UCLA General Surgery Residency Program Rotation Educational Policy

Goals and Objectives UPDATED: September 2009

ROTATION: BURN SURGERY

ROTATION DIRECTOR: 

CHIEF OF BURN SURGERY: 

SITE: Los Angeles County-USC Medical Center

GOALS:
To provide trainees an opportunity to participate in the perioperative and operative aspects of burn surgery

LEVEL OF TRAINEE: R2

ASSESSMENT:
Monitoring of the accomplishment of the stated objectives will be performed using the following methods:

1. Global Rating: end of rotation evaluation of resident performance to assess the resident’s demonstration of Core Competencies with respect to the stated objectives by faculty, other team resident members, students, and nursing staff.
2. Case Logs: auditing of operative cases pertinent to the specialty in the Surgical Operative Log.
3. Written Examination: performance on the annual ABSITE examination, Cardiovascular and Respiratory systems section.

DESCRIPTION OF THE ROTATION:
The Burn Surgery rotation will consist of 4 weeks during the R2 year. The resident will achieve the stated objectives using the following methods:

1. direct involvement in patient care and management, under the supervision of faculty-attendings (USC)
2. personal performance of procedures
3. participation in operative cases
4. lectures

COMPETENCY BASED LEARNING OBJECTIVES

Patient Care:
1. Provide emergency burn patient evaluation and monitoring. Determine the level of care and need for transfer to a burn facility.
2. Implement fluid resuscitation protocols for children and adults.
3. Select and apply appropriate dressings and antibacterials.
4. Manage systemic effects of the burn wound in the critically injured patient, considering:
   a) sepsis
   b) ileus
c) gastrointestinal bleeding
d) respiratory failure
e) renal failure
5. Determine daily energy requirements of critically ill burn patients using established formulas accounting for varied metabolic demands. If possible, utilize “metabolic cart” to calculate metabolic needs.
6. Manage the treatment of inhalation injury including:
   a) the performance of flexible laryngoscopy and bronchoscopy
   b) ventilator management
7. Manage wound therapy, including:
   a) eschar formation and slough
   b) re-epithelization
   c) tangential and fascial excision
   d) debridement of deep tissues
   e) skin graft harvest and application
8. Evaluate and manage the treatment of electrical burns, including:
   a) entrance and exit wound
   b) cardiac, vascular, neurologic, ophthalmologic effects
   c) deep tissue destruction
9. Institute treatment of chemical burns, including:
   a) identification of types and sources of injuring agent
   b) treatment by dilution or neutralization
   c) treatment of the systemic effects of local chemicals
10. Manage eschar contracture and edema control:
    a) techniques of escharotomy
    b) techniques of fasciotomy
11. If possible, manage the treatment of the burned child, including initial therapy, systemic support, and special care needs with input from the pediatric intensive care team.

