8-1-2022

287 Effects of ruxolitinib cream on pruritus in black patients with atopic dermatitis

L. F. Eichenfield

Linda F. Stein Gold

K. K. Brar

Z. C. Chiesa Fuxench

J. I. Silverberg

See next page for additional authors

Authors

L. F. Eichenfield, Linda F. Stein Gold, K. K. Brar, Z. C. Chiesa Fuxench, J. I. Silverberg, M. E. Venturanza, H. Kallender, J. Gao, and J. C. Szepietowski

272

Adiposis dolorosa and deoxycholic acid: An alternative therapeutic method

C Silence[1], SM Rice[2] and AS Kourosh[1,3] *1 Dermatology, Massachusetts General Hospital, Boston, Massachusetts, United States, 2 University of Massachusetts Medical School, Worcester, Massachusetts, United States and 3 Harvard Medical School, Boston, Massachusetts, United States*

Dercum disease, or adiposis dolorosa, is a rare disorder characterized by multiple painful lipomas distributed throughout the body. There are currently no approved treatments for Dercum disease and excision is often not feasible due to tumor burden and extent of disease. Here we present the use of deoxycholic acid (DCA) to reduce the size of lipomas associated with Dercum disease. Ultrasound was used to obtain 3-dimensional measurements of painful lipomas in three patients. Lesions were identified for treatment with patient and radiology input based on larger size, troublesome symptoms, and feasibility of location (e.g. accessibility for injection and avoidance of critical structures). Controls were chosen based on similar criteria and symmetry within the body (e.g. lesions of similar size and pain in left vs right forearm). Imaging was repeated, tracking changes in the size of treated and untreated lipomas and volumes were calculated. The treated lesions had a 34% (patient 1), 68% (patient 2), 41% (patient 2) and 30% (patient 3) decrease in volume, while the control lesions had a 111% (patient 1), 22% (patient 2), 93% (patient 3) increase in volume. The results show that all lipomas treated with DCA had a reduction in volume while untreated controls increased in volume. Interestingly, repeat imaging of the treated lipoma in patient 3 revealed an anechoic center, possibly highlighting cell death of adipocytes in response to injected DCA. DCA is naturally found in the body and assists with emulsifying and solubilizing fats. While initially used as a treatment method for submental fat, it may be a possible alternative treatment modality for individuals with extensive painful lipomas who are not candidates for surgical excision. Additional studies should be conducted to determine appropriate dosing and side effect profile.

273

Long-term efficacy and safety of investigational autologous gene-corrected skin sheets (EB-101) for recessive dystrophic epidermolysis bullosa (RDEB)

J So[1], V Iwummadu[1,2], J Nazaroff[1], I Bailey[1], D McCarthy[2], M Mirza[2], J Tang[1] and A Chiou[1] *1 Department of Dermatology, Stanford University School of Medicine, Stanford, California, United States and 2 Abeona Therapeutics Inc, Cleveland, Ohio, United States*

RDEB is a rare, severe dermatosis caused by mutations in type VII collagen (C7), a major component of structural attachments between the basement membrane and dermis. Manifestations include large, chronic wounds and blisters, increased squamous cell carcinoma (SCC) and early death. Currently, there are no approved therapies. We report long-term outcomes of a Phase 1/2a trial to treat large, chronic RDEB wounds with 35cm^2 autologous skin sheets (EB-101) gene-corrected with a retroviral vector (RV). 7 patients received 42 total sheets and were monitored for 4-8 years (mean 5.7). At last follow-up, 5 patients were alive. 1 died from SCC at a non-grafted site and 1 died from infection due to underlying disease; deaths were considered unrelated to EB-101. We saw long-term improvements in symptoms: 74% (31/42) of treated sites had ≥50% wound healing and 60% (25/42) had ≥75% wound healing. Subjects also noted improvements in quality of life including no pain or itch at 86% (36/42) of treated sites compared to no pain at 42% (19/42) and no itch at 38% (16/42) of sites prior to treatment, and improved skin durability at 73% (31/42) and decreased blistering at 71% (30/42) of treated sites compared to baseline. Regarding safety, no SCCs on grafted sites or replication-competent RV infections were identified. 14% (6/42) of sites developed infections—all within 1 year of grafting—that self-resolved or resolved with antibiotics. No subjects developed long-term systemic autoimmunity to EB-101 as defined by the presence of anti-C7 cytotoxic T cells, increased blistering or persistent circulating anti-C7 antibodies (Ab). One patient had tissue-bound anti-C7 Ab at treated sites past year 1 but did not exhibit signs of systemic autoimmunity, suggesting this response remained localized. Thus, EB-101 is a safe, effective treatment for large, chronic RDEB wounds in this Phase 1/2a trial. A confirmatory Phase 3 trial is ongoing.

