

Burns

Current Awareness Newsletter



September 2015

Respecting everyone
Embracing change
Recognising success
Working together
Our hospitals.





Outreach

Your Outreach Librarian can help facilitate evidence-based practise for all Burns members of staff, as well as assisting with academic study and research. We can help with **literature searching, obtaining journal articles and books**, and setting up individual **current awareness alerts**.

Literature Searching

We provide a literature searching service for any library member. For those embarking on their own research it is advisable to book some time with one of the librarians for a 1 to 1 session where we can guide you through the process of creating a well-focused literature research and introduce you to the health databases access via NHS Evidence.

Critical Appraisal Training

We also offer **one-to-one or small group training** in literature searching, accessing electronic journals, and critical appraisal/Statistics. These are essential courses that teach how to interpret clinical papers.

For more information, email: katie.barnard@uhbristol.nhs.uk

Books

Books can be searched for using SWIMS our online catalogue at www.swims.nhs.uk. Books and journals that are not available on site or electronically may be requested from other locations.

Please email requests to: library@uhbristol.nhs.uk

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Tables of Contents from Burns journals

If you require full articles please email: library@uhbristol.nhs.uk

Burns 2015 (Elsevier)

[September 2015, Volume 41, Issue 6](#)

Journal of Burn Care & Research (LWW)

[July/August 2015, Volume 36, Issue 4](#)

Injury Prevention (BMJ)

[August 2015, Volume 21, Issue 4](#)

Plastic and Reconstructive Surgery (LWW)

[September 2015, Volume 136, Issue 3](#)

Journal of Plastic, Reconstructive & Aesthetic Surgery (Elsevier)

[September 2015, Volume 68, Issue 9](#)

Archives of Disease in Childhood (BMJ)

[September 2015, Volume 100, Issue 9](#)

Pediatrics (HighWire)

[September 2015, Volume 136, Issue 3](#)

Injury (Elsevier)

[September 2015, Volume 46, Issue 9](#)

Trauma (Sage)

[July 2015, Volume 17, Issue 3](#)

New NICE Guidance

NG15 [Antimicrobial stewardship: systems and processes for effective antimicrobial medicine use](#)

Latest relevant Systematic Reviews from the Cochrane Library

[Oral non-steroidal anti-inflammatory drugs versus other oral analgesic agents for acute soft tissue injury](#)

[Single dose oral ibuprofen plus caffeine for acute postoperative pain in adults](#)

[Continuous intravenous perioperative lidocaine infusion for postoperative pain and recovery](#)

New activity in UpToDate

Stevens-Johnson syndrome outbreak associated with *M. pneumoniae* (August 2015)

Stevens-Johnson syndrome/toxic epidermal necrolysis (SJS/TEN) is a rare, severe blistering mucocutaneous reaction, most commonly triggered by medications, characterized by extensive necrosis and detachment of the epidermis and mucosa. *Mycoplasma pneumoniae* and cytomegalovirus infections are the next most common trigger of SJS/TEN, particularly in children. Between September and November 2013, an outbreak of eight pediatric cases of *M. pneumoniae*-associated SJS/TEN was reported in Colorado, likely related to high levels of *M. pneumoniae* infection in the region [21]. All children had severe oropharyngeal mucositis; the conjunctiva was involved in seven children and the genital mucosa in five. (See "[Stevens-Johnson syndrome and toxic epidermal necrolysis: Pathogenesis, clinical manifestations, and diagnosis](#)", section on 'Infection'.)

HDAS Literature Search guide

<http://www.library.nhs.uk/hdas>

Forgotten how to conduct a search using the NHS Health Databases Advanced Search (HDAS)? Not sure how to get the best out of your search strategy? This quick guide will help you fill in the blanks...

You will need to log in using your OpenAthens username and password.

