ACD 56th Annual Scientific Meeting 2024 Conference Review™

Making Education Easy

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In this review:

Abbreviations used in this review:

BCC = basal cell carcinoma; **CSPG4** = chondroitin sulphate proteoglycan 4; **CTC** = circulating tumour cell; **DHT** = dihydrotestosterone; **EB** = epidermolysis bullosa; **GAHT** = gender-affirming hormone therapy; **LVI** = lymphovascular invasion; **PBS** = Pharmaceutical Benefits Scheme; **PCOS** = polycystic ovary syndrome; **PNI** = perineural invasion; **SCC** = squamous cell carcinoma; **TGD** = transgender & gender diverse.

Welcome to our review of the 2024 Australasian College of Dermatologists (ACD) Annual Scientific Meeting held in Perth, Australia.

This year's ACD meeting provided a rich programme with a wide range of presentations dedicated to all aspects of skin health, while exploring the latest developments in the field. Here I discuss some of the highlights, beginning with updated data from the Cancer Alliance Queensland Registry, showing that a high proportion of patients with SCCs have concurrent perineural and lymphovascular invasion, with poorer survival outcomes. This is followed by an interesting talk from Haady Fallah that described the efficacy of spironolactone for acne vulgaris, particularly among patients who relapse after isotretinoin, patients with PCOS and those not responding to antibiotics. We conclude with a systematic review which concluded that laser therapy shows reasonable efficacy in reducing skin staining following iron infusions, with a favourable safety profile. Detailed abstracts for the presentations can be located online here.

I trust that you will find this review of interest and clinical value, and I encourage you to send in your thoughts.

Kind Regards,

Dr Philip Tong
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An update on concurrent perineural invasion and lymphovascular invasion in keratinocyte cancers

Speaker: Georgia De'Ambrosis (Gold Coast Hospital & Health Service, Australia)

Summary: Georgia De'Ambrosis provided an update on data which were presented at the 2023 ACD Annual Scientific Meeting on keratinocyte cancers with concurrent lymphovascular invasion (LVI) and/or perineural invasion (PNI). Previously, data reported findings from 2009-11; this analysis reports on findings from 2012-17. Within the Cancer Alliance Queensland Registry, 910 keratinocyte cancers with PNI were identified retrospectively, of which 485 were squamous cell carcinomas (SCCs) and 425 basal cell carcinomas (BCCs). LVI status was not mentioned in 62.3% of all cases. Overall, concurrent PNI and LVI were detected in 9.67% of all tumours, and this combination was more common in SCCs (81 tumours) than in BCCs (7 tumours). Among BCC tumours, no associated lymph node metastasis or disease-related death occurred. Among the SCCs, 14 had lymph node metastasis, 52 received radiotherapy, 9 underwent chemotherapy and 20 died as a result of SCC.

Comment: The concurrent presence of PNI and LVI in keratinocyte cancers significantly impacts on subsequent management. SCCs with both PNI and LVI exhibit higher recurrence, metastasis and disease-related death rates (27%) compared to SCCs with only PNI (13%), necessitating more aggressive treatment and closer monitoring. In contrast, this combination does not worsen the prognosis for BCCs, which can continue with standard management protocols. The combination is most frequently observed in infiltrative or mixed subtype tumours, suggesting that dermatologists should conduct detailed histopathological examinations for these subtypes. The study's limited data underscore the need for further research to develop specific management guidelines for SCCs with concurrent PNI and LVI. Future analyses extending to 2019 aim to provide additional insights, reinforcing the importance of vigilant monitoring and evidence-based treatment strategies to improve patient outcomes.

Surgery for the general dermatologist

Spironolactone for acne vulgaris: an update

Speaker: Haady Fallah (University of Sydney, Australia)

Summary/Comment: Dr Fallah's talk highlights key evidence-based findings on the use of spironolactone for treating acne vulgaris. Spironolactone's anti-androgenic activity, achieved by inhibiting testosterone synthesis and blocking DHT receptors, makes it effective for women with acne. A study involving 410 women showed significant efficacy, particularly for those not responding to antibiotics, relapsing post-isotretinoin or with concurrent PCOS. Initial dosing starts at 100mg daily with possible increases to 200mg, combined with topical therapy. Laboratory monitoring for hyperkalaemia is not required for healthy young women but it is advised for older patients or those with renal/cardiac disease. Despite historical concerns, recent studies found no increased cancer risk associated with spironolactone use. For pregnant women, counselling on teratogenic risks and the use of contraception is essential. These insights support the broader use of spironolactone.

