Changing Melanocytic naevi during pregnancy: Physiologic or pathologic?

Bruna Gallo[1], Lilian Rocha[2], Pascale Guitera[1], Linda Martin[3], Serigne Lo[4], Bruna Gouveia[1], Tasnia Ahmed[1]
[1]*Melanoma Institute Australia, Sydney, Australia*
[2]*Hospital das Clínicas of São Paulo University, Brazil*
[3]*MIA*
[4]*University of Sydney*

Background: Differentiation of physiological and pathological changes in melanocytic naevi in pregnancy is essential for early diagnosis of pregnancy-associated melanoma. Self-perceived changes in naevi during pregnancy are common, however criteria for investigation of changing naevi are lacking. Moreover melanocytic naevi are dynamic in young adults. We conducted a prospective controlled trial of sequential dermoscopic imaging of naevi during pregnancy compared to a biologically-matched control across two sites in Australia and Brazil.

Methods: Women less than 26 weeks gestation, with a non-pregnant sister as the control were included. Patients with dysplastic naevus syndrome were excluded. Dermoscopic images were performed for all nevi greater than 2 mm at baseline, after 3 months and 6 months post-partum. Lesions with clinically obvious change were further evaluated with reflectance confocal microscopy (RCM) and excisional biopsy was performed for lesions with features of malignancy.
Results: 40 pregnant women and 31 controls completed the study and 2095 melanocytic naevi were analysed. There were no significant differences in demographic data nor risk factors between the groups. Changes were observed in dermoscopic parameters of 26% of naevi in pregnant women *vs* 4.8% of naevi in control women ($P < 0.0001$). The most common change was enlargement 7.2% *vs* 1.2% ($P = 0.02$) of naevi per women followed by disappearance of lines network 1.9% *vs* 0.1% ($P = 0.057$). RCM was performed in 6.8% *vs* 0.9% of naevi per woman. Excisional biopsies were performed in one pregnant woman at the 6 month post-partum visit and three control women. No melanomas were diagnosed during the study.

Discussion: Physiological changes in naevi during pregnancy are common. Sequential dermoscopic imaging and RCM are safe non-invasive techniques to evaluate changing naevi during pregnancy.

Hair and Nails

Safety of oral bicalutamide in female pattern hair loss: A retrospective review of 316 patients

Fathima Ferial Ismail[1], Nekma Meah[2], Lara Trindade de Carvalho[2], Bevin Bhoyrul[2], Dmitri Wall[2], Rodney Sinclair[2]
[1]*Skin Health Institute*
[2]*Sinclair Dermatology*

Aim: The pathogenesis of female pattern hair loss (FPHL) involves androgen-mediated hair follicle miniaturisation and perturbation of the hair cycle in genetically susceptible follicles. Flutamide has been shown to be efficacious in the treatment of FPHL, however its use is associated with significant liver toxicity. Bicalutamide is an antiantrogen with a more favourable safety profile than flutamide when used in the treatment of prostate cancer. The aim of this study was to evaluate the safety profile of oral bicalutamide in FPHL.

Methods: We conducted a retrospective review of all patients prescribed oral bicalutamide at a specialist hair clinic between April 2013 and October 2019. We identified 316 women through a computer database search. The standard dose of bicalutamide used was 10 mg daily. The mean duration of treatment was 6.21 months (range 2–69 months).

Adverse effects documented in the clinical notes were reviewed in addition to blood tests performed at baseline and 3-monthly intervals. Efficacy was evaluated as a secondary objective in the 138 patients who had taken bicalutamide for ≥6 months by dermatologist evaluation of serial clinical photographs to assess the Sinclair Stage.

Results: The most common adverse effect was mild transaminitis in 9 patients which was less than twice the upper limit of normal and asymptomatic in all patients. This resolved without a dose change in 4 of 9 patients and with dose reduction in 2 patients. Other adverse effects included peripheral oedema in 8 patients and gastrointestinal complaints in 6 patients.
The mean Sinclair stage at baseline was 2.77. The mean reduction in Sinclair stage was 0.18 at 3 months, 0.47 at 6 months, 0.56 at 9 months, 0.68 at 12 months, and 0.80 at 2 years.