274

Complete clearance of actinic keratosis observed from day 8 of tirbanibulin treatment, along with good tolerability: post-hoc analysis of two Phase 3 studies

B Berman[1], G Gupta[2], L Padullés[3] and F Hernández[4] *1 Department of Dermatology and Cutaneous Surgery, University of Miami Miller School of Medicine, Miami, Florida, United States, 2 NHS Lothian, Edinburgh, United Kingdom, 3 Almirall, Barcelona, Spain and 4 Almirall, Sant Feliu de Llobregat, Spain*

Tirbanibulin 1% ointment was approved for actinic keratosis (AK) of face or scalp based on two Phase 3 trials. Pooled rates of complete (100%) clearance (CC) and partial (≥75%) clearance (PC) in these trials were reported for Day (D) 57 of treatment, being 49% and 72% respectively. We present *post-hoc* efficacy and safety analyses evaluating earlier time points.

Participants (N=702) in the Phase 3 trials had 4-8 clinically visible AK lesions (25 cm^2 area); 353 were randomized to tirbanibulin (self-applied once daily, 5 consecutive days). At study visits (D8-D15-D29-D57) efficacy was assessed through CC/PC, and safety through local skin reactions (LSR) including erythema, flaking/scaling, crusting, swelling, vesiculation/pustulation and erosion/ulceration. Each LSR was scored between 0-3 (absent-severe). Individual scores were added resulting in a LSR composite score between 0-18. The maximum LSR composite scores reached up to D57 were averaged for participants achieving CC at each visit.

CC rate was 13.4% at D8, increasing during treatment to 24.7%(D15), 36.4%(D29) and 49.3%(D57). PC rate was 20.2% at D8 and gradually rose to 41.2%(D15), 62.8%(D29) and 72.2%(D57). Among patients reaching CC at each visit, baseline characteristics were similar except for a trend to higher percentage of face treatments in those achieving CC at D8-D15 vs. D29-D57. The mean (±standard deviation) maximum LSR composite score reached during the follow-up was similarly low regardless if CC was obtained at D8(4.7±1.8), D15(4.8±2.2), D29(4.9±2.1) or D57(4.9±2.1).

Although the highest CC rate with tirbanibulin was observed at D57, this analysis confirms that AK patients can show much earlier responses (from D8). These were not accompanied by an increase in the severity of LSRs, thus showing a similarly good tolerability as compared to later responders.

275

Effects of ruxolitinib cream on sleep and quality of life over 52 weeks in black patients with atopic dermatitis

LF Eichenfield[7], LF Stein Gold[1], KK Brar[2], ZC Chiesa Fuxench[3], JI Silverberg[4], ME Venturanza[5], H Kallender[5], J Gao[5] and E Simpson[6] *1 Henry Ford Health System, Detroit, Michigan, United States, 2 New York Grossman School of Medicine, New York, New York, United States, 3 University of Pennsylvania, Philadelphia, Pennsylvania, United States, 4 George Washington University, Washington, District of Columbia, United States, 5 Incyte Corporation, Wilmington, Delaware, United States, 6 Oregon Health & Science University, Portland, Oregon, United States and 7 University of California San Diego, San Diego, California, United States*

Atopic dermatitis (AD) is an inflammatory skin disease with phenotypic differences across race and can affect sleep and quality of life (QoL). In 2 phase 3 studies of identical design (TRuE-AD1/TRuE-AD2), patients (pts; ≥12 y with AD for ≥2 y; Investigator's Global Assessment score 2/3; 3%–20% affected body surface area) were randomized (2:2:1) to twice-daily 0.75% or 1.5% ruxolitinib (RUX; Janus kinase [JAK]1/JAK2 inhibitor) cream or vehicle for 8 wk (continuous treatment), followed by a long-term safety period (LTS; as-needed treatment) up to Wk 52. Pts randomized to RUX cream remained on their regimen during the LTS; pts on vehicle were rerandomized to either RUX cream strength. For Black pts who were initially randomized to the 0.75% RUX cream/1.5% RUX cream/vehicle to 0.75% RUX cream/vehicle to 1.5% RUX cream groups and continued in the LTS (n=91/97/25/22), sleep-related impairment and sleep disturbance scores per Patient-Reported Outcomes Measurement Information System at baseline (BL) were 16.3/16.4/15.0/17.5 and 18.9/19.7/17.9/19.8, respectively. Scores had decreased (less impairment) at LTS start in the RUX cream groups (Wk 8; 14.2/14.7/16.1/15.5 and 16.7/17.5/19.0/19.4) and were below BL at Wk 52 in all groups (14.3/14.8/13.9/14.4 and 18.0/18.0/17.4/16.3). Dermatology Life Quality Index (DLQI) scores were decreased at Wk 8 (mean change from BL, −7.4/−6.6/−3.8/−4.8); decreased scores were maintained to Wk 52 (−7.1/−6.5/−5.6/−8.8). Results were similar for children's DLQI (Wk 8, −4.0/−6.9/−4.0/−3.0 [n=12/9/1/3]; Wk 52, −5.6/−11.6/−12.0/−7.3 [n=9/7/1/4]). In summary, sleep and QoL improved with RUX cream; improvements were maintained for 44 wk with as-needed use in Black pts.

