GLOBAL VITILIGO FOUNDATION

MARCH 2022

2022 ANNUAL SCIENTIFIC SYMPOSIUM

Abstract Booklet

BOSTON, MA USA

Thursday, March 24, 2022

CO-CHAIRS

Samia Esmat, MD; Davinder Parsad, MD

INVITED ABSTRACTS

No. 89
Mental Health and Psychosocial Burden Among Patients Living With Vitiligo: Findings From the Global VALIANT Study

No. 94
Vitiligo Adverse Events and Associated Medications as Reported in the Us Food and Drug Administration's Adverse Event Reporting System From 2016 to 2021

No. 99
Differential Diagnosis of Hypopigmentation Disorders in Children: A Retrospective Study of 1,785 Children

No. 100
RECELL Autologous Cell Harvesting Device: A Review of the Science of Autologous Skin Cell Suspension and Clinical Protocol Aimed in Establishing Safety and Effectiveness for Repigmentation of Stable Vitiligo Lesions

No. 101
The Voice Registry: A Vitiligo Database – Our First Year

NO. 89 MENTAL HEALTH AND PSYCHOSOCIAL BURDEN AMONG PATIENTS LIVING WITH VITILIGO: FINDINGS FROM THE GLOBAL VALIANT STUDY

SUBJECT CATEGORY: EPIDEMIOLOGY

Presenting Author: Kristen Bibeau, PhD, MSPH | Incyte Corporation | United States of America

Disclosures: Kristen Bibeau is an employee and shareholder of Incyte Corporation.

SUMMARY

The **V**itiligo **a**nd **L**ife **I**mpact **A**mong I**nt**ernational Communities (VALIANT) study recruited 3541 adult patients (median age, 38 years) from 17 countries who self-reported a vitiligo diagnosis and interviewed them regarding their quality of life (QoL). Almost half of patients (46.0%) said that managing their vitiligo on a daily basis was burdensome. Mean (SD) global Vitiligo Impact Patient scale score was 27.3 (15.6), with the highest scores (ie, more burden) in India (40.2 [14.1]) and South Africa (32.7 [18.8]). Clothing choices and attending social activities were among the most stressful daily activities for patients. Although 24.5% of patients had depression diagnoses, 55.0% had symptoms consistent with moderate to severe depression per the Patient Health Questionnaire-9. Rates of depressive symptoms were highest among patients with >5% affected body surface area, darker skin types, and facial involvement. These findings highlight unmet needs in understanding the QoL burden of patients living with vitiligo globally.

ADDITIONAL AUTHORS

Iltefat H. Hamzavi, MD, Henry Ford Medical Center, Detroit, MI, USA; Khaled Ezzedine, MD, PhD, Henri Mondor University Hospital and Université Paris-Est Créteil Val de Marne, Paris, France; Nanja van Geel, MD, PhD, Ghent University Hospital, Ghent, Belgium; Pearl Grimes, MD, Vitiligo & Pigmentation Institute of Southern California, Los Angeles, CA, USA; Jackie Gardner, BA, Vitiligo Support International, Lynchburg, VA, USA; Christine LaFiura, BA, Envision Health Partners LLC, Riverside, CT, USA; Anouk Lindley, MBA, Incyte Corporation, Wilmington, DE, USA

IHH has served as an advisory board member for AbbVie; a consultant for Boehringer Ingelheim, Galderma Laboratories LP, Incyte Corporation, Pfizer, and UCB; a principal investigator for Avita, Bayer, Estée Lauder, Ferndale Laboratories, Incyte Corporation, Lenicura, L'Oréal, Pfizer, and Unigen; a subinvestigator for Arcutis; president of the HS Foundation; and a board member of the Global Vitiligo Foundation.

KE is a consultant for AbbVie, Incyte Corporation, La Roche-Posay, Pfizer, Pierre Fabre, Sanofi, and Viela Bio.

NvG is a consultant and/or investigator for AbbVie, Incyte Corporation, Pfizer, and Sun Pharma; and is chair of the Vitiligo Task Force for the European Academy of Dermatology and Venereology (EADV).

PG has served as a consultant for Aclaris Therapeutics, Clarify Medical, DermaForce, Incyte Corporation, Proctor & Gamble, and Versicolor Technologies; and a principal investigator for Aclaris Therapeutics, Allergan/SkinMedica, Clinuvel Pharmaceuticals, Incyte Corporation, Johnson & Johnson, L'Oréal, Merz Pharma, Pfizer, Thync Global Inc., and VT Cosmetics.

JG has served as a consultant for AbbVie, Avita Medical, Concert Pharmaceuticals, Incyte Corporation, Mitsubishi Tanabe Pharma Corporation, and Pfizer.

CL is a co-owner of Envision Health Partners, who received funding for conducting this project from Incyte Corporation.

AL is an employee and shareholder of Incyte Corporation.

INTRODUCTION

Vitiligo is a chronic autoimmune disease characterized by the destruction of melanocytes, resulting in pale or white patches of skin.

OBJECTIVES

The population-based **V**itiligo **a**nd **L**ife **I**mpact **A**mong I**nt**ernational Communities (VALIANT) study sought to understand the impact and burden of vitiligo on quality of life (QoL) from the patient perspective.

METHODS

Participants aged ≥18 years who self-reported a clinical vitiligo diagnosis were recruited via an online panel and answered questions regarding their mental health, psychosocial burden, and behavior in professional and social situations. The survey included patients from 17

countries grouped into geographic regions as follows: Africa/Middle East (Egypt, Saudi Arabia, South Africa), Asia (China, India, Japan, Philippines, Thailand), Australia, Brazil, Canada, Europe (France, Germany, Italy, Spain, United Kingdom), and the United States.

RESULTS

Of 3541 patients, 54.6% were male and 59.2% had Fitzpatrick skin phototypes I–III (ie, fairer skin). Median (range) age at the time of the survey was 38 (18–95) years. Almost half of patients (46.0%) said that managing their vitiligo on a daily basis was burdensome, and 47.8% reported telling themselves that "life would be very different without vitiligo," per the Vitiligo Impact Patient scale (VIPs). Nearly half (46.6%) of patients said that "no one understands what it's like to live with vitiligo," with patients in Africa/Middle East (60.7%) feeling the most impact. Mean (SD) global VIPs score was 27.3 (15.6), with India (40.2 [14.1]), South Africa (32.7 [18.8]), Brazil (29.7 [17.1]), Thailand (29.6 [15.4]), the United States (29.4 [12.8]), and Germany (29.3 [14.8]) reporting the highest scores (ie, more burden). Most (59.4%) patients reported often hiding their vitiligo; rates of hiding vitiligo were significantly (*P*5% affected body surface area (BSA; as assessed by Self Assessment Vitiligo Extent Score; 72.0% vs 47.6% for BSA of 1%–5% and 34.5% for BSA

CONCLUSION

In summary, these findings highlight an unmet need in understanding the QoL burden of patients living with vitiligo globally. Patients alter their behavior, experience high burden, and have symptoms consistent with depression, which may be undiagnosed.

NO. 94 VITILIGO ADVERSE EVENTS AND ASSOCIATED MEDICATIONS AS REPORTED IN THE US FOOD AND DRUG ADMINISTRATION'S ADVERSE EVENT REPORTING SYSTEM FROM 2016 TO 2021

SUBJECT CATEGORY: THERAPY

Presenting Author: Christine Learned, BA | Tufts Medical Center | United States of America

Disclosures: No relevant disclosures

SUMMARY

This study supports the association between these immune modulating therapies and vitiligo and serves as a reminder for providers to consider this potential adverse effect as use of these therapies continues to grow. The dermatologist serves an important role in diagnosing and managing cutaneous toxicities from systemic medications.

ADDITIONAL AUTHORS

Stephanie Cohen, MD; Sara Alsukait, MBBS; David Rosmarin, MD.