Conclusions: The results of this study support that oral bicalutamide has a favourable safety profile when used to treat FPHL.

Reversibility of alopecia caused by chronic cutaneous lupus erythematosus

Fathima Ferial Ismail[1], Nekma Meah[2], Rodney Sinclair[2]
[1]*Skin Health Institute*
[2]*Sinclair Dermatology*

Aim: Chronic cutaneous lupus erythematosus (CCLE) is a common cause of cicatricial alopecia (CA) which represents almost 2% of presentations to specialist hair clinics. CA is generally permanent and irreversible, although hair regrowth has been noted in some patients with CA secondary to CCLE. We present three cases of CCLE where prompt treatment led to significant hair regrowth.

Methods: This was a case series of three patients with CCLE treated at a specialist hair clinic in Melbourne, Australia.

The first patient was a 29-year-old female who presented with a 2-month history of multiple circular patches of CA with clinical and histological findings supportive of a diagnosis of discoid lupus erythematosus (DLE). She was treated with prednisolone 20 mg daily,

minoxidil 0.45 mg daily, hydroxychloroquine 200 mg twice daily and intralesional triamcinolone acetonide 5 mg/mL injections.

The second patient was a 29-year-old male who presented with a 2-month history of a solitary patch of CA with central atrophy and hyperpigmentation. Clinical and histological features were consistent with DLE. He was treated with intralesional triamcinolone acetonide 5 mg/mL injections and hydroxychloroquine 200 mg daily.

The third patient was a 38-year-old female who presented with a 3-year history of a solitary, 10 x 10 cm, slowly enlarging patch of CA. Clinical and histological features were consistent with lupus profundus. She was treated with intralesional triamcinolone acetonide 5 mg/mL injections.

Results: The first patient had marked hair regrowth in all patches of CA after 6 weeks of treatment The second patient had marked hair regrowth and reduced erythema after 4 weeks of treatment The third patient had a reduction in the size of the alopecic patch to 7 x 6 cm after 6 weeks of treatment.

Conclusions: This case series highlights the potential reversibility of CA with prompt treatment.

Tofacitinib for treating severe alopecia areata: a case series

John O'Bryen[1], Christina Sander[2]
[1]*GP*
[2]*Central Dermatology Clinic, Maroochydore, Australia*

Aims: To demonstrate the effectiveness and safety of oral tofacitinib in treating severe alopecia areata.

Methods: We present a case series of four patients with severe alopecia areata treated with oral tofacitinib (Xeljanz) on compassionate supply from Pfizer.

Results: Workup, monitoring and side effects are discussed. All patients have had a complete clinical response while remaining on therapy with regrowth of hair on scalp, face and body. One patient had comorbid vitiligo which also responded. All patients remain on tofacitinib to prevent relapses.

Conclusions: The JAK inhibitors have an increasing role in dermatology. In this case series we present four patients with significant response to treatment without concerning side effects.

Congenital malalignment of the great toenails: A case report and review of treatment strategies

Yolanka Lobo[1], Nerilee Wall[2]
[1]*Mater Hospital, Queensland Children's Hospital, Brisbane, Australia*
[2]*Queensland Children's Hospital, Brisbane, Australia*

Congenital malalignment of the great toenails (CMGT) is an underdiagnosed dystrophic disorder that affects 1–2% of children and is characterised by lateral deviation of the longitudinal axis of the nail plate in relation to the hallux. Affected nails are typically short and hyperkeratotic with transverse grooves or ridges, giving an oyster shell-like appearance. It commonly presents in infancy or childhood but may not be identified until the child is older or develops complications from repeated microtraumas to the toenail. Herein, we present a case of CMGT and summarise the existing literature on treatment strategies.

An 11-year-old female presented with a 6-month history of abnormal and slowly growing great toenails. Examination revealed thickening, transverse ridging, yellow-brown discolouration, and lateral deviation of the great toenail plates. Fungal cultures of clippings from each great toenail were negative. The patient was diagnosed with CMGT based on history and morphologic appearance and was managed conservatively with podiatric care.