Management of TGD patients with acne

Speaker: Karen Rothacker (Royal Perth Hospital, Australia)

Comment: This talk discussed the management of acne in transgender and gender diverse (TGD) patients, particularly those undergoing masculinising gender-affirming hormone therapy (GAHT). It highlighted that the incidence of acne is higher in this group, often peaking within the first 6 months of therapy. It suggests that treatment largely follows existing guidelines for cisgender (gender assigned at birth) patients, but with specific considerations. For instance, combined oral contraceptive pills do not prevent masculinisation and can be safely used alongside testosterone treatment, although they are unacceptable in trans-masculine patients given their typical association with female, and not recommended for treating acne in trans-feminine patients initiated on GAHT. Isotretinoin can be initiated with careful monitoring in light of concomitant testosterone therapy. How frequently liver function tests should be monitored with concurrent testosterone therapy is unclear. The importance of proactive acne treatment, considering the significant impact of acne on mental health and quality of life, is key in this group of patients.

Chondroitin sulfate proteoglycan 4 as a marker for aggressive cutaneous squamous cell carcinoma

Speaker: Kathryn Chen (Western Sydney University, Australia)

Summary: While many instances of SCC can be treated, patients with epidermolysis bullosa (EB) have poorer survival rates. Furthermore, detecting SCC can be difficult due to blistering and poor wound healing after biopsy. These researchers evaluated the utility of chondroitin sulphate proteoglycan 4 (CSPG4) as a marker for circulating tumour cells (CTCs) in patients with advanced SCC. CSPG4-positive CTCs were detected from patient blood samples and evaluated using immunofluorescence and automated machine learning. It was concluded that most aggressive and mesenchymal SCCs have high expressions of CSPG4, and this may be an effective, minimally invasive tool for diagnosis and monitoring.

Comment: The talk presents a study on CSPG4, a cell surface glycoprotein, and its role in SCC, particularly in patients with EB. The study found elevated CSPG4 expression in some SCCs, including radiation-resistant subtypes and those associated with EB. The research also demonstrated the potential of a minimally invasive CTC liquid biopsy for detecting CSPG4. This work is significant for dermatology, as it opens new avenues for early SCC detection and monitoring, especially in EB patients where traditional biopsy is challenging. Further research will focus on characterising CSPG4 expression in a larger dataset and optimising the liquid biopsy protocol.

Melanoma/oncology

Diathermy smoke and YOU!

Speaker: Lachlan Warran (Dermatology South Australia)

Summary: When performing electrosurgery, diathermy smoke can pose risks to surgical teams, although these risks have typically been underexplored. Lachlan Warran shared a number of personal experiences which pointed out the risks and potential dangers of diathermy plumes for dermatology workers. He also discussed the current occupational health and safety guidelines for diathermy smoke, making recommendations as to how staff can be better equipped and protected during surgery.

Comment: This personal account from Dr Warren discusses the hazards of diathermy plume in dermatological surgeries. It highlights that the smoke produced during diathermy contains harmful chemicals and bioaerosols, including viable and non-viable cellular material. The talk emphasises the need for effective plume evacuation, as surgical masks only filter particles larger than 5 microns, while 70% of particles in the plume are smaller than 0.3 microns. The presentation suggests that implementing compulsory surgical smoke evacuation systems could significantly improve the safety of dermatological surgeries. This change in practice could protect both surgeons and staff from potential harm, fulfilling ethical and legal responsibilities towards healthcare workers. This is a crucial area for further research and development that will affect us all, and how we work.