INTRODUCTION

Vitiligo is a cutaneous depigmenting autoimmune disorder with the potential to cause significant impairment of quality of life. The pathophysiology of vitiligo is complex and can be genetic, immunological, and/or environmental in nature. Medications associated with vitiligo include imiquimod, interferons, and more recently anti-PD-1 agents. Systematic reviews of drug-associated vitiligo in the US are currently lacking from the literature.

OBJECTIVES

We aim to evaluate trends in vitiligo adverse event reports over the last 5 years, as reported to the FDA Adverse Event Reporting System (FAERS).

METHODS

We compiled all reports of vitiligo adverse events from the FDA Adverse Event Reporting System (FAERS) and their associated medications, from the years 2016-2021.

RESULTS

The medications most commonly associated with vitiligo adverse events were nivolumab, pembrolizumab, ipilimumab, and adalimumab, with 138, 110, 82, and 42 reports respectively. Imiquimod received only 5 reports since 2016, while all subtypes of interferons received a combined total of 13 reports since 2016.

CONCLUSION

Our results indicate that immune checkpoint inhibitors and anti-TNF-a agents remain some of the most commonly reported medications to be associated with vitiligo. The data supports the association between

immune-modulating therapies and vitiligo and highlights the importance of the immunologic pathogenesis in vitiligo.

NO. 99 DIFFERENTIAL DIAGNOSIS OF HYPOPIGMENTATION DISORDERS IN CHILDREN: A RETROSPECTIVE STUDY OF 1,785 CHILDREN

SUBJECT CATEGORY: EPIDEMIOLOGY

Presenting Author: Hyun Jeong Ju, MD | St. Vincent's Hospital, College of Medicine, Catholic University of Korea | Republic of Korea

Disclosures: No relevant disclosures

SUMMARY

The hypopigmentation disorders in children can be categorized into age of presentation: since birth, in early, or later childhood.

Being aware of prevalent diseases prevalent in each age group, characteristic clinical and morphological findings are used to distinguish the disorders further.

Since hypopigmentation disorders are sometimes tricky in the early stages, clinical approach based on the typical age of onset is proposed.

ADDITIONAL AUTHORS

Jung Min Bae, MD, Phd, St. Vincent's Hospital, College of Medicine, Catholic University of Korea

INTRODUCTION

Hypopigmentation disorders in childhood can be caused by various congenital and acquired diseases and has a differential diagnosis different from that of adults. Hypopigmented spots in children are of a great concern to children themselves and their parents. However, differential diagnosis is often tricky in early stages leading to delayed diagnosis.

OBJECTIVES

We aimed to investigate the frequency of hypopigmentation and depigmentation disorders of childhood according to age distribution.

METHODS

A total of 1,785 patients aged under 12 years who were examined at the Vitiligo and Hypopigmentation Disorder Clinic in four tertiary referral hospitals from January 2015 to June 2020 were included. The electronic medical records, pathology reports, and clinical photographs were retrospectively reviewed. The most frequent hypopigmentation disorders by age onset were explored following age groups.

RESULTS

The most common hypopigmentation disorder during childhood in total was pityriasis alba (34.1%) followed by vitiligo (26.4%), nevus depigmentosus (21.5%), post-inflammatory hypopigmentation (5.2%), lichen striatus (3.6%), tinea versicolor (2.0%), nevus anemicus (1.2%), and others. According to the age distribution, nevus depigmentosus was the most common disease in children under 1 year old (n = 316). In the 1-10 years age group (n = 1,310), pityriasis alba and vitiligo were the two most prevalent diseases. Vitiligo was the most frequent disease in children over 10 years of age (n = 159).

CONCLUSION

A clinical approach based on the typical age of onset provides a quick guide to differential diagnosis of childhood hypopigmentation disorders. In each category, clinical findings comprising the extent of lesion, sites of involvement, degree of pigment loss, and morphological findings are used to distinguish the disorders further.

NO. 100 RECELL AUTOLOGOUS CELL HARVESTING DEVICE: A REVIEW OF THE SCIENCE OF AUTOLOGOUS SKIN CELL SUSPENSION AND CLINICAL PROTOCOL AIMED IN ESTABLISHING SAFETY AND EFFECTIVENESS FOR REPIGMENTATION OF STABLE VITILIGO LESIONS

SUBJECT CATEGORY: THERAPY

Presenting Author: Katie Bush, PhD | AVITA Medical | United States of America

Disclosures: AVITA Medical employee

SUMMARY

Autologous cell suspension prepared using the RECELL System preserves melanocytes which is important for restoring natural pigmentation to the recipient area. This technology has the potential to be utilized in the office setting without specialized laboratory equipment, expanding the number of centers that can offer cellular transplantation for patients with stable vitiligo. Currently use of RECELL System is limited to Investigational Use and clinical evaluation is underway.

ADDITIONAL AUTHORS

Amelia Hopkin, PhD

Elizabeth Kirshner, BS

Andrew Quick, MS

All authors are employees of AVITA Medical

INTRODUCTION

Cellular transplantation techniques offer the potential for rapid repigmentation outcomes for patients with stable vitiligo through transfer of healthy noncultured autologous melanocytes and keratinocytes to areas of depigmented macules where functional melanocytes are absent. Although effective, current transplantation strategies (i.e., melanocyte-keratinocyte transfer, suction blisters, punch blisters) require specialized equipment and processes and can take a significant amount of time to prepare the cells/tissue to transplant.

The RECELL® Autologous Cell Harvesting Device enables the preparation of autologous skin cell suspension (ASCS) from a small skin sample in the office setting without specialized equipment or reagents. During the management of partial-thickness burns using this technology, it has been observed that the resultant healing is accompanied by repigmentation of the regenerated epidermis.

OBJECTIVES

The objective of this study is to report on scientific characterization data for ASCS prepared using the RECELL® System and present a clinical study protocol to establish safety and effectiveness for repigmentation of stable vitiligo lesions.

METHODS

Scientific characterization work includes preparation of cellular suspension and evaluation of phenotypes, cellular density harvested, viability, apoptotic activity, and aggregates.

In order to evaluate the safety and effectiveness of treatment with ASCS prepared using the device, a prospective blinded within-subject randomized controlled clinical trial was developed (NCT04271501).

RESULTS

Scientific Data

Cell suspension prepared by disaggregation of a thin skin sample, which includes the entire epidermis and top region of the papillary dermis (0.006-0.008”), contains a high proportion of single cells with high viability. The population of cells harvested consists of a mixed population of melanocytes, keratinocytes, and fibroblasts.

Clinical Protocol

A study was developed to understand the proportion of responders for RECELL-treated areas versus Control treated areas at Week 24. Responders are defined as study areas achieving ≥80% repigmentation. Patients >18 years of age with stable depigmented lesions were included in the trial. Two study areas were randomized with the treatment area receiving cellular suspension application following ablation (de-epithelialization) of the depigmented area, followed by targeted phototherapy using NB-UVB. A control area received only NB-UVB. Additional endpoints include investigator reported

repigmentation, patient reported outcomes, study area VASI scores, and repigmentation durability at Week 52. Safety will be evaluated in terms of healing and scar outcomes and treatment-related adverse events.

CONCLUSION

Autologous skin cell suspension can be prepared in the office setting in 30 minutes and consists of a viable population of melanocytes for immediate transfer to a prepared area of stable depigmentation. A clinical trial is underway (enrollment completed Dec 2021) to evaluate safety and effectiveness of this technology for the treatment of vitiligo.