Treatment options for CMGT depend on the severity of malalignment and range from conservative to surgical interventions. As spontaneous resolution and realignment of the nail may occur in 50% of cases, a conservative approach based on prevention and treatment of complications is recommended. Podiatry review for managing thickened nails, maintaining shorter toenail length, and prescribing appropriately fitting footwear is encouraged. Surgical intervention may be necessary for patients with severe deviation or complications, such as recurrent episodes of infection, and include realignment of the nail matrix, nail matrixectomy, ungueodermal flap repair, and surgical elongation of the extensor tendon of the phalanx.

A correct diagnosis is required to prevent unnecessary investigations and treatments, and to reduce the occurrence of adverse treatment effects in children mistakenly treated for onychomycosis. Furthermore, early recognition and treatment of CMGT help prevent common complications such as onychocryptosis, bacterial infection, onychomycosis, and paronychia.

Green-yellow fingernails due to frequent hand washing in the era of COVID-19: A case study and review of the literature

Genevieve Ho[1], Linda Martin[1], David Stewart[1]
[1]*Melanoma Institute Australia, Sydney, Australia*

Background/Aim: Chloronychia (Goldman-Fox Syndrome or the green nail syndrome) describes green nail plate discolouration caused by pigmented metabolites of *P.aeruginosa*. Constantly damp hands, with or without trauma are predisposing factors. This may be seen in certain occupations and with hand-hygiene behavioural changes as may have been associated with the COVID-19 pandemic. We describe such as case and discuss the existing literature on Chloronychia.

Methods: We describe the presentation, diagnosis and management of a patient with chloronychia as a result of frequent hand washing due to the COVID-19 pandemic. A literature search was performed on Pubmed and MEDLINE

using search terms "chloronychia", "Goldman-Fox Syndrome" or "Green Nail syndrome" and "COVID-19".

Results: A man in his 30s referred to the Dermatology Unit of the Melanoma Institute Australia had a six-month history of progressive painless yellow-green discolouration of his fingernails. There was polydactylous involvement of his fingernails, with focal trachyonychia and mild distal onycholysis, without paronychia. Nail clippings returned heavy growth of *Pseudomonas aeruginosa*. Although commonly associated with onychomycosis, this patient had a negative fungal culture. He was successfully treated with daily 2% acetic acid nail soaks, followed by amorolfine 5% nail lacquer and 30% boric acid with white soft paraffin. Historically, chloronychia has been associated with healthcare workers and those whose occupations involve wetwork. *P. aeruginosa* may cause serious infections such as pneumonia, endocarditis, urinary tract infections, osteomyelitis, septicaemia, necrotising fasciitis and ecthyma, especially in immune-compromised patients. Its true incidence in the community is not known but may be expected to rise due to rigorous hand hygiene practices mandated by the pandemic.

Conclusion: Chloronychia due to pseudomonal nail infection is an unexpected complication of otherwise beneficial increased hand hygiene practices in the era of COVID-19.

Hypoplastic nails following intrauterine exposure to phenytoin

Prudence Gramp[1], Dallas Gramp[1]
[1]*Gold Coast University Hospital, Southport, Australia*

Aim: Over the past 50 years the evidence has strengthened that anti-epileptics taken by women while pregnant can lead to an increased risk of congenital malformations. This poster will discuss a case study of a woman with hypoplastic nails after *in utero* exposure to phenytoin.

Methods: We present a case of a 67yo woman who was born with hypoplastic nails. In early childhood it was recognised that the woman and her two siblings' nail malformations were likely caused by their mother's use of phenytoin to treat severe epilepsy during pregnancy. We will review the literature and evidence regarding foetal exposure to medications and the associated risk of hypoplastic nails and anonychia.

Results: For pregnant women with epilepsy, the risk to the foetus from anti-epileptic medications must be considered against the risk of uncontrolled epilepsy. Congenital malformations are at least 2 to 3 times more likely in foetuses exposed to anti-epileptics *in utero* compared with the general population. Sodium Valproate and Carbamazepine cause the highest number of congenital malformations. Phenytoin, however, has also been shown to increase the risk of malformations including hypoplastic nails and anonychia. Other causes of hypoplastic nails include viral infection during pregnancy, *in utero* exposure to warfarin, valproate, carbamazepine and morphine or presence of syndromes such as Cooks syndrome, Goltz Syndrome, DOORS syndrome, Coffin-Siris syndrome, nail-patella syndrome, Iso-Kikuchi syndrome or Ectodermal dysplasias.