Register if needed here: <https://openathens.nice.org.uk/>

☐ Select All	Save all	Save selected lines	Delete selected	Remove duplicates	?	Collapse history ▲
Line	Database	Search Term	View Results			
☐ 1	EMBASE, Medline	p*ediatric*.ti,ab	526246	▼ Apply Limits	⊗	
☐ 2	EMBASE, Medline	child*.ti,ab	2309368	▼ Apply Limits	⊗	
☐ 3	EMBASE, Medline	adolescent*.ti,ab	385156	▼ Apply Limits	⊗	
☐ 4	EMBASE, Medline	infant*.ti,ab	678188	▼ Apply Limits	⊗	
☐ 5	EMBASE, Medline	1 OR 2 OR 3 OR 4	3198509	▼ Apply Limits	⊗	
☐ 6	EMBASE, Medline	"non invasive ventilation".ti	1890	▼ Apply Limits	⊗	
☐ 7	EMBASE, Medline	"noninvasive ventilation".ti	2086	▼ Apply Limits	⊗	
☐ 8	EMBASE, Medline	NIV.ti	391	▼ Apply Limits	⊗	
☐ 9	EMBASE, Medline	6 OR 7 OR 8	4167	▼ Apply Limits	⊗	
☐ 10	EMBASE, Medline	5 AND 9	442	▼ Apply Limits	⊗	
☐ 11	EMBASE, Medline	10 [Limit to: Publication Year 2013-2016]	148	▼ Apply Limits	⊗	
☐ 12	EMBASE, Medline	Duplicate filtered: [10 [Limit to: Publication Year 2013-2016]]	148 145 Unique results 3 Duplicate results		⊗	
Combine selected ☒ AND ☐ OR To combine two line numbers using NOT, enter the line numbers in the search box below: for example 1 NOT 2						

- 1) Choose your databases (or select all)
- 2) Enter in your search terms
 - Choose which fields to search (the default is title and abstract)
 - Break each concept down into all possible terms (British/American spellings, acronyms, alternative terms etc), then combine using 'OR'
 - More useful database search tips:

*	Truncation	A substitute for any letters (or none)	E.g. p*ediatric* = paediatric, pediatrics, paediatrician etc.
" "	Inverted commas	Specifies that adjacent words should be searched as phrases	E.g. "noninvasive ventilation"
ADJ	Adjacency	Specifies the maximum number of words that can appear between two search terms	E.g. Random* ADJ1 trial

- 3) Combine the different search concepts using 'AND'
- 4) Apply limits e.g. publication date
- 5) Remove duplicates (this function can be slow)
- 6) Click on 'unique results' to see you results

*But remember, the Library team can carry out searches on your behalf or provide you with assistance.
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Current Awareness database articles

If you require full articles please email: library@uhbristol.nhs.uk

Title: Non-melanoma skin cancer, sun exposure and sun protection.

Citation: Giornale italiano di dermatologia e venereologia : organo ufficiale, Società italiana di dermatologia e sifilografia, Aug 2015, vol. 150, no. 4, p. 369-378, 0392-0488 (August 2015)

Author(s): Calzavara-Pinton, P, Ortel, B, Venturini, M

Abstract: The incidence of skin tumors including squamous cell carcinoma (SCC), and its biological precursor, the actinic keratosis, and basal cell carcinoma (BCC) often named together non-melanoma skin cancer (NMSC) is growing all over the world in people of Caucasian ancestry. A plenty of clinical and epidemiological studies have demonstrated the causal relationship with high cumulative solar dosages and number of sunburns, although the hazard may be different for different tumors according to the modalities of ultraviolet (UV) exposure. BCC is much more strongly related to measures of intermittent ultraviolet exposure (particularly those of childhood or adolescence) than to measures of cumulative exposure. In contrast, SCC is more strongly related to constant or cumulative sun exposure. Photobiological studies have clarified that sunlight and UVB radiation are complete carcinogens for AK and SCC although the relationship with UVA exposure is much less known. Also the likelihood of BCC has been related to either sunburns and high lifetime solar, UVA and UVB cumulative doses but the pathogenetic pathways of both UVB and UVA radiation for BCC development need to be clarified so far. The lack of a complete knowledge of the photocarcinogenic pathways of keratinocytes has contributed to the limited results of solar photoprotection strategies, beside the limitations of the available sunscreens and present EU regulations.

Title: The Use of Glabrous Skins Grafts in the Treatment of Pediatric Palmar Hand Burns.