NO. 101 THE VOICE REGISTRY: A VITILIGO DATABASE – OUR FIRST YEAR

SUBJECT CATEGORY: EPIDEMIOLOGY

Presenting Author: Libin Mathew, MBBS, MRCP, BSc | St John's Institute of Dermatology, London | United Kingdom

Disclosures: No relevant disclosures

SUMMARY

The aim of our presentation is to highlight the value of an electronic vitiligo patient database, especially its value in being able to conduct research and continuously generate upto date data that can be analysed. Our goal is to expand the database across the U.K into other vitiligo centres and thus generate a national database. We will be able to assess epidemiology, disease associations, and response to treatments to name a few. The potential for a national database to enhance research within vitiligo in the U.K is truly exciting.

ADDITIONAL AUTHORS

John Ferguson, MB ChB, MRCP (derm)

INTRODUCTION

Vitiligo is a depigmenting skin disorder, characterised by the loss or destruction of melanocytes resulting in the loss of pigment in affected areas of skin. It is the commonest depigmenting disorder with a worldwide prevalence estimated between 0.5% - 2% amongst all ages. The treatment of vitiligo continues to prove challenging and remains largely unsatisfactory. The psychological effect and the impact on reducing quality of life is well recognised. In 2017 a tertiary vitiligo service was set up at Guy's Hospital, London.

OBJECTIVES

The opportunity to learn more about vitiligo and its related conditions to better understand its causes, impact and treatment was recognised. The vitiligo registry and bio-resource (VOICE) project was established in 2020. A central database to collect patient data was created with ICARSIS software with a small grant from the British Skin Foundation. Ethics approval was obtained through the virtual system. The registry records information on demographics, history of vitiligo onset, co-morbidities, family history, previous and current treatments, other medications, investigations and the clinical history.

METHODS

Prior to each appointment, patients are requested to fill out questionnaires related to their mental health (PHQ9, GAD7), the stigma of vitiligo and the impact on their quality of life (vitiligo impact patient scale (VIPs), DLQI). These scores are also recorded within the database at each visit. The vitiligo extent score (VES) is also completed at each visit with the use of a template that allows us to match the patient's vitiligo extent to various scoring templates to generate a VES score. With each visit and VES score recorded, it is possible to generate data demonstrating the effectiveness of the different treatments.

RESULTS

Thus far 423 patients have been registered within the database, with an age range of 6 – 85. 44.7% are male with 55.3% female. The most commonly prescribed treatments are tacrolimus 0.1% ointment (46%), followed by narrowband UVB (nb-UVB) phototherapy (36%) and topical mometasone furoate 0.1% ointment (33%). As we are continuing to register patients into the registry each week, the most up to date data will be presented at the symposium.

CONCLUSION

We wish to present the data that we have been able to collect thus far through the registry, in particular focussing

on the effectiveness of nb-UVB phototherapy demonstrated within our patient cohort. We hope by demonstrating the usefulness of our database to encourage other centres across the country to participate in the study and enter their vitiligo cohort into the database enabling us to create a national database that enhances research within vitiligo in the U.K. Future projects being planned includes deep phenotyping and whole excime sequencing.

POSTER ABSTRACTS

NO. 86 ASSESSING PARTICIPANTS' EXPERIENCES WITH VITILIGO FROM QUALITATIVE INTERVIEWS

SUBJECT CATEGORY: EPIDEMIOLOGY

Presenting Author: Amit Pandya, MD | Palo Alto Foundation Medical Group | United States of America

Disclosures: Amit G. Pandya has served as an investigator for Aclaris Therapeutics, Immune Tolerance Network, Incyte Corporation, and Pfizer; a consultant for AbbVie, Arcutis, Avita Medical, Chromaderm, Immune Tolerance Network, Incyte Corporation, Pfizer, TWi, Viela Bio, and Villaris; and holds stock options for Tara Medical and Zerigo Health.

SUMMARY

Semi-structured qualitative interviews of participants (Study 1; n=36) from TRuE-V1 and TRuE-V2 clinical trials of ruxolitinib cream and participants identified by a recruiting firm (Study 2; n=23) were conducted to evaluate the burden of vitiligo and establish treatment goals. In Study 1, facial and total body vitiligo had emotional, social, and physical impacts. Participants reported ≥50% and ≥25% reductions on the facial and total Vitiligo Area Scoring Indexes (VASI), respectively, and ≥3 on the Vitiligo Noticeability Scale (VNS) as thresholds of clinically meaningful improvement. Most Study 2 participants (83%) reported that the noticeability of their facial vitiligo affected their behavior, and 44% reported emotional and mental impacts. Many (57%) reported ≥50% of facial repigmentation as the smallest meaningful improvement. Results indicate that facial and total body vitiligo affects participants emotionally, socially, and physically, causing them to alter their behavior. Improvements in both face and total body were important to participants.

ADDITIONAL AUTHORS

Theresa Amoloja, MPH,

Incyte Corporation, Wilmington, DE, USA.

Kristen Bibeau, PhD, MSPH,

Incyte Corporation, Wilmington, DE, USA.

Dana DiBenedetti, PhD,

RTI Health Solutions, Patient-Centered Outcomes Assessment Group, Research Triangle Park, NC, USA.

Katherine Kosa, MS,

RTI Health Solutions, Patient-Centered Outcomes Assessment Group, Research Triangle Park, NC, USA.

Kathleen Butler, MD,

Incyte Corporation, Wilmington, DE, USA.

Deanna Kornacki, PhD,

Incyte Corporation, Wilmington, DE, USA.

Khaled Ezzedine, MD, PhD

Henri Mondor University Hospital and Université Paris-Est Créteil Val de Marne, Paris, France.

Coauthor Disclosures:

Theresa Amoloja, Kristen Bibeau, Kathleen Butler, and Deanna Kornacki are employees and shareholders of Incyte Corporation.

Dana DiBenedetti and Katherine Kosa are employees of RTI Health Solutions, which was contracted by Incyte Corporation to conduct Study 2.

Khaled Ezzedine is a consultant for AbbVie, Incyte Corporation, La Roche-Posay, Pfizer, Pierre Fabre, Sanofi, and Viela Bio.

INTRODUCTION

Vitiligo is a chronic autoimmune disease leading to skin depigmentation.

OBJECTIVES

This analysis aimed to evaluate the burden of facial and total body vitiligo and establish treatment goals using data from (1) semi-structured qualitative exit interviews (conducted by IQVIA) of adolescents and adults with vitiligo from two phase 3, double-blind, randomized, vehicle-controlled studies of twice-daily 1.5% ruxolitinib cream (TRuE-V1 [NCT04052425] and TRuE-V2 [NCT04057573]; Study 1 hereafter) and (2) semi-structured qualitative interviews with adolescents and adults with facial vitiligo identified by a recruiting firm via their proprietary database, support groups, and social media advertising (Study 2 hereafter).

METHODS

In Study 1, meaningful change (yes/no) was assessed as a function of the facial and total Vitiligo Area Scoring Index (F-VASI and T-VASI, respectively) and Vitiligo Noticeability

Scale (VNS; 5-point scale) at baseline to Week 24. Additionally, Study 2 participants identified by a recruiting firm were interviewed regarding their experience with facial vitiligo and the smallest facial repigmentation improvement considered meaningful. Transcripts were analyzed using text-based and standard qualitative approaches.

