

DIAGNOSIS AND MANAGEMENT OF BURNS IN REMOTE AND INDIGENOUS COMMUNITIES

Multi-Subspecialty Education For Low-Resource Settings

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An aerial photograph showing a river or stream meandering through a vast, dense green forest. The water is a light blue-green color, contrasting with the deep green of the surrounding trees. The forest appears to be a tropical or subtropical rainforest, with a thick canopy. The river starts from the top center and winds its way towards the bottom right of the frame.

Land Acknowledgements

Background

- High prevalence of burns in remote and indigenous communities
- Socioeconomic factors contributing to high burn rate
- Unique challenges due to remoteness, lack of resources, cultural nuances



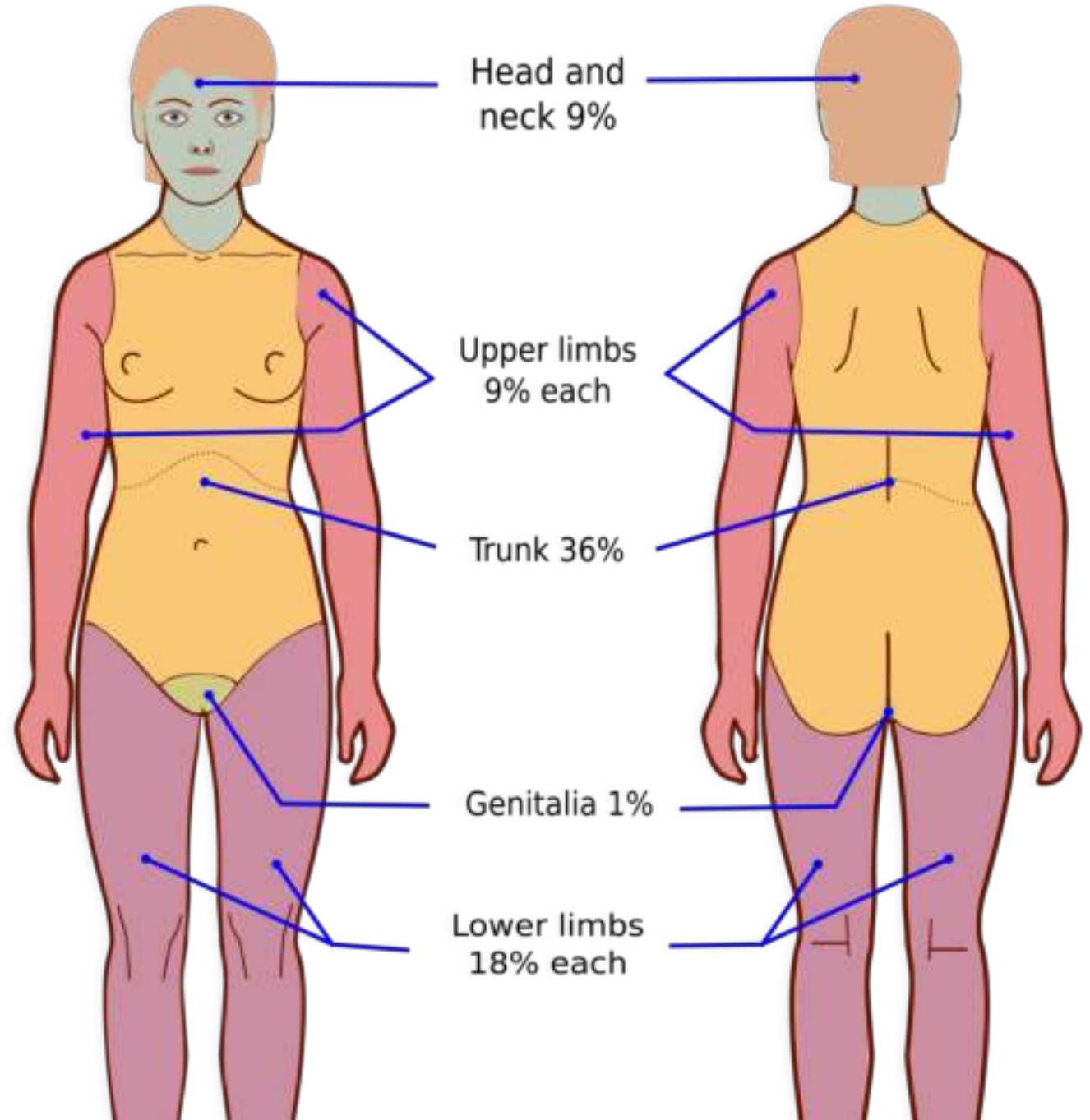
Understanding Burns

- Direct injury to the body's tissues from heat, electricity, chemicals, or radiation
- Sources of damage
 - Thermal
 - Electrical
 - Chemical
 - Radiation