Citation: Annals of plastic surgery, Aug 2015, vol. 75, no. 2, p. 153-157 (August 2015)

Author(s): Friel, Michael T, Duquette, Steve P, Ranganath, Bharat, Burkey, Brooke A, Glat, Paul M, Davis, Wellington J

Abstract: An often overlooked, yet useful, technique in the treatment of palmar hand burns is the use of glabrous skin grafting, particularly in dark-skinned individuals. Pediatric palmar burns are a particularly unique subset of burns. The typical split-thickness or full-thickness skin grafts leave a notably different skin texture and pigmentation. It is also known that the psychological aspects of a pediatric burn can be quite burdensome for a child as he or she progresses through childhood and adolescence. For a dark-skinned patient the placement a standard full-thickness skin graft in a nonpigmented palm provides for a constant reminder of a traumatic event. We report a case series of pediatric patients who were managed with glabrous skin grafting from the plantar aspect of the foot. A retrospective review of palmar skin burns requiring grafting at a single pediatric burn center experience over a 2 and a half year time period was performed. Seventeen patients were identified. Our treatment algorithm for deep partial thickness burns first relies on a combination of operative and nonoperative measures to expedite the demarcation of the burn injury. If the burn is full thickness in nature or if a lack of progression of healing is identified within the first 14 days of injury, then skin grafting is recommended. Our technique for performing the graft is described. The average age at time of surgery was 2.05 years (6 months to 6.8 years). Fourteen of the 17 patients had darker skin types (Fitzpatrick Type III-VI) and identified themselves as either Hispanic or African American. The average size of the area requiring skin graft after debridement was 0.94% total body surface area (0.5%-2.0%). Of the patients that were not lost to follow-up, 1 patient required additional grafting after developing a finger contracture for splint noncompliance. Aesthetically, the wounds went on to heal with an excellent pigment match and an inconspicuous donor site. In the management of deep-partial or full-thickness palmar skin burns in the pediatric population that require grafting, the use of plantar glabrous skin grafts offers a reliable option for coverage. The aesthetic and functional results are improved over standard techniques.

Title: Health-Related Quality of Life in adolescent survivors of burns: Agreement on self-reported and mothers' and fathers' perspectives.

Citation: Burns : journal of the International Society for Burn Injuries, Aug 2015, vol. 41, no. 5, p. 1107-1113 (August 2015)

Author(s): Pan, Raquel, Egberts, Marthe R, Nascimento, Lucila Castanheira, Rossi, Lidia Aparecida, Vandermeulen, Els, Geenen, Rinie, Van Loey, Nancy E

Abstract: This study examined the agreement on self-reported Health-Related Quality of Life (HRQOL) between adolescents with burns and their mother's and father's observation at 6 and 18 months after the burn. Moreover, factors potentially influencing discrepancies between the adolescent and proxy reports were examined. Children with burns (11-18 years old) and their mother and father were invited to participate. A total of 54 adolescents aged 11 years or older filled out the American Burn Association/Shriners Hospitals for Children Burn Outcomes Questionnaire (BOQ). Descriptive and correlational analyses were performed. The physical functioning scores showed to be optimal in almost all participants (99%) and across the three informants. Adolescents reported better functioning than their fathers and mothers on most of the scales. On average the correlations between self-reports and proxy reports were moderate to good. Higher parental traumatic stress scores were linked to less favorable parent-reported burn outcomes. Overall, this study showed that a large proportion of the parents had similar views on the adolescents physical functioning, but disparities emerged also, mainly in psychosocial scales. The discrepancies between self- and parent reports should be discussed when they have a role in treatment decisions. Preferably, besides parent-reports, adolescents' self-reports should be included in clinical assessments and treatment decisions, as parental traumatic stress symptoms are a possible factor influencing parental observations. Copyright © 2014 Elsevier Ltd and ISBI. All rights reserved.

Title: Randomized controlled trial of three burns dressings for partial thickness burns in children.