RESULTS

Overall, 36 of 652 participants in Study 1 completed exit interviews (mean [range] age, 38.2 [12–80] years), and 23 participants in Study 2 were interviewed (mean [range] age, 42.4 [15–66] years). Study 1 participants described vitiligo (facial/total body) as having emotional, social, and physical impacts, with social inhibition (66%/61%), sun sensitivity (31%/56%), and reduced self-esteem/confidence (63%/56%) being the most burdensome. Most participants (83%) indicated that facial improvement was equally (36%) or more (47%) important than total body improvement, with the latter primarily due to the visibility and difficulty of covering the face. A ≥50% F-VASI reduction was the threshold Study 1 participants most consistently reported as a meaningful change at Week 24, with 83% reporting 50%–74% F-VASI reduction as meaningful and 93% reporting ≥75% as meaningful. For T-VASI, ≥25% reduction was the threshold reported as meaningful change, with 83% reporting reductions of both 25%–49% and 50%–74% as meaningful. A facial VNS score ≥3 (slightly less noticeable to no longer noticeable) at Week 24 was the threshold of facial and total body improvement participants considered clinically meaningful. Most Study 2 participants (83%) reported that the noticeability of their facial vitiligo affected their behavior. Nearly half (44%) reported that vitiligo affects them emotionally (eg, feeling self-conscious, uncomfortable) and mentally (eg, feeling anxious, depressed). Some participants (39%) reported that facial vitiligo affected their social life, and 22% reported they wear skin protection on affected areas. Topical prescription medication (52%) and light therapy (48%) were the most commonly used treatments. At the time of the interview, 74% of participants were not receiving treatment. Overall, 57% reported ≥50% of facial repigmentation would be the smallest meaningful improvement to them.

CONCLUSION

Results from these qualitative interviews indicate that facial and total body vitiligo affects participants emotionally, socially, and physically, causing them to alter their behavior in several ways. Participants reported that improvements in both face and total body were important. Participants considered ≥50% facial and ≥25% total body repigmentation to be clinically meaningful.

NO. 87 ASSESSMENT OF MEASUREMENT PROPERTIES OF THE FACIAL AND TOTAL VITILIGO AREA SCORING INDEX INSTRUMENTS IN THE TOPICAL RUXOLITINIB EVALUATION IN VITILIGO (TRUE-V) PHASE 3 STUDIES

SUBJECT CATEGORY: EPIDEMIOLOGY

Presenting Author: Kristen Bibeau, PhD, MSPH | Incyte Corporation | United States of America

Disclosures: KB is an employee and shareholder of Incyte Corporation.

SUMMARY

This study aimed to evaluate the psychometric properties of facial and total VASI (F-VASI [range, 0–3] and T-VASI [range, 0–100], respectively) using data from two phase 3 studies of ruxolitinib cream in patients with vitiligo (n=652). Among stable patients per Patient Global Impression of Change–Vitiligo (PaGIC-V) and Physician's Global Vitiligo Assessment (PhGVA), reliability was moderate to good for F-VASI (PaGIC-V/PhGVA intraclass correlation coefficient [ICC], 0.891/0.739) and T-VASI (ICC, 0.768/0.686). Both VASI instruments detected changes based on correlations with PaGIC-V/PhGVA scores (Week 24 Spearman correlation: F-VASI, r=0.610/r=0.501; T-VASI, r=0.512/0.344). Using PaGIC-V and PhGVA as anchors, improvement threshold ranges of 0.38–0.60 for F-VASI and 1.69–3.88 for T-VASI were considered clinically meaningful; patient exit interviews gave similar results (n=36; 0.51 and 2.40, respectively). These results indicate that F-VASI and T-VASI are reliable, valid, responsive to change, and fit-for-purpose to evaluate facial and total vitiligo.

ADDITIONAL AUTHORS

Kathleen Butler, MD,

Incyte Corporation, Wilmington, DE, USA.

Kang Sun, PhD,

Incyte Corporation, Wilmington, DE, USA.

Konstantina Skaltsa, PhD,

IQVIA Consulting Services, Barcelona, Spain.

Iltefat H. Hamzavi, MD

Henry Ford Medical Center, Detroit, MI, USA.

Coauthor Disclosures:

Kathleen Butler and Kang Sun are employees and shareholders of Incyte Corporation.

Konstantina Skaltsa is an employee of IQVIA contracted by Incyte Corporation to perform the psychometric analysis reported in this abstract.

Iltefat H. Hamzavi has served as an advisory board member for AbbVie; a consultant for Boehringer Ingelheim, Galderma Laboratories LP, Incyte Corporation, Pfizer, and UCB; a principal investigator for Avita, Bayer, Estée Lauder, Ferndale Laboratories, Incyte Corporation, Lenicura, L'Oréal, Pfizer, and Unigen; a subinvestigator for Arcutis; president of the HS Foundation; and board member of the Global Vitiligo Foundation.

INTRODUCTION

Vitiligo is a chronic autoimmune disease resulting in skin depigmentation.

OBJECTIVES

The Vitiligo Area Scoring Index (VASI) is a quantitative clinical tool based on a composite estimate of the overall area of vitiligo patches and degree of macular repigmentation over time. This analysis aimed to evaluate the psychometric properties of facial and total VASI (F-VASI and T-VASI, respectively) using data from two phase 3, double-blind, randomized, vehicle-controlled studies of ruxolitinib cream (TRuE-V1 [NCT04052425]; TRuE-V2 [NCT04057573]).

METHODS

Patients ≥12 years old with nonsegmental vitiligo with depigmented areas ≤10% total body surface area (BSA) including ≥0.5% BSA on the face, ≥3% BSA on nonfacial areas, ≥0.5 on F-VASI, and ≥3 on T-VASI were eligible for enrollment in TRuE-V1 and TRuE-V2. Data collected in these studies using the facial and total Patient Global Impression of Change–Vitiligo (PaGIC-V; 7-point scale) and Physician's Global Vitiligo Assessment (PhGVA; 5-point scale) instruments were used to assess F-VASI (range, 0–3) and T-VASI (range, 0–100) for reliability, validity, sensitivity to change, and clinically meaningful change. Transcripts of exit interviews performed at Week 24 were examined, and patients were classified as reporting clinically meaningful improvement or not to further support anchor-based determination of clinically meaningful change.

RESULTS

The analysis included 652 patients, with 36 completing exit interview. Median F-VASI and T-VASI scores were 0.70 and 6.76, respectively, at baseline and decreased to 0.48 and 4.80 at Week 24, indicating reduced vitiligo lesions with ruxolitinib cream application. Among stable patients (ie, no change from baseline to Week 24) per PaGIC-V, reliability was moderate to good for F-VASI (intraclass correlation coefficient [ICC], 0.891) and T-VASI (ICC, 0.768). Among stable patients per PhGVA, reliability was also moderate to good for F-VASI (ICC, 0.739) and T-VASI (ICC, 0.686). F-VASI and T-VASI differentiated well among most PhGVA categories (ie, mild, moderate, severe) at baseline, thus demonstrating known-group validity. As more patients moved into the PhGVA category for clear or almost clear with ruxolitinib cream treatment at Week 24, F-VASI and T-VASI differentiated well between clear/almost clear and mild disease. Both VASI instruments were able to detect changes as assessed by correlations with PaGIC-V scores at Week 24 (Spearman correlation: F-VASI, r=0.610; T-VASI, r=0.512) and changes in PhGVA scores from baseline to Week 24 (F-VASI, r=0.501; T-VASI, r=0.344). Using PaGIC-V and PhGVA as anchors to determine clinically meaningful change indicated improvement threshold ranges of 0.38–0.60 for F-VASI and 1.69–3.88 for T-VASI; these thresholds were similar to those from patient exit interviews (0.51 and 2.40, respectively).

CONCLUSION

These results indicate that F-VASI and T-VASI instruments are reliable, valid, and responsive to change, with defined clinically meaningful change from baseline in adolescents and adults with nonsegmental vitiligo with depigmented areas ≤10% total BSA (facial and nonfacial) with ≥0.5% facial BSA and ≥3% nonfacial BSA. Thus, these scales are fit-for-purpose to evaluate facial and total vitiligo.

NO. 88 EXPLORING THE NATURAL AND TREATMENT HISTORY OF VITILIGO: FINDINGS FROM THE GLOBAL VALIANT STUDY

SUBJECT CATEGORY: EPIDEMIOLOGY

Presenting Author: Kristen Bibeau, PhD, MSPH | Incyte Corporation | United States of America

Disclosures: KB is an employee and shareholder of Incyte Corporation.