Conclusions: As much data as possible is needed to better inform future prescribing practices for treating pregnant women with epilepsy. As such, all pregnant women taking anti-epileptic medications should register with The Australian Pregnancy Register for Women on Antiepileptic Medications. When control of epilepsy is required in pregnant women specialists should be consulted regarding drug choice, dosing and monitoring to minimise the risk of nail and other organ malformations in infants.

Congenital hypotrichosis treated with sublingual minoxidil: a case report and review of literature

Anneliese Willems[1], Rodney Sinclair[2]
[1]*Skin Health Institute, Carlton, Australia*
[2]*Sinclair Dermatology*

Aims: Congenital hypotrichosis may be syndromic or non-syndromic. We report a case of non-syndromic congenital hypotrichosis.

Methods: A 5-year-old girl presented with diffuse, congenital, hereditary, generalised hypotrichosis with associated hair shaft fragility. On examination at age 5, she was noted to have both a reduction in the number of follicular units over her scalp and an associated hair fibre dystrophy with sparse, short, and fractured hairs over her entire scalp. Eyebrows were absent and her eyelashes were short. Physical examination was otherwise normal. Trichoscopy revealed multiple brush tipped fractures. There was a family history of hair fragility across three generations. There was no family history of consanguinity.

Results: Treatment was initiated with sublingual minoxidil 0.15 mg daily. The dose was up-titrated over 12 months to 1.8 mg daily. No side effects were identified. Over 24 months of treatment, there was significant improvement in hair density and hair length of the scalp and eyebrows. Topical Bimatoprost was subsequently added to augment eyelash regrowth.

Conclusions: Congenital hypotrichosis is a feature of a heterogenous group of conditions with significant phenotypic and genetic diversity. Sublingual minoxidil can be considered as a therapeutic modality.

Oral Baricitinib and sublingual minoxidil for alopecia universalis in an 11-year-old girl: a novel combination therapy for paediatric patients

Anneliese Willems[1], Rodney Sinclair[2]
[1]*Skin Health Institute, Carlton, Australia*
[2]*Sinclair Dermatology*

Aims: Alopecia areata (AA), and its more severe form, alopecia universalis (AU), commonly first present in childhood. The psychological burden associated with AU is significant. There are no systematic treatments approved for the treatment of AU. There are a number of case reports where Baricitinib has been successfully used to treat AA

and AU in adults but there are no reports of it use in children with AA or AU. We report a case of AU in a paediatric patient successfully treated with oral Baricitinib and sublingual minoxidil combination therapy.

Methods: An 11-year-old female attended with an 11-month history of patchy alopecia areata that had progressed over 6 months to universalis. She was otherwise well. Baseline scalp severity of alopecia tool (SALT) score was 99. There was associated loss of eyebrows and eyelashes. There was no nail involvement. Physical examination was otherwise normal. Previous unsuccessful therapies prior to referral to our clinic included daily use of a low-level laser cap and twice daily topical 5% minoxidil. She was commenced on Baricitinib (JAK1/JAK2 inhibition) 1.7 mg twice daily for the first month, reducing to 1.7 mg once daily thereafter in combination with sublingual minoxidil 0.3 mg daily.

Results: Both medications were well tolerated. Within three weeks, fine vellus hair regrowth appeared over 90% of her scalp. At 5 months, her SALT score was 2 and there was good regrowth of both eyebrows and eyelashes. Regrowth corresponded with significant improvement in her psychological wellbeing.

Conclusions: This case highlights a single paediatric patient with AU who achieved near complete remission after 5 months of treatment with oral baricitinib and sublingual minoxidil. The treatment was well tolerated.

Combination treatment of moderate-to-severe alopecia areata in adolescent patients with baricitinib and minoxidil

Anthony Moussa[1], Bevin Bhoyrul[1], Rodney Sinclair[1]
[1]*Sinclair Dermatology, Melbourne, Australia*

Background: Baricitinib is a selective and reversible Janus kinase (JAK)-1/2 inhibitor that has demonstrated efficacy in Phase II/III clinical trials for the treatment of AA in adults with ≥50% scalp hair loss. Minoxidil has been successfully used to treat several hair loss disorders through an unknown mechanism of action. Minoxidil in combination with JAK inhibitors may have superior efficacy to JAK inhibitor monotherapy. There is limited data regarding combination therapy for AA in adolescents.