Citation: Burns : journal of the International Society for Burn Injuries, Aug 2015, vol. 41, no. 5, p. 946-955 (August 2015)

Author(s): Gee Kee, E L, Kimble, R M, Cuttle, L, Khan, A, Stockton, K A

Abstract: This study compared the effects of three silver dressing combinations on small to medium size acute partial thickness burns in children, focusing on re-epithelialization time, pain and distress during dressing changes. Children (0-15 years) with clean, $\leq 10\%$ total body surface area (TBSA) partial thickness burns who met the inclusion criteria were included in the study. Children received either (1) ActicoatTM; (2) ActicoatTM with MepitelTM; or (3) Mepilex AgTM dressings. Measures of burn re-epithelialization, pain, and distress were recorded at dressing changes every 3-5 days until full re-epithelialization occurred. One hundred and three children were recruited with 96 children included for analysis. No infections were detected for the course of the study. When adjusted for burn depth, ActicoatTM significantly increased the expected days to full re-epithelialization by 40% (IRR = 1.40; 95% CI: 1.14-1.73, $p < 0.01$) and ActicoatTM with MepitelTM significantly increased the expected days to full re-epithelialization by 33% (IRR = 1.33; 95% CI: 1.08-1.63, $p \leq 0.01$) when compared to Mepilex AgTM. Expected FLACC scores in the Mepilex AgTM group were 32% lower at dressing removal ($p = 0.01$) and 37% lower at new dressing application ($p = 0.04$); and scores in the ActicoatTM with MepitelTM group were 23% lower at dressing removal ($p = 0.04$) and 40% lower at new dressing application ($p < 0.01$), in comparison to the ActicoatTM group. Expected Visual Analog Scale-Pain (VAS-P) scores were 25% lower in the Mepilex AgTM group at dressing removal ($p = 0.04$) and 34% lower in the ActicoatTM with MepitelTM group ($p = 0.02$) at new dressing application in comparison to the ActicoatTM group. There was no significant difference between the Mepilex AgTM and the ActicoatTM with MepitelTM groups at all timepoints and with any pain measure. Mepilex AgTM is an effective silver dressing, in terms of accelerated wound re-epithelialization time (compared to ActicoatTM and ActicoatTM with MepitelTM) and decreased pain during dressing changes (compared to ActicoatTM), for clean, $< 10\%$ TBSA partial thickness burns in children. Copyright © 2014 Elsevier Ltd and ISBI. All rights reserved.

Title: Evaluation of haemoglobin in blister fluid as an indicator of paediatric burn wound depth.

Citation: Burns : journal of the International Society for Burn Injuries, Aug 2015, vol. 41, no. 5, p. 1114-1121 (August 2015)

Author(s): Tanzer, Catherine, Sampson, Dayle L, Broadbent, James A, Cuttle, Leila, Kempf, Margit, Kimble, Roy M, Upton, Zee, Parker, Tony J

Abstract: The early and accurate assessment of burns is essential to inform patient treatment regimens; however, this first critical step in clinical practice remains a challenge for specialist burns clinicians worldwide. In this regard, protein biomarkers are a potential adjunct diagnostic tool to assist experienced clinical judgement. Free circulating haemoglobin has previously shown some promise as an indicator of burn depth in a murine animal model. Using blister fluid collected from paediatric burn patients, haemoglobin abundance was measured using semi-quantitative Western blot and immunoassays. Although a trend was observed in which haemoglobin abundance increased with burn wound severity, several patient samples deviated significantly from this trend. Further, it was found that haemoglobin concentration decreased significantly when whole cells, cell debris and fibrinous matrix was removed from the blister fluid by centrifugation; although the relationship to depth was still present. Statistical analyses showed that haemoglobin abundance in the fluid was more strongly related to the time between injury and sample collection and the time taken for spontaneous re-epithelialisation. We hypothesise that prolonged exposure to the blister fluid microenvironment may result in an increased haemoglobin abundance due to erythrocyte lysis, and delayed wound healing. Copyright © 2015 Elsevier Ltd and ISBI. All rights reserved.

Title: Vaginal Burn from Alkaline Battery in an 8-Year-Old.