SUMMARY

The **V**itiligo **a**nd **L**ife **I**mpact **A**mong I**nt**ernational Communities (VALIANT) study recruited adults (aged ≥18 years) who self-reported formal diagnoses of vitiligo via an online panel in 17 countries and interviewed them regarding their natural history and patient journey with vitiligo. The demographics, clinical characteristics, and treatment history of 3541 patients with median (range) age of 38 (18–95) years, of whom 54.6% were male, are presented. Nearly half (45.2%) of patients reported high (>5%) body surface area (BSA) involvement. These patients were younger at first appearance of lesions, were more likely to have a family history of vitiligo, and used a greater number of treatments than patients with ≤5% BSA. Patients with darker skin types or facial involvement were also more likely to have a family history or use more treatments. The data from this global survey provide a new perspective on patient experiences with diagnosis and treatment of vitiligo.

ADDITIONAL AUTHORS

Davinder Parsad, MD, Post Graduate Institute of Medical Education and Research, Chandigarh, India; John E. Harris, MD, PhD, University of Massachusetts Medical School, Worcester, MA, USA; Yan Valle, MSc, MBA, Vitiligo Research Foundation, New York, NY, USA; Mukta Tulpule, MBBS, Shweta Association, Pune, India; Gaone Tlhong Matewa, BBA, Beyond Vitiligo, Johannesburg, South Africa; Christine LaFiura, BA, Envision Health Partners LLC, Riverside, CT, USA; Anouk Lindley, MBA, Incyte Corporation, Wilmington, DE, USA; Khaled Ezzedine, MD, PhD; Henri Mondor University Hospital and Université Paris-Est Créteil Val de Marne, Paris, France

DP has served as an expert or primary investigator for Incyte Corporation, Pfizer, and Sun Pharmaceuticals.

JEH has served as a consultant for AbbVie, Aclaris Therapeutics, BiologicsMD, EMD Serono, Genzyme/Sanofi, Janssen, Pfizer, Rheos Medicines, Sun Pharmaceuticals, TeVido BioDevices, The Expert Institute, 3rd Rock Ventures, and Villaris Therapeutics; has served as an investigator for Aclaris Therapeutics, Celgene, Dermira, EMD Serono, Genzyme/Sanofi, Incyte Corporation, LEO Pharma, Pfizer, Rheos Medicines, Stiefel/GlaxoSmithKline, Sun Pharmaceuticals, TeVido BioDevices, and Villaris Therapeutics; holds equity in Aldena Therapeutics, NIRA Biosciences, Rheos Medicines, TeVido BioDevices, and Villaris Therapeutics; is a scientific founder of Aldena Therapeutics, NIRA Biosciences, and Villaris Therapeutics; and has patents pending for IL-15 blockade for treatment of vitiligo, JAK inhibition with light therapy for vitiligo, and CXCR3 antibody depletion for treatment of vitiligo.

YV is CEO of the Vitiligo Research Foundation, has served as a scientific advisor at Temprian Therapeutics and as an invited professor at Guglielmo Marconi University.

MT has no conflicts of interest to disclose.

GTM is the founder of Beyond Vitiligo South Africa and cofounder of Beyond Vitiligo Botswana.

CL is a co-owner of Envision Health Partners, who received funding for conducting this project from Incyte Corporation.

AL is an employee and shareholder of Incyte Corporation.

KE is a consultant for AbbVie, Incyte Corporation, La Roche-Posay, Pfizer, Pierre Fabre, Sanofi, and Viela Bio.

INTRODUCTION

Vitiligo is a chronic autoimmune disease characterized by the destruction of melanocytes, resulting in pale or white patches of skin. Epidemiology studies in vitiligo are often limited to smaller sample sizes and rely on dermatology clinics for the source population.

OBJECTIVES

The population-based **V**itiligo **a**nd **L**ife **I**mpact **A**mong I**nt**ernational Communities (VALIANT) study sought to understand the natural history of vitiligo among patients worldwide, as well as the patient journey with vitiligo.

METHODS

Participants were recruited via an online panel. Adults (aged ≥18 years) who self-reported vitiligo diagnosis by a healthcare professional were eligible to participate. The survey included patients from 17 countries grouped into geographic regions as follows: Africa/Middle East (Egypt, Saudi Arabia, South Africa), Asia (China, India, Japan, Philippines, Thailand), Australia, Brazil, Canada, Europe (France, Germany, Italy, Spain, United Kingdom), and the United States.

RESULTS

Of 3541 patients, 54.6% were male; median (range) age at the time of the survey was 38 (18–95) years. Mean (SD) disease duration was 11.7 (12.6) years, with 1.4 (4.1) years between first noticing lesions and receiving a formal diagnosis. Median (range) body surface area (BSA) affected by vitiligo was 4.22% (0.02%–73.88%), as measured by the Self Assessment Vitiligo Extent Score (SA-VES). Nearly half (45.2%) of patients had high BSA involvement (>5%), with significantly (*P*

CONCLUSION

In summary, these findings provide a new perspective on the diagnosis and treatment journey for patients with vitiligo globally. Patients with higher affected BSA often had earlier disease onset, family history of vitiligo, and used a greater number of treatments than other patients.

NO. 90 DIAGNOSIS AND MANAGEMENT OF VITILIGO FROM THE PERSPECTIVES OF PATIENTS AND HEALTHCARE PROFESSIONALS: FINDINGS FROM THE GLOBAL VALIANT STUDY

SUBJECT CATEGORY: EPIDEMIOLOGY

Presenting Author: Kristen Bibeau, PhD, MSPH | Incyte Corporation | United States of America

Disclosures: KB is an employee and shareholder of Incyte Corporation.

SUMMARY

The **V**itiligo **a**nd **L**ife **I**mpact **A**mong I**nt**ernational Communities (VALIANT) study was conducted via an online survey in 17 countries. A total of 3541 adult patients who self-reported a vitiligo diagnosis and 1203 healthcare professionals (HCPs) who treat patients with vitiligo were interviewed. Previous misdiagnoses were reported by 44.9% of patients and encountered by 16.4% of HCPs. Top treatment goals among patients and HCPs, respectively, included reduction/cessation of spread (24.7%/18.5%) and repigmentation of affected skin (22.5%/37.2%). Patients and HCPs reported a shared frustration with the lack of effective therapies for vitiligo. Many patients (56.7%) reported being told that their vitiligo could not be treated. Similarly, 53.9% of HCPs reported their belief that patients who never treated their vitiligo were told that there is no treatment for the disease. This perception may have led some patients to cease seeking healthcare. These findings highlight the need for improved disease management strategies.

ADDITIONAL AUTHORS

John E. Harris, MD, PhD, University of Massachusetts Medical School, Worcester, MA, USA; Christine LaFiura, BA, Envision Health Partners, LLC, Riverside, CT, USA; Khaled Ezzedine, MD, PhD, Henri Mondor University Hospital and Université Paris-Est Créteil Val de Marne, Paris, France; Iltefat H. Hamzavi, MD, Henry Ford Medical Center, Detroit, MI, USA

JEH has served as a consultant for AbbVie, Aclaris Therapeutics, BiologicsMD, EMD Serono, Genzyme/Sanofi, Janssen, Pfizer, Rheos Medicines, Sun Pharmaceuticals, TeVido BioDevices, The Expert Institute, 3rd Rock Ventures, and Villaris Therapeutics; has served as an investigator for Aclaris Therapeutics, Celgene, Dermira, EMD Serono, Genzyme/Sanofi, Incyte Corporation, LEO Pharma, Pfizer, Rheos Medicines, Stiefel/GlaxoSmithKline, Sun Pharmaceuticals, TeVido BioDevices, and Villaris Therapeutics; holds equity in Aldena Therapeutics, NIRA Biosciences, Rheos Medicines, TeVido BioDevices, and Villaris Therapeutics; is a scientific founder of Aldena Therapeutics, NIRA Biosciences, and Villaris Therapeutics; and has patents pending for IL-15 blockade for treatment of vitiligo, JAK inhibition with light therapy for vitiligo, and CXCR3 antibody depletion for treatment of vitiligo.

