasized to bilateral lungs, liver and spine on T-10 Vertebra. The tumor on the spine caused the narrowing of the spinal cannel of 50-60% causing spinal compression. (Per history report in computer) Patient went down for a CT of the brain, chest, abdomen and pelvis with IV contrast with possibly if need CT of thorax spine if recommend by radiologist. CT results showed progression in the lungs and liver of the cancer. Patient had a sputum culture down that came back positive for influenza E. W.B is on a medication called Ipilimumab is an antibody that has approved by FDA for the treatment of late stage metastatic melanoma. It is the first drug shown to prolong life in patients with this type of cancer. It is believed to allow patient immune system to recognize target and attack melanoma tumors. Patient per chart did not want to go on hospice. (Aschenbrenner, 2011)

Lab Information and Diagnostic test results (see table for labs and Assessment data for tests)

Lab	Patients Results	Normal Valve Range	Low, High, Normal
WBC	**8.8**	**4.5-11 K/CUMM**	**NORMAL**
RBC	**4.6**	**4.50-6 k/CUMM**	**NORMAL**
HGB	**12.5**	**13.5-17.5 G/DL**	**LOW** **Can be due to the cancer, chemo, radation therapies, and side effect of lovenox is anemia.**

HCT	**37.6**	**41-53%**	**LOW** **Can be due to the cancer, chemo, radation therapies, and side effect of lovenox is anemia.**
MCV	**80.7**	**80-99 FL**	**NORMAL**
MCHL	**33.2**	**32-36 GMDL**	**NORMAL**
RDW	**15.7**	**11-14.5**	**NORMAL**

PLT	**248**	**150-450 K/CUMM**	**NORMAL**
NEUT	**95.8**	**45-75%**	**HIGH** **Can be due to a recent infection, or body fighting off an infection (influenza)**
LYMP	**2.4**	**20-40%**	**LOW** **From chemo treatments causes immune system to be immunosuppressed (also positive for**

			influenza)
MONO	**0.9**	**2-10%**	**LOW** **From chemo treatments causes immune system to be immunosuppressed (also positive for influenza)**
EDS	**0.00**	**0-5%**	**NORMAL**
BASO	**0.1**	**0-2%**	**NORMAL**
NA	**130**	**136-145 MMDL/L**	**LOW** **Can be caused from the chemotherapy drugs, cancer in the lungs**
K	**4.2**	**3.5-5.1 MMDL/L**	**NORMAL**

CL	**91**	**98-107 MMDL/L**	**LOW** **Can be caused from the chemotherapy drugs**
C02	**32**	**21-31 MMDL/L**	**HIGH**

			Caused by COPD
AGAA	**7**	**5-16 MMDL/L**	**NORMAL**
GLU	**145**	**70-100 MG/DL**	**HIGH** **By the cortico steroids**
BUN	**8**	**7-26 MG/DL**	**NORMAL**
CREAT	**0.57**	**0.64- 1.27 MG/DL**	**LOW** **Could possibly mean liver disease which the patient does have cancer in liver**
BUN/CREAT	**14**	**15-26 MG/DL**	**LOW** **Could possibly mean liver disease which the patient does have cancer in liver**
CAL	**7.8**	**8.5-10.1 MG/DL**	**LOW** **From corticosteroid and chemo radiation treatments**

All lab values taken from mercy medical centers lab value protocol

Medications

Medication	Action	Class	Route	Dose	Side Effects
Lopressor	**Decreases BP Decrease HR**	**Beta Blocker**	**PO**	**50mg daily**	**CHF, Heart block, MI, bronchospasms, bradycardia, fatigue, rash, dyspnea, dizzy**
Multivitamin	**Take to get daily values of nutrients body needs**	**Vitamin**	**PO**	**1 Tab daily**	**Risk for overdose**
Dexamethasone	**Anti-inflammatory**	**Corticosteroid**	**IV**	**4mg Q6**	**Adrenal insufficiency, ulcers, CHF, pancreatitis, anaphylaxis, immunosuppression, nausea, vomiting, headache, mood swings, hyperglycemia, htn, anxiety, acne, weight gain, impaired wound healing, edema, dizzy, hypokalemia, insomnia,**
Lovenox	**Thins the blood, helps**	**Anticoagulant**	**SQ**	**40mg daily**	**Hemorrhage, anemia, thrombocytopenia,**