Citation: Journal of pediatric and adolescent gynecology, Aug 2015, vol. 28, no. 4, p. e99 (August 2015)

Author(s): Griffin, Kelly, Brent, Rohan, Vollenhoven, Beverley, Swanson, Amy E

Abstract: Life-threatening injury from battery ingestion has mandated changes in the manufacture of battery-operated devices. Whilst esophageal burns are commonly publicized, there is scarce literature on vaginal burns and their potential morbidity. An 8-year-old girl presented with self-report of a "fluffy toy" per vagina. Under general anesthesia, her vagina was examined and the mucosa appeared coated in a "blue fur." It was soon identified as corrosive damage from an alkaline button battery. Fistula and rectal injury were excluded. Symptomatic relief was achieved with the use of estradiol lidocaine intravaginal concoction following removal. Optimal management of a vaginal foreign body relies upon clinical suspicion, familiarity with prepubertal vaginal instrumentation, and expeditious removal of inserted batteries to avoid serious morbidity. Copyright © 2015 North American Society for Pediatric and Adolescent Gynecology. Published by Elsevier Inc. All rights reserved.

Title: Do β -Blockers Decrease the Hypermetabolic State in Critically Ill Children With Severe Burns?

Citation: Hospital pediatrics, Aug 2015, vol. 5, no. 8, p. 446-451, 2154-1663 (August 2015)

Author(s): Shan Chew, Elaine Chu, Baier, Nicole, Lee, Jan Hau

Abstract: Severe burns result in a hypermetabolic state that is associated with increased morbidity and mortality. We reviewed the literature to determine if there is strong evidence that short-term β -blockers reduce the hypermetabolic state or mortality and length of stay (LOS) compared with no therapy in patients with severe burns. A literature search of PubMed, Embase, the Cochrane Database of Systematic Reviews, and BestBETs was conducted on the use of adrenergic β -antagonists in burn patients. Six randomized controlled trials met the inclusion criteria. Five pediatric trials found that β -blockers reduced the hypermetabolic state (as defined by reduction of cardiac work, rate pressure product, resting energy expenditure, central deposition of fat, and bone mineral loss) and were associated with an improvement in lean muscle mass in patients with severe burns. However, there was no change in LOS or mortality in these children. One adult study in burn patients found shorter LOS in patients treated with β -blockers but no difference in mortality rate. β -blockers were relatively well tolerated, with no differences in adverse effects reported. β -blockers seem to reduce the hypermetabolic state in pediatric patients with burns, but there is insufficient evidence to suggest they have an impact on mortality rates or LOS. Copyright © 2015 by the American Academy of Pediatrics.

Full Text:

Available from *Highwire Press* in [Hospital Pediatrics](#)

Title: Do standard burn mortality formulae work on a population of severely burned children and adults?

Citation: Burns : journal of the International Society for Burn Injuries, Aug 2015, vol. 41, no. 5, p. 935-945 (August 2015)

Author(s): Tsurumi, Amy, Que, Yok-Ai, Yan, Shuangchun, Tompkins, Ronald G, Rahme, Laurence G, Ryan, Colleen M

Abstract: Accurate prediction of mortality following burns is useful as an audit tool, and for providing treatment plan and resource allocation criteria. Common burn formulae (Ryan Score, Abbreviated Burn Severity Index (ABSI), classic and revised Baux) have not been compared with the standard Acute Physiology and Chronic Health Evaluation II (APACHEII) or re-validated in a severely ($\geq 20\%$ total burn surface area) burned population. Furthermore, the revised Baux (R-Baux) has been externally validated thoroughly only once and the pediatric Baux (P-Baux) has yet to be. Using 522 severely burned patients, we show that burn formulae (ABSI, Baux, revised Baux) outperform APACHEII among adults (AUROC increase $p < 0.001$ adults; $p > 0.5$ children). The Ryan Score performs well especially among the most at-risk populations (estimated mortality [90% CI] original versus current study: 33% [26-41%] versus 30.18% [24.25-36.86%] for Ryan Score 2; 87% [78-93%] versus 66.48% [51.31-78.87%] for Ryan Score 3). The R-Baux shows accurate discrimination (AUROC 0.908 [0.869-0.947]) and is well-calibrated. However, the ABSI and P-Baux, although showing high measures of discrimination (AUROC 0.826 [0.737-0.916] and 0.848 [0.758-0.938]) in children, exceedingly overestimates mortality, indicating poor calibration. We highlight challenges in designing and employing scores that are applicable to a wide range of populations. Copyright © 2015 Elsevier Ltd and ISBI. All rights reserved.

