

Burn Case Study (PSLO)

Students: This case study measures your competency for the following Program Outcome: “Utilize effective communication, coordination and collaborative strategies with patients and members of the healthcare team to optimize healthcare outcomes” (Pre-licensure BSN Program Student Learning Outcome #6). This case study focuses on care for and communicating with a burn patient. **Please review the policy related to PSLOs in the Student Handbook. This must be passed at 76% within 2 attempts to be successful in the course.**

Please make sure that you are giving precise high-level data that enables your professor to judge your competency to care for this client that will assure a positive patient outcome. This is an assignment that is designed to be final in nature to see if you have met the program student learning outcomes. If you have any questions about the expectations, please contact your professor.

History and Physical

Judy Lemon is a 69-year-old female who is admitted right now through the ER. She is a trauma patient and was burned by the explosion of a paint can that was thrown into her outdoor burn pile.

Past Medical History

MI 7 years ago

Heart failure

Meds:

Accupril 20 mg PO Daily

Lasix 20 mg PO Daily

Pravachol 40 mg PO Daily

Nurse's Notes

The client is awake and oriented but agitated and unable to report about the accident. Her voice is raspy, and she says she is cold. She is shivering. Hair on her head and arms are singed. She has areas of redness, waxiness and blisters covering her face, anterior neck, all her right arm, chest, abdomen, and anterior surface of her left arm. She weighs 135 pounds. She is reporting severe pain in her face, neck, and right arm.

Vital Signs

Blood pressure (BP) is 110/52 (taken on her left thigh)

Heart rate is 132 bpm

Respiratory rate is 36

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Question #1. Look at the case presented above and put the following list of interventions in order of priority. **Make sure you are using your ABCD framework for help here.**

- Administer IV Morphine
- Administer IV fluids
- Administer 100% humidified O₂
- Administer prophylactic tetanus toxoid
- Establish IV access
- Initiate appropriate wound care
- Insert indwelling urinary catheter
- Prepare for endotracheal intubation
- Estimate body surface area burned

1. Administer 100% humidified O₂
2. Establish IV access
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5. Administer IV fluids
6. Administer IV Morphine
7. Insert indwelling urinary catheter
8. Initiate appropriate wound care
9. Administer prophylactic tetanus toxoid

Question #2. You are the ER Nurse. You have accomplished the above interventions and now you need to continue to closely assess and monitor your client. Complete the table below with listing the **assessment abnormalities you will need to NOTICE** and relate

Assessment	What abnormalities will you need to NOTICE?	What would it mean?
Urinary Output	Urine output < 0.5 mL/kg/hr.	The patient is hypovolemic and needs fluid resuscitation. The kidneys are at risk for damage or renal ischemia (Harding et al., 2023). Fluids may shift, and evaporative heat loss may occur (Greenfield, 2010).
Upper Airway	Stridor Edema of the lips, oral cavity and throat. Coughing Hoarse voice Dyspnea	Indicative of upper airway edema/narrowing. Swelling of the tongue, epiglottis and glottis can cause hoarseness and difficulty swallowing (Harding et al., 2023).
Lung Sounds	Wheezes, rales, or rhonchi.	Wheezing indicates partially obstructed airways related to inflammation (Harding et al., 2023). There may be impaired

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		gas exchange due to pulmonary edema (Greenfield, 2010).
Core Body Temperature	Hypothermia/decreased body temperature or increased body temperature.	Burn wounds are disrupting the skins thermoregulation abilities (Harding et al., 2023). Fever may also occur due to infection or sepsis (Greenfield, 2010).
Extremities	Cool, clammy, cyanotic extremities, with decreased capillary refill, and weak pulses. Also need to notice any arterial bleeding.	These signs may indicate shock or decreased MAP (Harding et al., 2023).

Question #3. The case progresses and the physician orders fluid replacement according to the Parkland formula. Calculate the goal amount of Lactated Ringer’s solution to be infused for this client. in the first 24 hours and again for the first 8 hours.

****Note: You can use either the Rule of Nines or the Lund Browder method. Please relate which method you will be using and show your work.**

Rule of Nines: **36%**

Face: 4.5%, Anterior neck, chest, and abdomen: 18%, all the right arm: 9%, anterior surface of left arm: 4.5%.

- 4 mL Lactated Ringers Calculation: 61.4 kg with a 36% TBSA burn: $4 \text{ mL} \times 61.4 \text{ kg} \times 36 =$
8,841.6 mL in the first 24 hours

½ of the total in the first 8 hours: $8,841.6 \text{ mL} / 2 =$ **4,420.8 mL** | $4,420.8 / 8 \text{ hours} =$ **552.6 mL/hr**

¼ of the total in the second 8 hours: $8,841.6 \text{ mL} / 4 =$ **2,210.4 mL** | $2,210.4 / 8 \text{ hours} =$ **276.3 mL/hr**

¼ of the total in the third 8 hours: $8,841.6 \text{ mL} / 4 =$ **2,210.4 mL** | $2,210.4 / 8 \text{ hours} =$ **276.3 mL/hr**

(Harding et al., 2023)

Question #4: Explain to the husband, in lay terms, why you will be running this large amount of fluid so fast.