Surgery for the general dermatologist

Topical JAK inhibitors and beyond in medical management of vitiligo

Speaker: Sachin Vaidya (Dermatology South Australia)

Summary/Comment: Dr Vaidya's talk highlights several JAK inhibitors, including ruxolitinib, AC-1101, ATI-1777 and others in various stages of clinical trials. The talk emphasises the promising results of a Phase 2b study evaluating povorcitinib (INCB54707) in patients with extensive non-segmental vitiligo. More patients achieved significant reduction in Vitiligo Area Scoring Index at Week 52 compared to Week 24. The treatment was well-tolerated, and repigmentation was maintained after treatment discontinuation. The talk also mentions ongoing research on Wnt/β-catenin signalling, small molecules, T Reg Pool, microRNA, and cytokines such as IFN-ɣ, CXCL10, IL15, CXCR 3, inducible HSP 70 DNA, PD-1 and PD-L1 as emerging areas of intense research into pathogenesis and therapeutic targets in vitiligo.

Consultation circumstances that lead to skin cancer detection in general practice

Speaker: Alex Majri (Perth, Australia)

Summary: Australia has the highest rate of skin cancer worldwide, and lesions are predominantly removed by GPs. These investigators interviewed eight GPs across three general practices, to identify consultation circumstances in which skin cancer is detected. GPs reported that skin cancer was most commonly detected when a patient presented with 1) a skin lesion alongside health problems, 2) a skin lesion alone, 3) an incidental finding of skin cancer or 4) a request for general skin monitoring due to a history of skin cancer. These findings were supported by an analysis of consultation notes for 103 patients, which showed that 74.8% of the time, skin cancers were detected when patients presented with a skin lesion as well as a list of other competing health concerns.

Comment: It is well known that the bulk of skin cancer management is performed in general practice; however, there is limited literature identifying the circumstances in which GPs are most commonly detecting skin cancers during consultations. Guidelines currently recommend opportunistic skin evaluation; however, given that consultation time is limited, the authors wished to explore common circumstances that lead to skin cancer detection amongst GPs. Employing a mixed methods description study across three general practices in Western Australia, GP interviews and chart reviews were conducted, and 74.8% of patient encounters where skin cancer was diagnosed was when a patient presented with a lesion alongside additional problems. In these multi-problem consults, the average number of problems addressed and/or actions performed was 3.55 (excluding skin cancer detection). It appears that it is not only dermatologists who are presented with a problem list from patients, and that resources should be invested into looking at solutions to ease the high clinical load placed on GPs.

Current and future dermatology

The 'who & when' of targeted melanoma screening: assessment of risk-based clinical surveillance intervals in the 'tailored surveillance' targeted melanoma screening project

Speaker: Neeraja Thirukkumaran (University of NSW, Australia)

Summary: This prospective cohort study evaluated the efficacy of a targeted melanoma screening programme. A total of 591 patients at a tertiary referral dermatology clinic were followed for 12-19 months. Patients were given a melanoma risk score calculated by validated risk prediction calculators, alongside advice for sun protection. Each patient was allocated a screening interval frequency depending on their 10-year risk of melanoma, ranging from every 4 to 12 months. Among a total of 76 patients, 106 cutaneous melanomas were detected, of which 8 were invasive primary melanomas and 98 were *in situ*. The risk prediction model demonstrated reasonable discrimination for new primary melanomas across all risk strata (AUC 68.6%; 95% CI 62.4—74.9). For patients with a risk threshold >10%, the model showed sensitivity of 82.9% and specificity of 40.0%. It was noted that additional studies are required to better discern optimal screening regimens.

Comment: This single centre cohort study of 591 patients in NSW was performed to assess a personalised, risk-based surveillance interval for melanoma screening amongst patients seen in a specialised metropolitan clinic. The aim was to assess how well the Melanoma Institute Australia risk prediction calculators did in estimating the incidence of first and subsequent primary melanoma, in this patient population, during the follow-up period. In total, 106 primary cutaneous melanomas were diagnosed, with the majority being *in situ* melanoma (93%). Invasive primary melanomas were mainly from subsequent melanoma groups. Those predicted to have a 10-year melanoma risk of >75% were screened every 4 months, resulting in 14.7 screening visits to diagnose one melanoma; whilst in contrast, those screened annually with a <10% 10-year melanoma risk, but with dysplastic naevus syndrome, resulted in 32.7 screening visits to diagnose one melanoma. The authors acknowledged the limited median follow-up time of 19 months, as well as the lack of generalisability due to differing availabilities of non-invasive diagnostic technologies. More research will no doubt elucidate the requirements for efficient screening of melanoma in these at-risk populations.