Title: Preventing childhood scalds within the home: Overview of systematic reviews and a systematic review of primary studies.

Citation: Burns : journal of the International Society for Burn Injuries, Aug 2015, vol. 41, no. 5, p. 907-924 (August 2015)

Author(s): Zou, Kun, Wynn, Persephone M, Miller, Philip, Hindmarch, Paul, Majsak-Newman, Gosia, Young, Ben, Hayes, Mike, Kendrick, Denise

Abstract: To synthesise and evaluate the evidence of the effectiveness of interventions to prevent scalds in children. An overview of systematic reviews (SR) and a SR of primary studies were performed evaluating interventions to prevent scalds in children. A comprehensive literature search was conducted covering various resources up to October 2012. Experimental and controlled observational studies reporting scald injuries, safety practices and safety equipment use were included. Fourteen systematic reviews and 39 primary studies were included. There is little evidence that interventions are effective in reducing the incidence of scalds in children. More evidence was found that inventions are effective in promoting safe hot tap water temperature, especially when home safety education, home safety checks and discounted or free safety equipment including thermometers and thermostatic mixing valves were provided. No consistent evidence was found for the effectiveness of interventions on the safe handling of hot food or drinks nor improving kitchen safety practices. Education, home safety checks along with thermometers or thermostatic mixing valves should be promoted to reduce tap water scalds. Further research is needed to evaluate the effectiveness of interventions on scald injuries and to disentangle the effects of multifaceted interventions on scald injuries and safety practices. Copyright © 2015 Elsevier Ltd and ISBI. All rights reserved.

Title: The use of split-thickness versus full-thickness skin graft to resurface volar aspect of pediatric burned hands: A systematic review.

Citation: Burns : journal of the International Society for Burn Injuries, Aug 2015, vol. 41, no. 5, p. 890-906 (August 2015)

Author(s): Prasetyono, Theddeus O H, Sadikin, Patricia M, Saputra, Debby K A

Abstract: The aim of this systematic review was to discuss the comparison of split-thickness skin graft (STSG) and full-thickness skin graft (FTSG) use as the treatment for volar digital and palmar burns in children. We conducted PubMed and Cochrane Library searches using keywords "hand injuries", "contracture" and "skin transplantation". The search was limited to studies published from 1st January 1980 until 31st December 2013 and used English language. We selected the studies based on specific inclusion and exclusion criteria. We assessed the quality of the studies by using Newcastle-Ottawa Scale (NOS) for cohort studies. We included eight articles in our systematic review. One of those studies is a prospective cohort study and the others are retrospective cohort studies. Based on combined range of motion (ROM) evaluation in three studies, STSG group yielded poorer functional outcomes than FTSG group. However, there is no study which can fairly show that FTSG was significantly superior to STSG to achieve good functional outcomes. Currently, there is no strong, high-quality evidence to prove that FTSG is superior to STSG to cover pediatric palmar burns. Either FTSG or STSG can be utilized with consideration of several influential factors especially splinting and physiotherapy. Copyright © 2015 Elsevier Ltd and ISBI. All rights reserved.

Title: Reconstruction of post thermal burn defect of face and shoulder

Citation: International Journal of Pharmaceutical Sciences Review and Research, August 2015, vol./is. 33/1(240-243), 0976-044X;0976-044X (01 Aug 2015)

Author(s): Giri S.K., Das S.R., Sahoo S., Nayak B.B.

Language: English

Abstract: Burn is an injury to the body tissue by electricity, chemicals, thermal, steam and radiation. Burn of head and neck is most common due to thermal injury because of unprotected fire places and cooking. Females and children are mostly affected. Burn of head and neck region is more severe because of damage to eyes, ear and lungs. Post thermal burn is difficult to manage due to deep involvement of tissues. So the main aim of post thermal burn is to resurface the post thermal burn defect with different flaps according to the need of defect. Skin grafting replaces skin permanently lost in the burn injury. The appearance of grafted skin may vary; it sometimes blends into nearby healthy skin very well but sometimes a distinct mark is noticeable between the normal and grafted skin.