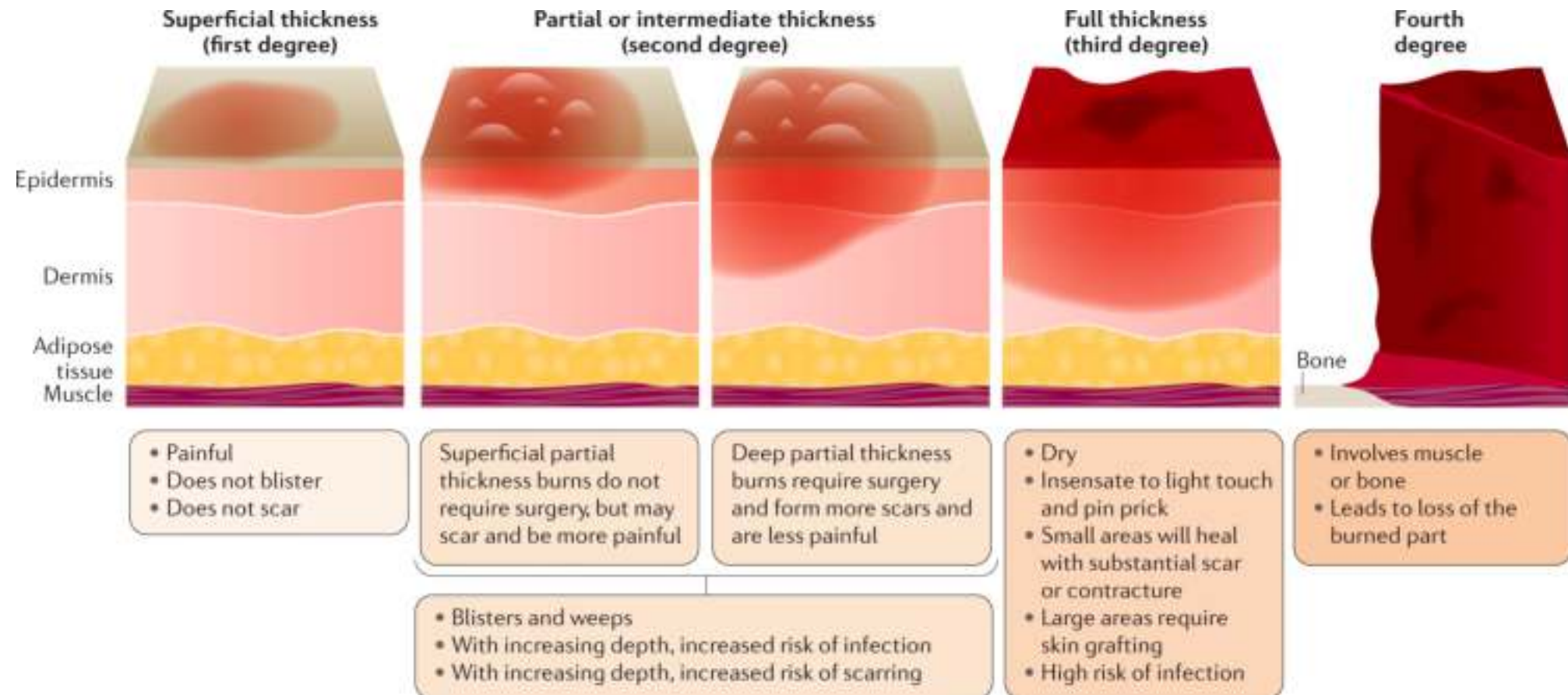


Burn Severity

- Assess burn severity based on Total Body Surface Area (TBSA)
- Consider burn depth and location in severity evaluation
- Severity assessment guides treatment decisions and prognosis



Classification of burns



Acute Complications of Burns

- Circumferential full-thickness burns
- Flash burns and explosion trauma
- Inhalation injuries
- Carbon monoxide and cyanide poisoning



Long-Term Complications of Burns

- Scarring and contractures can affect mobility and function
- Long-term psychological impact may occur, requiring support

Assessment and Diagnosis

- Primary Survey: ABCDE approach
- Secondary Survey: Full body examination
- Burn Size: Rule of Nines, Palm method
- Special areas: Face, hands, feet, genitals, perineum, major joints



Assessment and Diagnosis Continued

- Burn Depth: Superficial, partial-thickness, full-thickness
- Severity Assessment: Age, burn depth, TBSA, inhalation injury, comorbidities
- Consider signs of non-accidental injuries



Diagnostic Tests

- Use diagnostic tests when necessary to aid in burn diagnosis
- Blood tests monitor infection, kidney function, and nutrition
- Carbon monoxide and cyanide testing for potential smoke inhalation



Management: Initial Phase

- Stop the burn!
- ABCs: Airway, Breathing, Circulation
- Pain control: importance and options
- Exposure and Environment: remove clothing/jewelry, keep patient warm

Management: Resuscitation

- New formula for fluid resuscitation
- Monitor urine output
- Adjust fluid rate based on response



Burn Wound Care

- Initial wound cleaning, debridement, dressing
- Use of topical antimicrobials
- Non-adhesive dressing options
- Additional Considerations



Pain Management

- Importance of pain management
- Pain management options for burn patients
- Multimodal approach