Aims: To investigate combination therapy with baricitinib and low-dose oral minoxidil (LDOM) in adolescents with moderate-to-severe AA.

Methods: We performed a single-centre, retrospective review of adolescent patients (12–17 years) with moderate-to-severe AA (baseline SALT >20) treated with baricitinib and LDOM combination therapy between January 2019 and September 2021.

Results: Eighteen adolescents (10 males and 8 females) were identified. Mean AA duration prior to starting treatment was 2.7 years. Median baseline SALT score was 78.8%. Three patients (17%) had alopecia totalis and three patients (17%) alopecia universalis. Baricitinib dose ranged from 1.7 mg to 6.8 mg daily (0.04–0.16 mg/kg/daily). LDOM dose ranged from 0.25 mg to 2.7 mg daily (0.005–0.035 mg/kg/day). Mean duration of treatment was 7.9 months. Partial or complete scalp hair re-growth was observed in 89% of patients. The median percentage reduction in SALT from baseline was 86.1%. Amongst responders with eyebrow and eyelash loss, re-growth was observed in 89% and 75% respectively. Baricitinib and LDOM were well-tolerated with only mild adverse events. No patients required interruption or discontinuation of therapy.

Conclusions: Combination therapy with baricitinib and LDOM showed favourable outcomes and was well-tolerated in our adolescent AA cohort. Larger prospective studies are required to compare the safety and efficacy of combination therapy with baricitinib and LDOM to baricitinib monotherapy in adolescents with AA.

Combination treatment of alopecia areata of the beard with baricitinib and minoxidil

Anthony Moussa[1], Bevin Bhoyrul[1], Rodney Sinclair[1]
[1]*Sinclair Dermatology, Melbourne, Australia*

Background: The beard is affected in 28% of men with alopecia areata (AA). Baricitinib is a selective and reversible Janus kinase (JAK)-1/2 inhibitor that has demonstrated efficacy in the treatment of scalp AA. Minoxidil promotes scalp hair growth through an unknown mechanism of action and has been used to treat several hair disorders including AA. Baricitinib and minoxidil combination therapy has not been studied for the treatment of beard AA (BAA).

Aims: To investigate combination therapy with baricitinib and minoxidil for treatment of BAA.

Methods: We performed a single-centre, retrospective review of all male BAA patients ≥18 years who were treated with baricitinib and minoxidil combination therapy for ≥3 months between January 2019 to September 2021.

Results: Fifty-four patients with a mean AA duration of 11.7 years were identified. At baseline, mean age was 38.1 years and median SALT score was 39.6%. AA subtypes included patchy (n = 26), diffuse (n = 5), totalis (n = 3), universalis (n = 14) and BAA only (n = 5). Fourteen patients (25.9%) had total beard loss, 35 (64.8%) had multiple discrete patches and 5 (9.3%) had a solitary patch. Baricitinib dose ranged from 1.7–6.8 mg daily (mean 5.1 mg/day). Minoxidil dose ranged from 0.3-10 mg daily (mean 2.9 mg/day). Mean treatment duration was 9.6 months. Median SALT score after treatment with baricitinib was 4.9%. Complete beard re-growth occurred in 21 men (38.9%) and partial beard re-growth occurred in 25 men (46.3%). Mean time to onset of beard regrowth was 2.8 months. Eight patients (14.8%) demonstrated no beard re-growth despite treatment for a mean of 9.6 months. No serious adverse events were noted.

Conclusion: Combination therapy with baricitinib and systemic minoxidil appears beneficial and well-tolerated for

the treatment of BAA. Further evaluation with larger prospective studies will be needed to determine if baricitinib and minoxidil combination therapy is superior to baricitinib monotherapy.