CL is a co-owner of Envision Health Partners, who received funding for conducting this project from Incyte Corporation.

KE is a consultant for AbbVie, Incyte Corporation, La Roche-Posay, Pfizer, Pierre Fabre, Sanofi, and Viela Bio.

IHH has served as an advisory board member for AbbVie; a consultant for Boehringer Ingelheim, Galderma Laboratories LP, Incyte Corporation, Pfizer, and UCB; a principal investigator for Avita, Bayer, Estée Lauder, Ferndale Laboratories, Incyte Corporation, Lenicura, L'Oréal, Pfizer, and Unigen; a subinvestigator for Arcutis; president of the HS Foundation; and a board member of the Global Vitiligo Foundation.

INTRODUCTION

Vitiligo is a chronic autoimmune disease characterized by the destruction of melanocytes, resulting in pale or white patches of skin.

OBJECTIVES

The population-based **V**itiligo **a**nd **L**ife **I**mpact **A**mong I**nt**ernational Communities (VALIANT) study sought to understand the diagnosis and management of vitiligo from patient and physician perspectives.

METHODS

The VALIANT study recruited adult patients (aged ≥18 years) who self-reported a vitiligo diagnosis, and healthcare professionals (HCPs) who treat patients with vitiligo, via an online panel in 17 countries. Patients were asked questions regarding their clinical characteristics and vitiligo treatment. HCPs completed questions related to their diagnosis and management of patients with vitiligo.

RESULTS

Globally, 3541 patients and 1203 HCPs (1099 dermatologists, 104 primary care providers) participated in the survey. Patients' mean (SD) disease duration was 11.7 (12.6) years, with 1.4 (4.1) years between first noticing lesions and receiving formal diagnosis. Most patients (62.3%) were diagnosed by a dermatologist, or a nurse practitioner or physician assistant in a dermatology-focused practice. Almost half of patients were previously misdiagnosed (44.9%), with significantly (*P*

CONCLUSION

In this global survey, patients and HCPs reported similar treatment goals and a shared frustration with the lack of effective therapies for vitiligo. Additionally, the perception that vitiligo cannot be treated may have led some patients to cease seeking healthcare. These findings highlight the need for improved disease management strategies.

NO. 91 FACTORS CONTRIBUTING TO EXACERBATION OF VITILIGO DURING THE COVID-19 PANDEMIC

SUBJECT CATEGORY: BASIC SCIENCE

Presenting Author: Brittani Jones, BA | Henry Ford Health System Department of Dermatology | United States of America

Disclosures: No relevant disclosures

SUMMARY

As we continue to come through the current pandemic and for future similar crises, a holistic approach to patients with vitiligo including home-based therapies and psychosocial support for better continuity of care and more comprehensive disease management should be considered.

ADDITIONAL AUTHORS

Vivian Liu, BS 1; Jalal Maghfour, MD 2; Richard H. Huggins, MD 2

1 Wayne State University School of Medicine, Detroit, MI, USA

2 Vitiligo Treatment and Research Center, Henry Ford Health System, Detroit, MI, USA

INTRODUCTION

Global spread of the novel coronavirus (SARS-Cov-2), after the first documented cases in humans in 2019, spurred widespread shutdowns and a plethora of other unforeseen challenges, including disruption of contiguous dermatologic care. Several studies reported worsening of various medical and dermatologic conditions throughout the pandemic as a consequence of this interruption, and this proved true for patients with vitiligo as well.

OBJECTIVES

To conduct a narrative review exploring the impact of COVID-19 on the activity/severity of vitiligo.

METHODS

A comprehensive search was performed using Embase and PubMed databases for articles published from December 1, 2019 to September 31, 2021. The search yielded 23 articles, 13 of which were screened and excluded due to irrelevance.

RESULTS

Delays in treatment contributed substantially to disease progression, a theme discussed in three of the identified articles. Notably, the reliance of patients with vitiligo on phototherapy for management, which was largely administered at in-person facilities prior to the pandemic, led to worsening of vitiligo when these facilities closed, were forced to adopt social distancing policies, or patients neglected to attend appointments due to fear of COVID infection.1 Additional therapies that were noted to experience delays included use of corticosteroids and combination treatments.2

Additionally, one study found that emotional dysregulation and fatigue were independent risk factors for worsening vitiligo, suggesting that the psychosocial burden of the COVID-19 pandemic contributed to disease exacerbation.2 This was likewise supported by the findings of another study that examined the influence of the pandemic on the dermatological life quality index (DLQI). The average DLQI was 14.3 for patients with vitiligo, interpreted as having a “very large effect,” which, despite differing subject groups, was increased from documented averages prior to the pandemic (e.g. 10.67).3,4 Other factors that were associated with new-onset or progression of vitiligo included koebnerization resulting from wearing masks, use of antimalarials for treating concomitant COVID infection, and possibly COVID vaccination as there was one reported instance of new-onset of vitiligo following this.5-7

CONCLUSION

Treatment delays, psychosocial stressors, and other facets of the COVID-19 pandemic have contributed to the development of new cases and worsening of existing cases of vitiligo.

NO. 92 ASSESSMENT OF VITILIGO PATIENTS’ PERCEPTIONS AND OPINIONS ABOUT THEIR DERMATOLOGISTS

SUBJECT CATEGORY: THERAPY

Presenting Author: Camille Robinson, No | Duke University School of Medicine | United States of America

Disclosures: No relevant disclosures

SUMMARY

Understanding the firsthand experience of patients with vitiligo and how they perceived their first dermatologist encounter is key to improving the patient-physician relationship and properly addressing their unique concerns. Preliminary results so far indicate patient desire for more in-depth explanations of their diagnosis, as well as the need for a greater demonstration of compassion and empathy regarding the emotional impact of vitiligo.

ADDITIONAL AUTHORS

Elizabeth Warbasse, MD, USF Dermatology ; Ricahard Huggins, MD, Heny Ford Hospital- Dermatology

INTRODUCTION

Previous studies analyzing the quality of life for patients with vitiligo have demonstrated the importance of a compassionate and empathetic approach, but there is little literature discussing patient perceptions of their dermatologists. This is a necessary topic of study, as the outcomes can potentially provide dermatologists with insight as to what patients with vitiligo need from their providers, leading to better patient-provider relationships and improved quality of life outcomes.

OBJECTIVES

1. Analyze the experiences of patients with vitiligo at the time of diagnosis

2. Identify the overall perceptions and opinions vitiligo patients have about their dermatologists, and assess how these contribute to their views about their diagnosis

3. Provide guidance for dermatologists about the needs of vitiligo patients

METHODS

This study involved a cross sectional and qualitative study approach, analyzing data extracted from a survey distributed among vitiligo patients throughout vitiligo support groups within the United States. Included questions targeted key aspects of the participants' experience and interactions with their dermatologists when they were first diagnosed, including: Overall Experience, Interpersonal skills, Explanation of diagnosis and treatment options, Accessibility and availability, and Satisfaction.

RESULTS

Preliminary results indicate that roughly 70% of vitiligo patients who completed the survey felt that the explanation of their diagnosis was either extremely unclear or somewhat unclear, desiring a more in-depth explanation of their diagnosis as well as the possible course of the disease. A common recommendation for more than 90% of the participants was the need for a greater demonstration of compassion and empathy regarding the emotional impact of vitiligo from their diagnosing dermatologist.

CONCLUSION

Understanding the firsthand experience of patients with vitiligo and how they perceived their first dermatologist encounter is key to improving the patient-physician relationship and properly addressing their unique concerns.

