**NI Fundamentals of Nursing Course**

**Clinical Skills Procedure/Rubric**

**Nurses International**
**Oncology Clinical Skills**

**Procedure/Rubric/*Rationale*: Central Venous Access Device (CVAD)- Administration of Anti-Cancer Drug**
**Prerequisite Clinical Skills:** Non-touch technique, Accessing and Deaccessing CVAD, Priming IV line

| Step | Procedure | Yes | No | Remarks |
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| 1. | Check the doctor's order for anti-cancer drugs prescribed. | | | |
| 2. | Perform hand hygiene. | | | |
| 3. | **<u>Collect equipments :</u>**<br><br>First- Clean trolley with approved cleaning agent<br><br>Second- Collect following supplies on the cleaned trolley<br>❏ chemotherapy prescription and treatment protocol<br>❏ personal protective equipment (PPE) (clean gloves)<br>❏ spill kit<br>❏ alcohol swabs<br>❏ plastic-backed absorbent sheet<br>❏ gauze squares (non-sterile)<br>❏ drug(s) to be administered (in leak proof, sealable bags)<br>● Inspect drug container for<br>- Leakage<br>- Drug cloudiness<br>- particulate matter<br>- Discoloration<br>- Expiration date<br><br>Contact pharmacy for further instruction if presence of leakage, drug cloudiness, particulate matter, discoloration, or expiration date.<br>❏ 10 mL or greater syringes as required to administer pre-medications<br>❏ compatible fluid (e.g. sodium chloride 0.9%) to prime IV line(s) and flush<br>❏ hazardous drug waste bags and a bin. | | | |
| 4. | Greet the patient and explain what, why, and how of the procedure. Obtain verbal consent and written consent as required. | | | |

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| 5. | Ensure privacy by pulling curtains, closing doors as per patient's comfort. | | | |
| 6. | Verify the patient has received education on :<br>● Antineoplastic drugs and how they work<br>● Treatment protocol including drug names, number of cycles and days of treatment<br>● Venous access required e.g. IVC, PICC, Port, CVC, apheresis catheter (circle)<br>● Side effects of treatment e.g. immediate, early, late and delayed<br>● Self care activities e.g. diet, hydration, mouth care, monitoring temperature<br>● Situations that require urgent treatment e.g. febrile neutropenia, uncontrolled vomiting or diarrhoea, bleeding<br>● Medical review, when and how often<br>● Supportive care services | | | |
| **Assess Patient for Side-effects and Previous Adverse Events** | | | | |
| 7. | Laboratory parameters checked as per protocol requirements. | | | |
| 8. | Perform hand hygiene. | | | |
| 9. | Raise the level of bed to working height and lower the side rail on your side. | | | |
| 10. | Check the patient's vital signs. | | | |
| 11. | Perform psychosocial assessment. | | | |
| 12. | Assess patient for treatment experiences in the past and during current administration:<br>Anemia, neutropenia, thrombocytopenia, nausea, vomiting, oral mucositis, diarrhoea, constipation, fatigue, peripheral neuropathy, skin toxicity, others. | | | |
| 13. | Check for allergies. | | | |
| **Preparation of IV Access** | | | | |
| 14. | Position the patient comfortably. | | | |
| 15. | Perform hand hygiene and don clean gloves. | | | |
| 16. | Prime primary IV lines with normal saline. | | | |
| 17. | Access CVAD aseptically using non-touch technique. | | | |

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| 18. | Ensure patency of CVAD.<br><br>First- Wipe the lumen port with alcohol swab for 30 seconds twice with new alcohol swab each time. Let air dry without it touching any unsterile surface.<br>Second: Connect needleless prefilled syringe with normal saline to the port and draw back the plunger to check for blood return.<br>Third: If blood returns, then push the normal saline back into the line and disconnect the syringe.<br><br>If patency cannot be confirmed **DO NOT** proceed. A full review to find and resolve the reason for occlusion must be done. Blood return must be established prior administration of the drug.<br>*No blood return could mean blockage with blood clots which , if medication pushed forcefully, could be dislodged into the circulatory system causing life-threatening complications like stroke, pulmonary embolism, etc.* | | | |
| 19. | Ensure insertion site can be visualised and anchor IV tubing. | | | |
| 20. | Connect IV lines. | | | |
| **Administration of Anti-Cancer Drug** | | | | |
| 21. | Connect IV lines<br>a. Disinfect lumen ports with alcohol swab for 30 secs and air dry before connecting IV line.<br>b. Check that the IV infusion flows freely. | | | |
| 22. | Set up equipment on IV trolley including:<br>plastic backed absorbent sheet<br>drugs to be administered including anti-emetics and pre meds<br>gauze squares and alcohol swabs | | | |
| 23. | Put on PPE, minimum of two gloves and gown. | | | |