276

LLLT and Minoxidil combination treatment in androgenetic alopecia: A review of the literature

MA Kaiser[1], SM Almeida[1], N Issa[2], M Rodriguez[1], NT Issa[1] and JJ Jimenez[1] *1 Dr. Phillip Frost Department of Dermatology and Cutaneous Surgery, University of Miami Miller School of Medicine, Miami, Florida, University of Miami, Coral Gables, Florida, United States and 2 St. George's University School of Medicine, West Indies, Grenada*

Purpose: Low Level Light Therapy (LLLT) is a promising therapy for androgenetic alopecia (AGA). We analyzed randomized clinical trials (RCTs) evaluating the efficacy of combined therapy with LLLT and topical minoxidil. Methods: A literature search within PubMed identified RCTs evaluating hair regrowth following LLLT and minoxidil. Selection criteria were 600−1,100 nm wavelengths (optical window at red and near-infrared wavelengths), treatment time ≥16 weeks, and objective evaluation for hair regrowth. Results: Five RCTs compared LLLT with topical minoxidil (2% or 5%) to either no treatment, 5% minoxidil treatment, or LLLT treatment. One study found that combination therapy of LLLT and 5% minoxidil showed greater improvement of hair density and diameter than LLLT or 5% minoxidil monotherapy. Another found combination LLLT with 2% minoxidil induced hair regrowth equivalent to 5% minoxidil. Similarly, another study described LLLT with 5% minoxidil and 5% minoxidil alone to increase the total number of hairs with no statistical difference between the two groups. One trial found that combination group only showed statistically significant increase in hair regrowth in the first 2 months, but all groups showed increased hair growth at 4 months. The last study found a statistically significant increase in hair density of the combined LLLT and 5% minoxidil solution compared to minoxidil with sham device. Discussion: The studies describe either superiority of combination treatment or equivalence of combination therapy to minoxidil monotherapy for AGA. Early outcomes appear to support the superiority of combination therapy, but this advantage wanes at the end of the study periods. These findings suggest that more rigorous clinical trials with increased sample size and stratification of alopecia by severity are necessary to establish whether combination therapy is superior.

277

Treatment of aphthous ulcers with montelukast

AS Hwang[1], EH Campbell[2] and JC Sartori-Valinotti[2] *1 Mayo Clinic School of Medicine - Scottsdale Campus, Scottsdale, Arizona, United States and 2 Mayo Clinic Minnesota, Rochester, Minnesota, United States*

Aphthous ulcers are the most prevalent oral mucosal lesions, yet treatment is challenging. There is evidence that oral montelukast is efficacious in treating aphthous ulcers. A randomized placebo-controlled trial comparing montelukast against prednisone for recurrent aphthous stomatitis demonstrated montelukast has superior efficacy compared with placebo, decreased efficacy compared with prednisone, but decreased adverse effects compared to prednisone. Our single-center, retrospective study identified subjects with a minimum of 2 distinct encounters using the search term:(Singular or montelukast) AND (aphthous ulcers). 16 subjects met inclusion criteria and were found to have follow up after treatment. Over half (56.3%) of patients had positive clinical responses, measured by provider assessment. Among these, 44.4% had reduction in number of ulcers, 22.2% had decrease in frequency of ulcer eruptions, and remainder had unspecified improvement. Mean dosing of montelukast was 9 mg daily, with a range of 4-10 mg. 4-5 mg was prescribed to pediatric patients;10 mg for all others aged 15 and older. While 10% of patients in the aforementioned RCT reported side effect of diarrhea from montelukast, none in our study reported any adverse effects, despite a mean therapy duration of 455.4 days (measured by encounter dates). We were unable to determine an accurate time to response due to longer durations between encounters without specific documentation of time to response. The aforementioned RCT had an active treatment duration of 2 months. Our study demonstrates a longer lasting efficacy of montelukast, as response was measured at the last related encounter. Our study further strengthens support for montelukast as a safe and effective treatment option for recalcitrant aphthous ulcers with reduction in both number and frequency of ulcers. Montelukast has minimal adverse effects, even with long treatment duration, compared with other systemic medications used for management. Further studies to determine the recurrence rate after cessation of montelukast are warranted.