Indigenous

Forty-seven-year evolution of cutaneous Mycobacterium marinum infection

Danielle McGeachie[1], Aaron Boyce[1], Robert Miller[2], Kimberly Oman[1]
[1]*Townsville University Hospital, Townsville, Australia*
[2]*Salassie House, Townsville, Australia*

Aims: *Mycobacterium marinum* is a non-tuberculosis mycobacterium found in a variety of aquatic settings. Human infection with *Mycobacterium marinum* typically follows exposure to contaminated water and most commonly presents with localised infection of the skin. Uncommonly the infection can locally invade deeper tissue planes such as tendon and bone. Disseminated infections are exceedingly rare in immunocompetent individuals.

The case presented herein describes an extraordinary presentation of cutaneous *M.marinum* infection which evaded diagnosis and appropriate treatment for almost five decades, leading to extensive disease presentation.
Methods: The case of a 54-year-old Indigenous male is described. This man recounted his problem first developing following a traumatic foot laceration on his right foot, at age 7, whilst fishing barefoot on rocks in the sea near Darwin. Over the ensuing decades, the eruption spread proximally in a sporotrichoid pattern, complicated by episodic suppuration and sinus formation.

After 47 years of disease progression, the diagnosis of *M.marinum* infection was ultimately confirmed following incisional biopsy taken from the right lower leg. Histopathology showed pseduoepitheliomatous hyperplasia with a suppurative granulomatous process. No mycobacteria or fungus was seen on special stains. Fungal cultures were negative. The ultimate diagnosis of *M.marinum* was ultimately made by tissue culture for atypical mycobacteria.

Clinical images taken at the time of diagnosis will be presented which demonstrate the extent and severity of this infection prior to treatment.

Results: The patient was referred to the infectious diseases clinic where he was commenced on a combination of clarithromycin 500 mg twice daily and rifampicin 600 mg daily for an expected period of 12 months. A positive response to treatment after eight months of this regimen was seen.

Conclusions: This case illustrates a rare presentation of atypical mycobacterial infection with extensive local disease spread that developed over several decades and demonstrates a positive response to appropriate antibiotic therapy.

Patient factors associated with dermatology outpatient non-attendance: An analysis of racial and ethnic diversity

Brent Doolan[1], Samra Saikal[1], Anish Scaria[2], Monisha Gupta[3]
[1]*Department of Dermatology, Liverpool Hospital, Sydney, New South Wales, Australia, The University of Newcastle, Sydney, New South Wales, Australia*
[2]*The George Institute for Global Health, University of New South Wales, Sydney, New South Wales, Australia*
[3]*The Skin Hospital*

Aims: Non-attendance of dermatology outpatient appointments has been shown to be a risk factor for poorer patient outcomes. The culturally and linguistically diverse (CALD) communities in Australia have been identified as at risk of poorer health outcomes. There is paucity of data assessing patient factors that may increase outpatient non-attendance, particularly in dermatology. The aim was to assess dermatology outpatient non-attendance and to identify patient factors within the Australian CALD/ non-CALD communities that may increase the risk of non-attendance.

Methods: A retrospective cross-sectional study analysing patient demographic data of dermatology outpatient appointments between January to December 2018 at Liverpool Hospital, Sydney, Australia; a single-centre tertiary referral institution.

Results: 6049 encounters were collected from 1954 patients. Those within the 18–45 years age bracket were 61% more likely to not attend compared to older age groups (odds ratio; OR 1.61). Those born in Australia (OR 1.27), Oceania (OR 1.62) and Middle East Asia (OR 1.42) were more likely to miss an appointment, whilst those born in East and Southeast Asia (OR 0.59) were more likely to attend. Those who spoke Arabic at home were more likely to not attend (OR 1.67), whilst those who spoke Vietnamese at home were more likely to attend (OR 0.46). Those who identified as Aboriginal and/or Torres Strait Islander had a 2.3 times higher rate of missing appointments compared to those who were not indigenous ($P < 0.001$).

Conclusions: The disparities in non-attendance between CALD and non-CALD Australian communities highlights the importance of clinician awareness of sub-populations attending outpatient appointments. The finding of those born in Australia having higher rates of non-attendance compared to those not born in Australia warrants further investigation.

Evaluation of video microscopy for crusted scabies diagnosis

Lauren Thomas, Dev Tilakaratne
Royal Darwin Hospital

Aim: Crusted scabies is diagnosed from scabies mite detection on light microscopy. For remote outpatient clinics, where scabies is endemic, the turnaround time for results can be several days. This delay often means