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| 24. | Check drugs and fluids with another appropriately trained health professional against prescription and treatment protocol.<br><br>Check for :<br>❏ **Right Patient (Two identifier- name and date of birth)**<br>❏ **Right Drug (Name and expiration date)**<br>❏ **Right Dose**<br>❏ **Right Route**<br>❏ **Right Time**<br>❏ **Correct rate**<br>❏ **Signed consent form**<br><br>Both providers must sign as a checker. | | | |
| 25. | Use bar code technology if available as per facility. | | | |
| 26. | Clean the luer lock/connection ports with two alcohol swabs twice for 30 secs and let them air dry before administering medication. *Disinfects to Prevent transmission of infection.* | | | |
| 27. | Administer fluids and premedications as per protocol. | | | |
| 28. | Administer anti-cancer drugs in the order outlined in the treatment protocol ensuring patency of CVAD is assessed regularly throughout administration<br><br>1. vesicant drugs<br>I. DO **NOT** use a pump to administer vesicants<br>II. administer via mini bag OR IV bolus via a side port of a free flowing IV infusion<br>III. **check CVAD for blood return regularly throughout the infusion** (ONS1 recommend checking for blood return every 2 mL for IV administration)<br>2. drugs via bolus injection<br>I. do not expel air from syringe<br>II. connect syringe ensuring luer lock connections are secure<br>III. administer via a side port of free flowing IV infusion<br>IV. use gauze to hold beneath the side port and syringe connection<br>3. drugs via IV infusion<br>I. clamp IV line<br>II. when spiking IV bag, place bag on clean flat surface at waist height | | | |

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| | III. use gauze to hold beneath the bag connection site and connect IV bag appropriately (where a closed system is not used)<br>IV. on completion of chemotherapy do not disconnect IV bag | | | |
| 29. | Observe administration for rate. Double check rates with another nurse. | | | |
| 30. | Monitor patient for signs and symptoms of extravasation, flare reactions, hypersensitivity reactions, and any other patient responses:<br><br>a. if extravasation is suspected stop the infusion<br>i. Watch for signs and symptoms of drug extravasation: stinging or burning pain, edema , redness, itching at insertion site, no blood return, leakage of medication at insertion site, numbness.<br>ii. If above sign/symptoms of extravasation are present, **Stop the infusion and disconnect the infusion.**<br>iii. Aspirate as much of the drug from the line as possible.<br>iv. Notify the physician and administer drug specific antidote.<br>v. Manage extravasation as per protocol.<br>vi. Escalate appropriately as per institutional guidelines.<br><br>b. if hypersensitivity or infusion related reaction is suspected, stop the infusion<br>i. refer to protocol for management.<br>ii. escalate appropriately as per institutional guidelines. | | | |
| 31. | Flush the line on completion with a compatible fluid do not disconnect the bag from the line. | | | |
| 32. | Disconnect line from CVAD and dispose of hazardous waste as per institutions guidelines. | | | |
| 33. | Assist the patient to a comfortable position, raise the side rail and lower the bed to a safe height | | | |
| 34. | Deaccess CVAD and dispose of hazardous waste as per institutional guidelines. | | | |

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| 35. | Remove PPE and discard as per institutional protocol. | | | |
| 36. | Perform hand hygiene. | | | |
| 37. | Document the procedure and follow up care in the medical record. | | | |

**Reference:**

Cancer Institute of New South Wales, eviQ, April 2019, *Clinical procedure- administration of anti-cancer drugs-central venous access device (CVAD)*.New South Wales Government. Accessed from: https://www.eviq.org.au/clinical-resources/administration-of-antineoplastic-drugs/1127-administration-of-anti-cancer-drugs-central#procedure

Accessing/Deaccessing CVAD: https://www.youtube.com/watch?v=oyE9959Dsyc

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