Due to your wife’s extensive burns, fluids are passing through the walls of her blood vessels more easily, causing swelling, wound drainage, and a decrease in her body’s blood volume. Giving your wife large amounts of fluids so quickly, allows us to prevent dehydration and shock, increase her blood pressure, and prevent kidney injury and death.

Question #5: As you are running the fluids into this client, please relate with full explanation (the reason why this is the priority) the top 3 priority assessments.

Priority nursing assessments should focus mainly on the lungs and the heart. Judy has a history of heart failure and MI so it will be important to assess for pulmonary edema, oxygen saturation, shortness of breath, wheezes, crackles, and anxiety related to fluid overload (Harding et al., 2023). It will also be important to assess the heart, by listening to heart sounds, monitoring BP, MAP and HR (Harding et al., 2023). Urine output and weight gain should be monitored as well to keep eye on Judy’s fluid volume

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status (Greenfield, 2010). MAP should stay above 65 mm HG, systolic BP should be greater than 90 mm Hg and heart rate should stay below 120 bpm (Harding et al., 2023).

Question #6: The case progresses, and your client is now intubated. She also has a new central subclavian catheter for fluid administration. Finally, she has an NG tube placed. List the **top six high priority** nursing interventions that you will do with this new information.

Top Six Priorities:

- Maintain and utilize an aseptic technique to prevent infection in the central line. Also, make sure to flush the catheter routinely and keep it free from kinks.
 - Provide support to the client by explaining what is happening, and the next steps of action. Assess the client's anxiety and pain. Provide paper and pencil, a whiteboard, or a cell phone to communicate with the patient. Assess pain routinely.
 - Do regular respiratory assessments such as auscultation, and listening for diminished breath sounds due to smoke damage which can progress to ARDS. ABG labs should all be assessed.
 - Check NG placement, making sure the tube hasn't moved. Set it to low intermittent suction and perform oral care routinely. Administer high-caloric, high-protein feedings via the NG tube.
 - Prevent stress ulcers and GI bleeding by giving H2 receptor blockers, PPIs, or EN.
 - Start VTE prophylaxis to prevent the risk of thromboembolism in the lower extremities as ordered.
- (Harding et al., 2023).

Question #7: During the emergent phase, J.L. experiences significant edema in burn and non-burn areas. One result is that she cannot open her eyes. She becomes agitated and is groping around on the bed. Describe how the nurse can comfort her. Include nursing interventions, collaborative care, and verbal and non-verbal interventions.

The nurse can comfort her by placing her hand on the patient's hand and providing education and therapeutic presence. The nurse should describe each step of care to the client and describe the environment to the patient as needed. The nurse should teach how to use the call light and keep it within the patient's reach. The nurse should provide emotional support and allow the patient to express anger, grief, and fear. Collaborative care should include the physician, the nurse, an occupational therapist, a burn consultant, a dietician, a pharmacist, a physiotherapist, a respiratory therapist, and a mental health specialist (Harding et al., 2023).

Question #8: What is Curling's ulcer? Why is your client at risk for this? What do you need to ensure you do to prevent Curling's ulcer in this client?

A Curling's Ulcer occurs in the stomach or duodenum due to extreme physical stress, such as in burn patients. Patients with reduced CO may have contributing ischemia of the gut, which increases the risk for the translocation of bacteria from the GI tract (Choi, 2015). To prevent Curling's ulcer in this client it will be important to give histamine receptor blockers or proton pump inhibitors (Harding et al., 2023).

Question #9: This burns unit uses a team nursing approach including RNs and CNAs. Which of the following tasks can be assigned to the CNA?

- a. Perform capillary blood glucose testing
- b. Apply SCD's to legs after her bath
- c. Assess J.L.'s pain after IV analgesic administration

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- d. Measure J.L.'s blood pressure using thigh cuff
- e. Record urine output for the shift
- f. Perform dressing changes on J. L's graft sites.

The tasks that can be assigned to a CAN include:

- Perform capillary blood glucose testing.
- Measure J.L.'s blood pressure using thigh cuff.
- Apply SCD's to legs after bath.
- Record urine output for the shift.

Question #10: After J.L.'s edema has subsided and her endotracheal tube has been removed, she refuses to participate in self-care and talks about not wanting to be "seen like this." Describe ideas for therapeutic communication to help J.L.

Open and frequent communication is very important so that J.L. can discuss her emotions and concerns. Encouragement to talk about J.L.'s feelings is important. Reassuring J.L. that her feelings are a normal reaction to such a big life event. Empathy is an important skill to use to acknowledge J.L.'s physical and emotional pain. Saying something like, "I can imagine this is really difficult for you" would be a good statement to make. It's also important the nurse use open-ended questions to encourage them to express their feelings. The nurse should also encourage decision-making and offer choices in her care as much as possible (Harding et al., 2023).

Make sure that you are submitting a scholarly work product. Please refer to the rubric for specific guidelines and make sure you are using in-text citations and a reference page. See the library for help with getting that right. Submit your work through the writing center if you need to.

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References

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