	prevent clots				**hyperkalemia, necrosis of skin, fever, nausea, hematuria, edema,**
Protonix	**Helps with indigestion**	**Proton pump inhibitor**	**PO**	**20mg daily**	**Pancreatitis, angioedema, abdominal pain, flatulence, dizzy, rash, headache, elevated liver enzymes**
Nicotine patch	**Helps quit smoking**		**Patch**	**21 mg daily**	**Edema, rash, tachycardia, HTN, Nausea, chest discomfort, constipation, flatulence, hiccups**
MORPHINE/ Roxanol	**Pain relief**	**Opioids**	**PO/IV**	**15mg/2mg**	**Resp depression, apnea, shock, bradycardia, seizures, anaphylaxis, sweating, edema, pruritus, flushing, dry mouth, asthenia, urinary retention**
Ipilimumab	**Oncology**	**Immunotherapy**	**IV**	**3mg/kg q3 weeks X4 doses**	**Immune mediated, enterocolitis, hepatotoxicity, uveitis,**

					rash, colitis. Pruritus, fatigue, anemia

(Epocrates 2009) All drug information taken from Epocrates

Analysis

Admitting Diagnosis Metastatic Melanoma

Nursing Diagnosis 1	**Nursing Diagnosis 2**
Acute/Chronic Pain r/t spinal cord compression/as evidence by	Risk for infection r/t immunosuppressed immune system
Supporting Data	**Supporting Data**
Verbally stated pain in back spinal area 8 out of 10 on pain scale, facial expression when changing position in bed or chair	Patient is receiving radiation and Chemo treatments along with corticosteroids.
STG	**STG**
Patient will have pain relief 3 out of 10 or less within one hour of pain medication administration	Patient will remain afebrile for entire shift from 8-1:30pm
LTG	**LTG**
Patient pain will be controlled on a scale of 3 out of 10 or less for 24 hours	Patient will Identify and participate in interventions to reduce risk for infection by discharge.
Intervention #1	**Intervention #1**
Determine the severity of pain on 1-10 pain scale, location of pain on body; ask patient what type of pain aching, dull, stabbing,	Show and demonstrate proper hand washing technique with patient and any visitors, and screen visitors for

constant, and intermediate. **Rational** To get a baseline of how bad the pain is and if the medication was effective	**Rational** To protect the client from any possible infections on hands or from visitors.
Intervention #2 Provide comfort measures and distractions for patient **Rational** To promote relaxation in patient and get pain relief	**Intervention #2** Monitor temperature **Rational** To detect any type of infections early (can be masked by corticosteroids and chemo treatments)
Intervention #3 Medicate patient with proper medication per order and time accurate measures follow the rules of medication administration. **Rational** To reduce or lessen pain	**Intervention #3** Monitor Lab data for elevated WBC **Rational** To detect any early warning signs of infection high WBC could mean an possible infection
Intervention #4 Reevaluate pain after 30-60 minutes after pain medication or comfort measures for pain any	**Intervention #4** Reposition patient frequently along with keeping lines dry and clean, wrinkle free

pain relief or less severe pain, any change **Rational** To determine if the medication or comfort measures were effective	**Rational** To limit and reduce stress on skin and prevent breakdown of skin keep infections from getting in through an open sore

Evaluation of STG Patient did experience pain relief with IV morphine sulfate but did not with PO morphine sulfate(roxanol)	**Evaluation of STG** Patient remained afebrile the entire shift
Evaluation of LTG Patient will have been relief and a pain level of 3 or less on pain scale before 1 week after discharge. (Doenges & Moorhouse, 2010)	**Evaluation of LTG** Patient did participate in hand washing and bathing during shift. Will continue to enforce until discharge and report to next shift to continue reinforcing and educate. (Doenges & Moorhouse, 2010)

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