Melanoma/oncology

How much is my consult really costing?

Speaker: Rachael Foster (Sir Charles Gairdner Hospital & Princess Margaret Hospital for Children)

Summary/Comment: The aim of Dr Foster's talk was to make the audience aware of the costs of common products recommended by dermatologists and ways to make care more affordable, particularly for those working in public hospitals who are unaware of the true cost to patients for recommendations and prescriptions. It is well acknowledged that high costs are a major barrier to good care, which is compounded if multiple family members are affected with skin issues or a delay in diagnosis. Impressively, Dr Foster broke down the various components of a dermatological consultation inclusive of the transport, investigations, non-prescription products and changes to food or clothing that may not be fully appreciated by treating dermatologists. Dermatologists may be further unaware that despite the supply of an authority script, patients may be attending an unapproved pharmacy, e.g. one that does not comply with location rules, and is thus not able to supply PBS medicines - which could result in patients being charged a higher amount for prescriptions such as topical steroids. Other opportunities to provide savings to patients were ensuring those eligible for The Closing the Gap PBS co-payment were applied to the relevant prescription and strategies for compounding, to allow creams to be on the PBS.

Efficacy and safety of laser therapy for the treatment of skin staining following parenteral iron administration

Speaker: Marra Aghajani (Royal North Shore Hospital, Australia)

Summary: This systematic review evaluated the safety and efficacy of laser therapy for persistent skin staining following intravenous or intramuscular parenteral iron. Investigators reviewed the experiences of 30 patients across five studies. Laser therapy was highly effective in eight patients, who demonstrated no clinically visible signs of skin staining following an average of 5.6 sessions. In contrast, 22 patients did not achieve complete clearance of staining, although skin lightening did occur in all cases. More than one laser device was used for eight patients. The most common side effects of laser therapy were hypo- and hyperpigmentation, pain, blistering and purpura.

Comment: Parenteral iron replacement is being increasingly utilised for the management of iron deficiency; however, skin staining is a known and potential complication from intramuscular and intravenous iron administration, leading to skin pigmentation, cosmetic concern and psychological distress. This poster presents the findings of a systemic review to examine the efficacy and safety of lasers in the management of these complications. In total, five studies with 30 cases were included, based on a standardised critical appraisal tool. It was found that the Q-switched Nd:YAG laser was the most commonly used laser, followed by the Q-switched Ruby laser, picosecond laser and alexandrite laser. In 8 of the 30 cases, more than one laser device was implemented. It was found that only a small subset of patients had complete clearance, and 75% of patients required a combination of lasers in order to treat superficial as well as deep dermal layers to increase efficacy, after an average of 5.6 treatment sessions. The majority of side effects included purpura and pain, which were experienced by over 80% of patients. Given the high costs of these treatments, with some covered through compensation payouts from medico-legal settlements, it may be pertinent to emphasise more training on appropriate patient selection and parenteral iron administration.

Cosmetic dermatology

Independent commentary by Dr Philip Tong

Dr Philip Tong became a Fellow of the Australasian College of Dermatologists after completing his dermatology specialist training in NSW as the inaugural Dean's Fellow in Dermatology, a joint initiative with The University of Sydney. He underwent world class-research and dermatology training at St Vincent's Hospital, Royal Prince Alfred Hospital, Liverpool and Westmead Hospitals. He also completed his PhD in advanced biomedical imaging and skin immunology at Centenary Institute during this time. Prior to obtaining his specialist qualifications, Dr Tong also received training in dermatology departments in Perth, Melbourne as well as in London at the world-renowned St John's Institute of Dermatology at Guy's and St Thomas' Hospital. He has lectured nationally and internationally on all aspects of skin. He is passionate about education and provides workshops and facilitates online learning modules for GPs and pharmacists. He is a VMO at St Vincent's Hospital in Sydney as well as Deputy Director of Research at The Skin Hospital, Sydney.