NO. 93 METABOLIC DISORDERS IN THE PATHOGENESIS OF VITILIGO AND DEVELOPMENT METHODS OF THEIR CORRECTION

SUBJECT CATEGORY: BASIC SCIENCE

Presenting Author: Botir Saatov, MD, PhD | Saatov Vitiligo Clinic | Uzbekistan

Disclosures: No relevant disclosures

SUMMARY

Liposomal form may be used both for the children from the first month of life and for the pregnant women and during lactation period, because liposomal form is of natural origin and designed only for external use which has recovering, antioxidant and melanogenesis stimulating effect and has no adverse effects.

ADDITIONAL AUTHORS

None

INTRODUCTION

The efforts of researchers and dermatologists worldwide are fostered to elucidate the mechanism of onset and progression of vitiligo and to develop efficient methods for its correction. Vitiligo is a disease associated with the skin pigmentation’s abnormality characterized with the rapid reduction or absence of melanocytes synthesizing melanin, a pigment in the skin, and appearance of distinct white or milky white spots of various forms, size, quantity and localization. Recent epidemiological studies clearly indicate intensive growth of patients with vitiligo worldwide, and specifically, in Uzbekistan. Recently observed increase in prevalence of vitiligo among children, young men and persons of working age, as well as decline of the patients’ quality of life add the dermatosis a social implication. Despite all above, pathogenesis of vitiligo remains unestablished; there are no efficient methods of treatment of the disease. Thus, it is urgent and challenging to study pathogenesis of vitiligo and to develop novel efficient medical approaches to its treatment.

At the present time, study on mechanisms of the skin depigmentation and development of systems providing biosynthesis of functionally active melanocytes is an extremely urgent problem. According to some authors, the skin depigmentation in patients with vitiligo results from intensification of lipid peroxidation processes and suppression of an organism’s antioxidant protection, which includes the focus of damage, to cause accumulation of toxic products destructing melanocytes (so called theory of self-destruction). The association between lipid peroxidation processes and concentrations of phospholipids, essential substrates for lipid peroxidation in the patients’ skin, remains an unexplored problem in pathogenetic mechanism of vitiligo onset. Disorders in microelement composition of skin have a

special place in the pathogenesis in question. Copper is known to be indispensable for activation of tyrosinase, iron is mandatory for activation of catalase. Zinc and calcium are active in the synthesis of melanin. Of note, there are only few publications on the role of micro- and macro-elements in the onset and progression of vitiligo, so further study on composition and concentrations of chemical elements in the skin of patients with vitiligo holds both theoretical and practical significance. Despite multiple studies, etiopathogenesis of vitiligo is thought to be explored incompletely; methods for its efficient therapy meeting requirement of practical medicine have not been developed. This makes complex clinical-biochemical study on mechanism of vitiligo onset and progression and development of novel pathogenetic approaches in up-to-date medical science based on the findings from the study above an urgent and challenging problem. It should be emphasized that no structural-metabolic studies on the skin tissue, in vitiligo inter alia, have been ever conducted. There are no data on studies of the skin phospholipids, structurally basic for membranes of pigment cells of skin. It is destruction of melanocyte membrane structure under various effects, such as oxidative stress, autoimmune processes, etc., that is thought to be the main factor of vitiligo pathogenetic mechanism. Thus, insufficient extent of prior investigation of vitiligo etiopathogenesis and absence of efficient methods for its therapy determine extreme urgency of all-sided study in the direction.

OBJECTIVES

The purpose of the study is to determine the role of metabolic disorders in

the mechanism of development of vitiligo and, based on the results obtained, develop a new method of his pathogenetic therapy.

1. To study the composition and content of skin and blood serum phospholipids in healthy individuals and patients with vitiligo;

2. Determine the intensity of lipid peroxidation (LPO) and the state of the antioxidant system in the skin and blood serum of people in health and vitiligo;

3. Comparative analysis of micro- and macroelement composition of human skin and hair in health and vitiligo

4. Based on the results of our own research, the development of a method for pathogenetic therapy of vitiligo using liposome technology.

5. Histomorphological examination of the skin and determination of the state of oxidative stress in vitiligo patients treated with the liposomal preparation

METHODS

Clinical-anamnestic, biochemical, morphological, neutron-activation and statistical research methods were used.

-Biochemical methods:

-determination of the amount of malondialdehyde (MDA);

-determination of the activity of the enzyme catalase;

- determination of the amount of phospholipid content;

-determination of the composition of micro- and macroelements of skin and hair using neutron activation analysis.

-Histomorphological studies before and after treatment studied apoptosis and proliferation of skin melanocytes with the determination of apoptotic (AI) and mitotic (MI) indices.

-Statistical processing of the research results was carried out using the Statictica 6.0 software package.

RESULTS

Scientific novelty of the research for the first time

-qualitative and quantitative compositions of phospholipids and cerebrosides in the comparative aspect were identified; significant shifts in concentrations of some phospholipid fractions were found in the skin of patients with vitiligo as compared with the parameters in healthy subjects;

-high level of oxidative stress in the skin and blood serum of patients with vitiligo playing a special role in pathogenesis of onset and progression of the dermatosis was established; imbalance in microelement composition of the skin and scalp hair is typical of vitiligo;

-an unparalleled novel multicomponent liposomal formulation was developed for therapy of vitiligo.

Practical results of the research

-changes in fraction composition of phosphoglycolipids and aggravation of oxidative stress in the skin of patients with vitiligo seen as novel fundamental finding unambiguously enriching the understanding of vitiligo pathogenesis;

-marked imbalance in concentrations of essential micro- and macro-elements in the skin and scalp hair of patients with vitiligo should be considered as a special factor in vitiligo onset;

-simultaneous intensification of lipid peroxidation and antioxidant system in the skin and blood serum of patients with vitiligo confirms customary suggestion that vitiligo is a systemic disease of an organism with topical manifestation of the pathological process;

-practical value of the study is governed by a multicomponent formulation for topical application in pathogenetic therapy of vitiligo developed on the basis of liposomal technology. Ingredients of liposomes have membrane- reparating, antioxidant, membrane-modifying and melanogenesis- stimulating properties, and are capable of eliminating factors hampering melanogenesis. Altogether, it contributes to improvement of repigmentation in the affected skin areas and clinical cure of patients with vitiligo.

Theoretical and practical significance of the research results lies in the fact that the disorders of phospholipid composition, intensity of lipid peroxidation and antioxidant system activity as well as changes in chemical elements in the skin of patients with vitiligo established in the course of the study form the basis for development of novel efficient liposomal formulation intended for pathogenetic therapy of the dermatosis. Practical value is confirmed by the fact that the liposomal formulation was used for treatment of the limited contingent of patients with vitiligo in combination with conventional therapy of vitiligo.

Implementation of the research results.

The findings from the study were formalized as an information letter “Method for therapy of vitiligo” and methodic recommendations “Use of liposomal form of medication for therapy of vitiligo” “Up-to-date aspects of etiology and pathogenesis of vitiligo” affirmed for Uzbekistan Public Health Ministry (No.8, dated 02.09.2008) and reduced to medical practice of the Republican Specialized Scientific-Practical Medical Center of Dermatology and Venereology, in particular, as well as of the Tashkent Regional Dermatovenereological dispensary. The liposomal formulation is covered by Republic of Uzbekistan Patent No. IAP 04292 dated 24.01.2011.

CONCLUSION

1. The qualitative and quantitative contents of phospholipids as well as cerebrosides in the human skin in norm and in vitiligo were studied in he first time in comparative aspect. As distinct from norm in the skin of the patients with vitiligo there were revealed significant changes in the contents of some fractions of phosphoglycolipids. On the basis of reduction of neutral fractions of phospholipids of sphingomyelin, phosphatidylcholine and phosphatidyletanolamine there was noted reliable increase of acid fractions of phospholipids of lysophosphatidylcholine, phosphatidic acid and cardiolipin. It was established that in comparison with norm in the patients with vitiligo in the impaired skin site the concentration of cerebrosides reduced by 13,6%, and in the intact area – by 7%.