Medical Knowledge:
1. Discuss the functional anatomy of the skin, adnexa, and subcutaneous tissues
2. Describe the physics and pathophysiology of thermal injury.
3. Discuss the physics and pathophysiology of electrical injury, including:
   a) current
   b) entrance and exit wounds
   c) deep tissue involvement
   d) neurologic injury
   e) vascular complications
4. Summarize the management of chemical burns to include sources, pathophysiology, decontamination, and treatment. In particular, note the treatment for the following agents:
   a) phosphorus
   b) hydrofluoric acid
5. Discuss the problem of inhalation injury including:
   a) risk factors
   b) physical findings
   c) role of tracheobronchoscopy and diagnostic findings
   d) carbon monoxide poisoning
   e) ventilatory support
   f) morbidity, mortality and prognosis
6. Outline the effects of major thermal injury including:
   a) shock
   b) immunologic alteration
   c) gastrointestinal effects
   d) cardiopulmonary effects
7. Discuss the role of early nutritional support in the treatment of burn patients.
8. Discuss the initial evaluation of a burn victim including:
   a) pertinent historical aspects (type of burn, type of fire)
   b) physical findings of the burn wound
   c) estimation of the size of the burn injury
   d) evaluation for inhalation injury
   e) criteria for the transfer to a major burn facility
9. Outline an initial treatment plan for stabilization and fluid resuscitation of the burn victim based upon the above evaluation.
10. Discuss aspects of the burn wound such as:
    a) appearance in relation to depth
    b) healing potential
    c) bacteriology
    d) role of surgical intervention
11. Note the special requirements of management and rehabilitation of the burned hand.
12. Describe the indications, techniques for harvest, application, immobilization, and care of split- and full- thickness skin grafts
13. Analyze treatment options for the comprehensive care of the burn patient, including:
    a) excision of burn
    b) homografting
    c) xenografting
    d) autografting
14. Describe and explain the following terms:
    a) compartment syndromes
    b) burn eschar contraction
    c) fasciotomy and escharotomy
15. Discuss the principles of the use of systemic and local antibacterial agents in the treatment of the burn wound.
16. Note the characteristics of the various local antibacterial agents used in the treatment of the burn wound.
17. Review the epidemiology, prevention, and socioeconomic and psychologic effects of burns.
18. Review the indications for and contributions of physical and occupational therapy in burn care.
19. Review the special circumstances, management, and rehabilitation of burns in the pediatric patient.
20. Describe the indications for and basic techniques of plastic and reconstructive intervention in the burn wound to alleviate:
   a) scar contracture
   b) underlying joint contracture
   c) hypertrophic scar
21. Summarize the activities of a specialized burn team or unit in the overall management of the burn patient to include the following:
   a) physical therapy
   b) occupational therapy
   c) psychological counseling
   d) recreational therapy
   burn nursing

**Practice Based Learning:**

1. Develop a personal program of self-study and professional growth with guidance from the teaching staff and senior residents. An understanding of the etiology, pathogenesis, pathophysiology, diagnosis and management of burn injuries will allow for sound surgical judgment, which relies on knowledge, rational thinking and the surgical literature.
2. Utilize current literature resources to obtain up-to-date in information in the care of burn patients and practice evidence-based medicine.
3. Participate in activities of the Division (including all teaching conferences) and assume responsibility for teaching and supervision of subordinate surgical house staff, and medical students.
4. Participate in daily teaching rounds and be able to present patients in an organized and complete fashion

**Professionalism:**

1. Practice compassionate patient care maintaining the highest moral and ethical values with a professional attitude.
2. Demonstrate understanding of the needs and feelings of others, including the patient's family members, allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.
3. Communicate and collaborate effectively in a team of health care providers
4. Demonstrate respect, compassion and integrity in the care of burn patients on a daily basis
5. Demonstrate mature and educated approach to Ethical issues commonly encountered in a critical care setting.
6. Show sensitivity to patients culture, age, gender and disabilities
7. Be self-aware and have knowledge of professional limits by practicing ongoing medical education and self-improvement.
8. Be accountable to profession in their actions and decisions

**Interpersonal Relationships And Communication:**
1. Create and sustain a therapeutic and ethically sound relationship with patients and patient families
2. Work effectively with other members of the medical team including allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.
3. Maintain professional interactions with other health care providers and hospital staff

**Systems Based Practice:**
1. Understand how the health care organization affects surgical practice of critical care
2. Demonstrate cost effective health care
3. Be able to coordinate multi-specialty and multidisciplinary care practice including discharge planning, social service, rehabilitation, and long term care
4. Follow established practices, procedures, and policies of the Department of Surgery and integrated and affiliated hospitals.
5. Maintain complete of medical records operative notes staff sheets and notes, patient database cards and other patient care related documentation in a timely, accurate and succinct manner.

**Additional Evaluation Information:**
1. The burn unit attending will conduct teaching rounds everyday and provide direct supervision on all aspect of patient care.
2. Each resident will be evaluated at the end of the burn rotation. The program director will evaluate the overall performance of each resident at least semiannually and will include feedback on performance of all mandatory and elective rotations including burns.
3. The annual ABSITE will further provide feedback on the residents’ clinical and basic science knowledge. Burn related questions and respective success rates will be discussed with the residents.
4. Each resident in turn, will be asked to evaluate the rounding faculty and the rotation after each rotation. The aggregate input from the residents will be tabulated and presented at the faculty meeting at least semi-annually. Input will be also discussed with the faculty members participating in the burn rotation. Improvement will be formulated by the program director and recommended to the faculty.