NURSING CARE PLAN  
A Client with a Major Burn

Craig Howard, a 39-year-old truck driver, is admitted to the hospital following an accident in which the cab of his truck caught on fire. He was freed from the truck by a passing motorist, who stayed with him until the rescue team arrived and transported him to a local ED. Mr. Howard’s wife, Mary, and twin daughters, Jessica and Jane, age 10, have been notified.

ASSESSMENT
On his admission to the ED, Mr. Howard is diagnosed with deep partial-thickness and full-thickness burns of the anterior chest, arms, and hands. A quick assessment based on the rule of nines estimates the extent of his burn injury at 36% of TBSA. His vital signs are as follows: T 96.2°F (35.6°C), P 140, R 40, and BP 98/60. In the field, the paramedics had inserted a large-bore central line into Mr. Howard’s right subclavian vein and started the rapid infusion of lactated Ringer’s solution. Mr. Howard is receiving 40% humidified oxygen via face mask. Initial ABGs are: pH 7.49, PO2 60 mmHg, PCO2 32 mmHg, and bicarbonate 22 mEq/L. Lung sounds indicate inspiratory and expiratory wheezing, and a persistent cough reveals sooty sputum production. A Foley catheter is inserted and initially drains a moderate amount of dark, concentrated urine. A nasogastric tube is connected to low-intermittent suction. Mr. Howard is alert and oriented and complains of severe pain associated with the burn injuries. The burn unit is notified, and Mr. Howard is transferred there.

DIAGNOSIS
■ Risk for Ineffective Airway Clearance, related to increasing lung congestion secondary to smoke inhalation
■ Deficient Fluid Volume, related to abnormal fluid loss secondary to burn injury
■ Risk for Ineffective Tissue Perfusion (peripheral), related to peripheral constriction secondary to circumferential burn wounds of the arms

EXPECTED OUTCOMES
■ Demonstrate a patent airway, as evidenced by clear breath sounds; absence of cyanosis; and vital signs, chest X-ray findings, and ABGs within normal limits.
■ Demonstrate adequate fluid volume and electrolyte balance, as evidenced by urine output, vital signs, mental status, and laboratory findings within normal limits.

PLANNING AND IMPLEMENTATION
■ Prepare for prophylactic nasotracheal intubation to maintain airway patency.
■ Initiate fluid resuscitation therapy using the Parkland formula to calculate intravenous fluid rate for the first 24 hours postburn.
■ Assist the physician to perform escharotomies of both upper extremities.

EVALUATION
The nurse anesthetist inserted a nasotracheal tube and connected Mr. Howard to a T-piece delivering 40% oxygen. Vigorous respiratory toileting has significantly improved his ABGs. Bronchodilators have been parenterally administered and mucolytic agents added to his respiratory treatments. His tracheal secretions have begun to show evidence of clearing. Hourly urine outputs indicate adequate fluid resuscitation. Urine output has been maintained at 50 mL/h, and color and concentration have improved. CVP readings have been maintained at 6 cm H2O, and blood pressure has increased to 100/64. The pulse rate has decreased to 100.

To improve tissue perfusion of both arms, the physician has performed bilateral escharotomies and the wounds are dressed, using sterile procedure. The extremities have demonstrated improved circulation.

CRITICAL THINKING IN THE NURSING PROCESS
1. Explain the rationale for the immediate insertion of a Foley catheter and nasogastric tube.
2. An escharotomy was performed on both arms. Why was this procedure necessary in Mr. Howard’s case?
3. What is the rationale supporting the intravenous administration of narcotics to control Mr. Howard’s pain?
4. Explain the sequence of events that led to a fluid and electrolyte shift during the first 24 to 48 hours after Mr. Howard sustained his injury.

See Evaluating Your Response in Appendix C.

Practice Alert
Move clients slowly and carefully across bed sheets to prevent shearing or dislodgement of the new skin grafts.

Practice Alert
When cleansing wounds, avoid cross-contamination of the client’s wounds.

Practice Alert
Provide special skin care to sensitive body areas:
■ Clean burns involving the eyes with normal saline or sterile water to prevent corneal and conjunctival drying and

Estimate the extent and depth of the burn wound and recalculate extent of unhealed burns weekly. The severity of the burn injury is the basis for determining which types of interventions are appropriate. Reassessment on a regular basis is necessary to monitor the healing process.

Provide daily wound care (including debridement method, dressing method, and medication administration) as prescribed to remove dead tissue, control infection, and promote reepithelialization as soon as possible.

■ Elevate burned or newly skin grafted extremities at or above heart level to increase venous return and to prevent edema formation.
■ Immobilize skin graft sites for 3 to 5 days or as ordered to promote graft adherence and to prevent loss of newly grafted skin.

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