

PROTOCOL FOR: Fluid Volume Alterations: in the Oncology Patient

SUPPORTIVE DATA: During and after chemotherapy administration there is a significant risk of fluid and electrolyte imbalance. The chemotherapy and/or radiation destroys normal rapidly dividing cells, as well as malignant cells. The highly proliferative cells of the GI mucosa are destroyed which accounts for the side effects of nausea, vomiting and diarrhea. Severe, persistent or refractory nausea, vomiting and diarrhea have the potential to lead to fluid and electrolyte imbalances.

During chemotherapy and/or radiation therapy patients are hydrated. Vigorous hydration is done to prevent the hemorrhagic cystitis associated with cyclophosphamide, and to prevent uric acid nephropathy and tumor lysis syndrome secondary to rapid cytoreduction. These large volumes of fluid have the potential to alter the patient's fluid and electrolyte balance.

Volume overload may occur during this stage due to the vigorous hydration, a chemotherapy induced syndrome of inappropriate anti-diuretic hormone secretion (SIADH), fluid shifts secondary to cytokine syndrome, congestive heart failure associated with cyclophosphamide or prior treatment with anthracycline chemotherapy. Diuretics may be administered to promote a brisk urine output during the conditioning regimen. Diuresis has the potential to promote fluid and electrolyte imbalances.

DESIRED

- PATIENT OUTCOMES:**
1. The patient will maintain fluid and electrolyte balance as evidenced by balance intake and output (\pm 500cc) and normal serum electrolytes.
 2. The patient meet urinary output parameters every 2 hours while receiving specific chemotherapy.
 3. The patient will maintain a maximum level of comfort as demonstrated by the absence of or minimal nausea and vomiting while on prescribed antiemetic regimen.

GENERAL

- NURSING CARE:**
1. Administer antiemetics as ordered by physician:
 - a. Monitor and record episodes of emesis
 2. Administer IV fluids as ordered by physician:
 - a. Begin IV fluids at prescribed number of hours prior to initiation of chemotherapy.
 - b. Continue IV fluids for prescribed number of hours after the completion of chemotherapy.
 3. Monitor urine characteristics:
 - a. Monitor and record output as ordered (may be as often as every 2 hours).
 - b. Obtain and monitor urine electrolytes as ordered.
 4. Administer diuretics as ordered by physician:
 - a. Monitor and record intake and output as often as q hour when ordered.
 - b. Monitor and record electrolytes, BUN, creatinine.

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5. Monitor and record weight as ordered (usually daily).
6. Monitor electrolytes:
 - a. Monitor and record episodes of emesis and diarrhea.
 - b. Severe and/or persistent nausea, vomiting or diarrhea
 - c. Administer electrolyte replacements as ordered.
7. Assess the patient for symptoms of fluid status changes:
 - a. Respiratory changes: rate, dyspnea, cough, sputum production, breath sounds
 - b. Observe for signs of edema or dehydration
 - c. Changes in vital signs (increased BP, tachycardia, tachypnea)
 - d. Weight gain/loss
 - e. Intake greater than output by 500cc or more.

- DOCUMENTATION:
1. Document assessment findings and interventions on the unit flowsheet, MAR and Infusion Record.
 2. Document patient response to care in the Progress Notes using focus format.

APPROVAL: Nursing Standards Committee

EFFECTIVE DATE: 8/89

REVISION DATES: 2/91, 1/95, 8/96, 3/99, 10/00, 3/02