Transfer to Burn Centre

- All consultations coordinated through CritiCall Ontario: 1-800-668-4357
- Systems criteria
- Consider transfer to a burn centre
- Special considerations
- Consider consult with burn centre



Special Considerations: Paediatric Patients

- Differences in burn care: fluid management, weight-based calculations
- Importance of considering child abuse
- Special psychosocial needs

Special Considerations: Elderly Patients

- Impact of comorbidities on burn care
- Altered physiology: changes in skin, cardiovascular system
- Importance of comprehensive geriatric assessment

The Impact on Indigenous Communities

- Access to care challenges: remote locations, limited resources
- Cultural considerations: respect for indigenous healing practices, importance of community involvement



Case Scenario 1

- 30-year-old man involved in a cooking fire accident in a confined kitchen space

Case Scenario 2

- 45-year-old woman was involved in an accident with a boiling water pot

Case Scenario 3

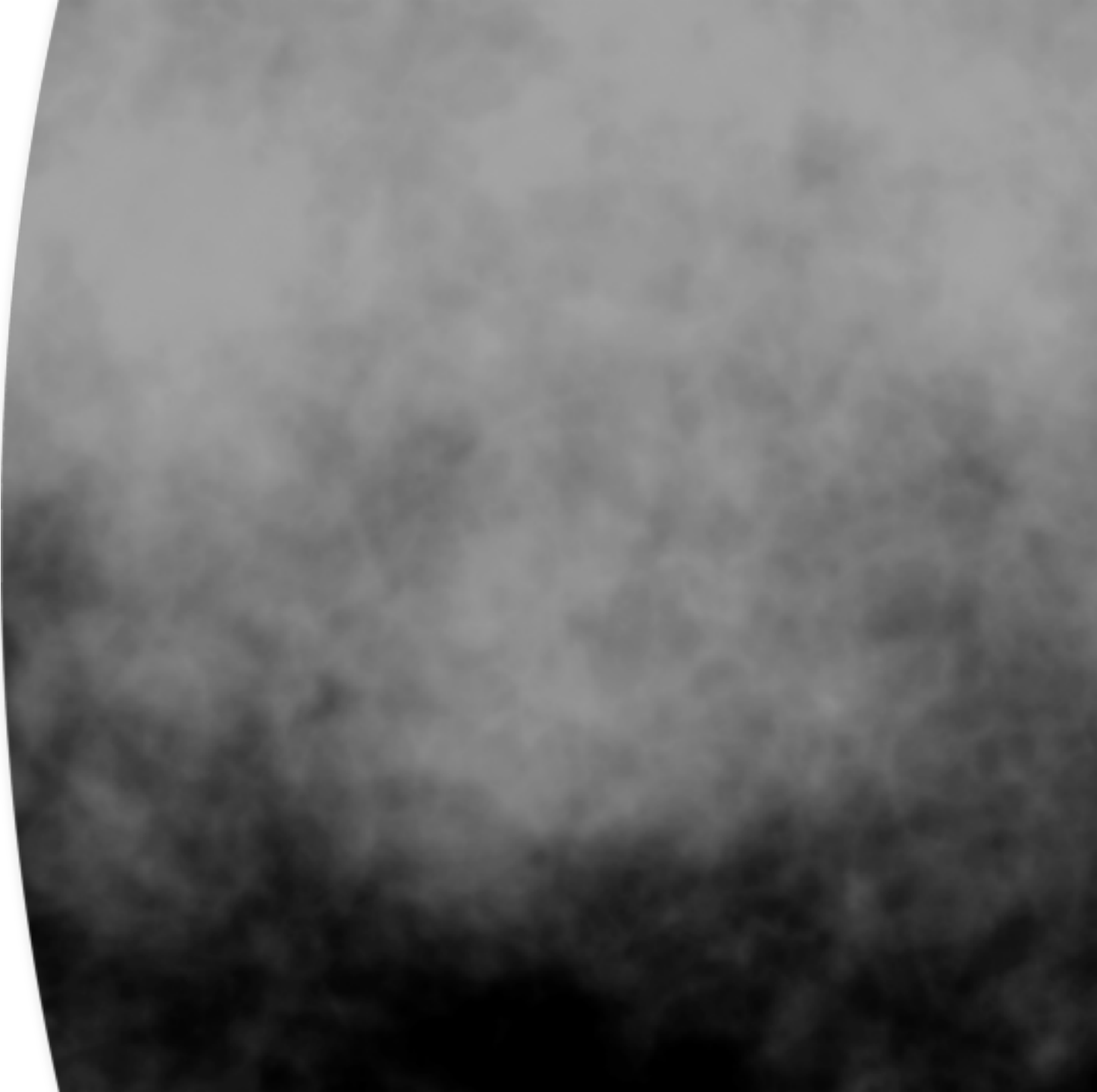
- 55-year-old man involved in a kerosene heater explosion

Case Scenario 4

- 30-year-old man involved in a gasoline explosion while working on his car



Conclusion and Q&A

- Understanding the unique challenges
 - Culturally sensitive approach
 - Collaboration and education
 - Comprehensive care
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