2. The oxidative stress, determined both in the skins and in the blood of the patients with vitiligo, is one of the leading pathogenic factors of occurrence and development of this dermatosis. Induced oxidative stress in the experimental animals sharply suppresses proliferative activity of the skin cells that expressed at lifting of mice to the height 4000 m, mitotic index (MI%) 0,36±0,12, apoptotic index (AI%) 0,3±0,03; at lifting to the height to 6000 m (MI%) 0,23±0,08, (AI%) 0,2±11 with increase of severity of oxidative stress the apoptotic and mitotic index reduced.

3. In the patients with vitiligo, in contrast to norm, there was observed marked imbalance in the contents of the most important macro- and microelements in the contents of skin and hair, that bring contribution into the pathogenesis of disease. It was established that in the skin of the patients with vitiligo there is noted reliable reduction in the contents of iodine (I) and cuprum (Cu), and in the hair reduction of iodine (I), cuprum (Cu), zinc (Zn), cobalt (Co) and Aurum (Au).

4. On the basis of results of the own investigations there has been developed and introduced into medical practice new without having analogues on a world scale multicomponent liposome drug designed to pathogenic treatment of vitiligo.

5. It is established that inclusion of liposome preparation into the combined therapy of vitiligo provides increase in mitotic index and normalization of the processes of melanocytes proliferation in the depigmentated skin zone in patients with vitiligo.In this case there is observed suppression of intensity of oxidative stress in the body of patients that indicates about increase in effective therapy of vitiligo.

NO. 96 CORRELATION OF GOOGLE SEARCH INTEREST FOR VITILIGO WITH RACE AND ETHNICITY: A NATIONWIDE, POPULATION-BASED STUDY

SUBJECT CATEGORY: EPIDEMIOLOGY

Presenting Author: Prachi Khanna, BSA | Dell Medical School at The University of Texas at Austin | United States of America

Disclosures: No relevant disclosures

SUMMARY

The online search interest for vitiligo has revealed a discrepancy between the prevalence of vitiligo amongst racial/ethnic groups and the demographics associated with highest vitiligo search (Black or African American and Latino or Hispanic).

ADDITIONAL AUTHORS

Ashley Riddle, MD, MPH;

Ammar M. Ahmed, MD

INTRODUCTION

Previous studies have documented the psychosocial burden of vitiligo, and some studies have shown a greater impairment in quality of life (QOL) in individuals of color. Our study examines this disparity at a population level by assessing interest in vitiligo relative to the racial make-up of each state. Since prevalence of vitiligo does not differ by race, we analyzed Google search trends to serve as a proxy for interest in vitiligo, hypothesizing that increased impairment in QOL translates to a higher level of online search activity regarding vitiligo.

OBJECTIVES

We aim to determine whether individuals of color search for vitiligo more frequently on the internet than their white counterparts by assessing nationwide state-level data.

METHODS

We utilized Google Trends, an online platform that provides free access to search requests made on the online search engine Google. We analyzed google search interest for vitiligo by state from January 1st, 2004 to January 3rd, 2022. This data was then compared to the racial/ethnic data for each state from the US Census Bureau. The population estimates from the US Census Bureau were last updated on July 1st, 2021. We fit univariate and multivariate linear regression models to the data between racial/ethnic demographics of a state andonline interest in vitiligo.

RESULTS

Univariate analyses revealed statistically significant associations between the proportion of black/African-American (p

In the full model including all racial demographic groups except for white, population percentages of black/African-American residents (p=0.001), Asian residents (p=0.007), and hispanic/Latino residents (p

CONCLUSION

Online search interest for vitiligo differs at a population level based on the racial/ethnic makeup of a state, with a greater search interest for vitiligo in states with a higher proportion of individuals of color. Further studies should explore the reasons for this disparity and examine the links between online resource utilization and impact on quality of life amongst individuals with vitiligo.

NO. 98 PLATELET RICH PLASMA FOR VITILIGO

SUBJECT CATEGORY: THERAPY

Presenting Author: Frederick Manuel, MBBS, DNB | Global Skin Centre | India

Disclosures: No relevant disclosures

SUMMARY

Patelet Rich Plasma may find a useful place in the treatment of vitiligo in the future.

ADDITIONAL AUTHORS

None.

INTRODUCTION

Vitiligo has profound implications on the quality of life of affected patients in India. Therapy is often very challenging with several patients having only partial or unsatisfactory repigmentation. We present a case where a patient who had only partial repigmentation had satisfactory repigmentation after receiving three cycles of Platelet Rich Plasma treatment.

OBJECTIVES

Our objective was to enhance the efficacy of current tretment that the patient was undergoing by adding platelet rich plasma tretment to the regimen.

METHODS

A 30 years old bank employee presented with a patch of vitiligo on the face of several years duration. He was put on a regimen of topical Tacrolimus 0.1 %, topical steroids and NBUVB of 3 months duration. He was not satisfied with the repigmentation that was achieved. He requested if there was a possibility to have a more rapid repigmentation as his marriage was nearing. Hence we suggested the addition of three sessions of platelet rich plasma therapy to the regimen. These were administered in monthly intervals.

RESULTS

At the end of the third month, the patient achieved satisfactory repigmentation.

CONCLUSION

Platelet Rich Plasma could be a useful adjunct in the treatment of patients with vitiligo. It could be added to the limited armamentarium to fight this disease. Large well designed trials are necessary to prove its place in the treatment of vitiligo.

NO. 102 PSYCHOSOCIAL AND QUALITY-OF-LIFE FACTORS ASSOCIATED WITH DEPIGMENTATION THERAPY FOR VITILIGO

SUBJECT CATEGORY: THERAPY

Presenting Author: Simi Cadmus, MD, MS | Dell Medical School at The University of Texas at Austin | United States of America

Disclosures: No relevant disclosures

SUMMARY

Clinicians treating individuals with vitiligo should be aware of the potential positive effects of depigmentation, as well as barriers and challenges related to this therapy.

ADDITIONAL AUTHORS

Ashley Riddle, MD, MPH; Kate Sebastian, RN, MPH; Pooja Reddy, MD;

Ammar Ahmed, MD.

INTRODUCTION

There have been no studies, to our knowledge, examining the psychosocial factors specific to the subset of vitiligo patients undergoing depigmentation. This study provides information about patients' perspective and experience while undergoing depigmentation therapy, as well as quality-of-life effects of such therapy, to aid providers and patients in decision-making regarding depigmentation.

OBJECTIVES

To describe the logistical, emotional, and financial implications of depigmentation therapy in patients with vitiligo. To assess the quality-of-life effects on patients

who have either undergone depigmentation therapy or currently undergoing depigmentation therapy.

METHODS

Design: An online survey (created by the authors) assessing the impact of depigmentation therapy on various psychosocial variables and the validated Dermatology Life Quality Index (DLQI)1 were administered to two groups of participants: 1) those who are currently undergoing or have completed depigmentation therapy and 2) those with vitiligo who have not undergone depigmentation therapy but have considered such treatment. Participants were members of the Vitiligo Support International (VSI) organization.

Outcomes and Measures: We assessed factors such as length of time until depigmentation therapy was offered, duration of treatment, financial burden, level of satisfaction, impact on life activities, and challenges faced during and after depigmentation therapy. DLQI scores were also measured.

RESULTS

Seventy-seven vitiligo patients responded to the survey, 42 (54.5%) of whom had undergone depigmentation therapy. Baseline characteristics were comparable between groups. Average DLQI was higher for patients who did not undergo depigmentation than for those who underwent depigmentation (10.2 versus 5.3, p

CONCLUSION

Depigmentation therapy is associated with augmented self-reported quality-of-life scores across various domains in individuals with vitiligo.