Full Text:

Available from ProQuest in [International Journal of Pharmaceutical Sciences Review and Research](#)

Title: Pharmacokinetic-pharmacodynamic correlation of imipenem in pediatric burn patients using a bioanalytical liquid chromatographic method

Citation: Brazilian Journal of Pharmaceutical Sciences, August 2015, vol./is. 51/2(305-315), 1984-8250;2175-9790 (18 Aug 2015)

Author(s): Santos S.R.C.J., Sanches-Giraud C., Silva Junior C.V., Gomez D.S.

Language: English

Abstract: A bioanalytical method was developed and applied to quantify the free imipenem concentrations for pharmacokinetics and PK/PD correlation studies of the dose adjustments required to maintain antimicrobial effectiveness in pediatric burn patients. A reverse-phase Supelcosil LC18 column (250 x 4.6 mm 5 micra), binary mobile phase consisting of 0.01 M, pH 7.0 phosphate buffer and acetonitrile (99:1, v/v), flow rate of 0.8 mL/min, was applied. The method showed good absolute recovery (above 90%), good linearity (0.25-100.0 mug/mL, $r^{2}=0.999$), good sensitivity (LLOQ: 0.25 mug/mL; LLOD: 0.12 mug/mL) and acceptable stability. Inter/intraday precision values were 7.3/5.9%, and mean accuracy was 92.9%. A bioanalytical method was applied to quantify free drug concentrations in children with burns. Six pediatric burn patients (median 7.0 years old, 27.5 kg), normal renal function, and 33% total burn surface area were prospectively investigated; inhalation injuries were present in 4/6 (67%) of the patients. Plasma monitoring and PK assessments were performed using a serial blood sample collection for each set, totaling 10 sets. The PK/PD target attained (40%T>MIC) for each minimum inhibitory concentration (MIC: 0.5, 1.0, 2.0, 4.0 mg/L) occurred at a percentage higher than 80% of the sets investigated and 100% after dose adjustment. In conclusion, the purification of plasma samples using an ultrafiltration technique followed by quantification of imipenem plasma

measurements using the LC method is quite simple, useful, and requires small volumes for blood sampling. In addition, a small amount of plasma (0.25 mL) is needed to guarantee drug effectiveness in pediatric burn patients. There is also a low risk of neurotoxicity, which is important because pharmacokinetics are unpredictable in these critical patients with severe hospital infection. Finally, the PK/PD target was attained for imipenem in the control of sepsis in pediatric patients with burns.

Title: Minor burn management: Potions and lotions

Citation: Australian Prescriber, August 2015, vol./is. 38/4(124-127), 0312-8008 (01 Aug 2015)

Author(s): Hyland E.J., Connolly S.M., Fox J.A., Harvey J.G.

Language: English

Abstract: The first aid for burns is to run cold water over the burn for 20 minutes. This is effective for up to three hours after the injury. Assess the affected body surface area using the rule of nines. Consult a burn unit if more than 5% of the total body surface area is burnt in a child or if more than 10% in an adult. Extensive or deep burns and burns to special areas, such as the hands, should be referred. Chemical or electrical burns should also be assessed by a burn unit. For minor burns, antimicrobial dressings are recommended, but oral antibiotics should be avoided unless there are signs of infection. As burns are tetanus prone, check the patient's immunisation status. Burns that become infected or are slow to heal should be discussed with a burn unit. The burn unit can also provide advice if there are uncertainties about how to manage a patient.

Title: Topical clobetasol for the treatment of toxic epidermal necrolysis: Study protocol for a randomized controlled trial

Citation: Trials, August 2015, vol./is. 16/1, 1745-6215 (August 22, 2015)

Author(s): Wilken R., Li C.S., Sharon V.R., Kim K., Patel F.B., Patel F., Maverakis E.

