Ultraviolet C Light Therapy

Indications and Contraindications

Indications	Contraindications

• Those who have been deemed a candidate for adjunctive therapies, see "Determining Candidacy for Adjunctive Therapies"
• To reduce bacterial burden[1-2]
• To produce a mild inflammatory response to help accelerate wound healing
• To increase vascular permeability, keratinocyte activation, wound epithelialization, and induction and modification of growth factors and their receptors
• To activate fibroblasts and to increase DNA synthesis
• To treat:
  ○ Chronic psoriasis
  ○ Acne vulgaris
  ○ Acute and chronic wounds
  ○ Uremic pruritus
  ○ Jaundice
	• Contraindicated if used in combination with UVA or UVB rays to large body surface areas[3-4]:
	  ○ Congestive Heart Failure
	  ○ Diabetes
	  ○ Tuberculosis
	  ○ Hyperthyroidism
	  ○ Systemic lupus erythematous
	  ○ Cardiac, renal, and hepatic disease
	  ○ Herpes simplex
	  ○ Syphilis
	  ○ Cancer
	  ○ Acute febrile illness
	• Malignant wounds or history of melanoma or carcinoma
	• In those with light allergies or light sensitive diseases, i.e. porphyria or lupus erythematous
	• Over fresh skin grafts
	• Direct viewing of the lamp output (goggles required)
	• AIDS/HIV
	• Over areas of acute eczema or psoriasis
	• Deep cellulitis and osteomyelitis
	• Over areas that received deep x-ray therapy in the past six months
	• Over the thyroid gland
	• Pregnancy
	• In infants
	• Prolonged exposure times
	• Over metal implants
	• Over areas of local erythema

Precautions	
• Ingestion of strawberries, eggs, shellfish before treatment • Use of birth control pills, tetracycline, quinine, diuretics, and/or insulin • Over areas of poor skin sensation • Avoid active epiphyseal regions in children • Avoid specialized tissues, i.e. testes • People with little skin pigmentation, i.e. people with blonde or red hair	

Level of Evidence	Definition
1A	Evidence obtained from meta-analysis or systematic review of RCTs
1B	Evidence obtained from at least one RCT
2A	Evidence obtained from at least one well-designed controlled study without randomization
2B	Evidence obtained from at least one other type of well-designed quasi-experimental study without randomization
3	Evidence obtained from well-designed non-experimental descriptive study, such as a comparative study, correlation study, and/or case study
4	Evidence obtained from expert committee reports or opinions and/or clinical experience of respected authority

RCT = randomized controlled trial

References

1. Conner-Kerr T, Albaugh KW, Woodruff LD, et al. Phototherapy in wound management. In: Sussman C, Bates-Jensen B (eds). Wound Care: A Collaborative Practice Manual for Health Professionals. Third edition. Baltimore: Lippincott Williams &Wilkins, 2007;591-611.
2. Taylor GJS, Bannister GC, Leeming JP. Wound disinfection with ultraviolet radiation. J Hospital Infection. 1995;30:85-93.
3. Weisberg J. Ultraviolet irradiation. In: Hecox B, Mehreteab TA, Weisberg J (eds). Physical Agens: A Comprehensive Text for Physical Therapists. Norwalk, CT: Appleton & Lange, 1994:377-378.
4. Hayes KW. Ultraviolet radiation. In: Hayes KW (ed). Manual for Physical Agents. Fifth edition. Norwalk, CT: Appleton & Lange, 1999.