Language: English

Abstract: Background: Toxic epidermal necrolysis (TEN) is a rare systemic allergic drug eruption with high patient mortality. Currently, no established treatments have been shown to be effective for TEN beyond supportive care. Prior studies of systemic corticosteroids have yielded conflicting data, with some showing a possible benefit and others reporting in increased mortality. However, topical steroids have shown promise for treatment of ocular sequelae of TEN, such as scarring and vision loss. We have designed a randomized controlled trial to evaluate topical clobetasol for treatment of the epidermal manifestations of TEN. In addition, we propose genetic studies to characterize the TEN transcriptome and alterations in cutaneous gene expression that might occur following topical steroid treatment. Methods/Design: This split-body randomized, double-blind, placebo-controlled Phase IIa proof-of-concept trial will evaluate the safety and efficacy of once-daily topical clobetasol applied to the skin of patients with TEN. This multicenter trial will recruit a total of 15 patients between the ages of 12 and 85 from the University of California Davis Medical Center and Shriners Hospital for Children inpatient burn units. Designated treatment areas on opposite sides of the body will be treated with blinded clobetasol 0.05 % ointment or control petrolatum ointment daily for 14 days. On day 3 of therapy, a biopsy will be taken from the treated area for genetic studies. The primary study aims will be to establish the safety of topical clobetasol treatment and determine the time to cessation of skin detachment for the control and clobetasol-treated areas. Secondary endpoints will evaluate efficacy using parameters such as time to 90 % re-epithelialization and percentage of affected skin at 0, 3, 6, 9, 12 and 15 days. Genomic DNA and RNA will be obtained from biopsy samples, to characterize the TEN transcriptome and identify changes in gene expression after topical steroid treatment. Discussion: Topical steroids have shown promise for treating ocular complications of TEN, but to date have not been evaluated for cutaneous manifestations of the disease. This trial will investigate clinical and molecular outcomes of topical clobetasol application and hopefully provide insight into the disease pathophysiology. Trial registration: ClinicalTrials.gov NCT02319616. <https://clinicaltrials.gov/ct2/show/NCT02351037>.

Full Text:

Available from *BioMed Central* in [Trials](#)

Available from *National Library of Medicine* in [Trials](#)

Title: Virtual restorative environment therapy as an adjunct to pain control during burn dressing changes: Study protocol for a randomised controlled trial

Citation: *Trials*, August 2015, vol./is. 16/1, 1745-6215 (August 05, 2015)

Author(s): Small C., Stone R., Pilsbury J., Bowden M., Bion J.

Language: English

Abstract: Background: The pain of a severe burn injury is often characterised by intense background pain, coupled with severe exacerbations associated with essential procedures such as dressing changes. The experience of pain is affected by patients' psychological state and can be enhanced by the anxiety, fear and distress caused by environmental and visual inputs. Virtual Reality (VR) distraction has been used with success in areas such as burns, paediatrics and oncology. The underlying principle of VR is that attention is diverted from the painful stimulus by the use of engaging, dynamic 3D visual content and associated auditory stimuli. Functional magnetic resonance imaging (fMRI) studies undertaken during VR distraction from experimental pain have demonstrated enhancement of the descending cortical pain-control system. Methods/Design: The present study will evaluate the feasibility of introducing a novel VR system to the Burns Unit at the Queen Elizabeth Hospital Birmingham for dressing changes: virtual restorative environment therapy (VRET). The study will also explore the system's impact on pain during and after the dressing changes compared to conventional analgesia for ward-based burn dressing changes. A within-subject crossover design will be used to compare the following three conditions: 1. Interactive VRET plus conventional analgesics. Discussion: The study accrual rate is currently slower than predicted by previous audits of admission data. A review of the screening log has found that recruitment has been limited by the nature of burn care, the ability of burn inpatients to provide informed consent and the ability of patients to use the VR equipment. Prior to the introduction of novel interactive technologies for patient use, the characteristics and capabilities of the target population needs to be evaluated, to ensure that the interface devices and simulations are usable.

Full Text:

Available from *BioMed Central* in [Trials](#)

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Mon 14th	Statistics
Tues 22nd	Literature Searching
Weds 30th	Understanding articles

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Mon 19th	Understanding articles
Tues 27th	Statistics



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