jigsaw
making the fit

Endocrinology nursing profile
Juvenile plantar dermatosis
Juvenile melanoma

NZDUNS Conference report

Future events
Glossary Dermatology Terms & Conditions
editorial

Jigsaw puzzle strategy
Putting this all together

This is the tenth issue of 2m2 Total Cover which began three years ago in November 2013. The need for an electronic publication to promote excellence in the care of people with dermatological conditions, increase recognition of NZ dermatology nurses and benefit worldwide readers through providing education on skin conditions, was there from the time the NZ Dermatology Nurses Society was founded in January 2010. How that objective would translate into reality, slowly connected together piece by piece to create what had been in mind from the very beginning.

When it comes to putting each issue together, jigsaw puzzle strategy is needed – planning, organising, focus, commitment and excellent material prepared by many of you, fitted together to make each emag something we are proud of.

Endocrinology nurses use a similar strategy to sift through sometimes mountains of information to find the most important signs of disorders and juvenile melanoma or Spitz naevi are not always easy to distinguish from melanoma.

This issue has professional development, alongside regular features, a report of the recent NZDNS conference and much more. Click on page numbers on the contents page to link directly to topics of interest.

Visit the website homepage www.nzdermatologynurses.nz when you have saved the date in your diary for the 2017 NZDNS national conference.

Have a wonderful Christmas and sunsafe holiday.

Tracy Fenton          Ann Giles
Endocrinology nursing

Jellyfish - beware at the beach

Juvenile plantar dermatosis

Jellyfish - beware at the beach

Endocrinology nursing

Juvenile plantar dermatosis

Published by NZDNS
New Zealand Dermatology Nurses’ Society Inc.
Website
www.nzdermatologynurses.nz
Email
2m2totalcover@gmail.com
Editorial Team
Tracy Fenton     Ann Giles

Designers - 262design
Russell Giles     Ann Giles
Sponsor
AbbVie Limited, www.abbvie.co.nz
November 2016 contributors
Joan Callis  Megan Croall
Ann Giles     Tracy Fenton
Dr Anna-Marie O’Mahony

contents

NZDNS conference report

Juvenile melanoma
Spitz naevus

Jellyfish - beware at the beach

Endocrinology nursing

Juvenile plantar dermatosis

Interesting bit

GLOSSARY
Dermatological Terms & Conditions

9

10

12

13

16

17

12

8
Humira® (adalimumab) is a Prescription Medicine for the treatment of Rheumatoid Arthritis; Polyarticular Juvenile Idiopathic Arthritis; Enthesitis-Related Arthritis; Psoriatic Arthritis; Ankylosing Spondylitis; Non-radiographic Axial Spondyloarthritis; Crohn’s Disease in Adults and Children; Ulcerative Colitis; Psoriasis in Adults and Children; Hidradenitis Suppurativa; Uveitis. Before prescribing Humira please review the Data Sheet available at www.medsafe.govt.nz for information on dosage, contraindications, precautions, interactions and adverse effects. AbbVie Limited, L6, 156-158 Victoria Street, Wellington, 6011. Prepared November 2016. NZ-HUMD-0034 TAPS PP8974

*AbbVie medications and programmes are designed to support patients on their health journey.

ENROL your patients into the AbbVie Care support programme to get the most out of their HUMIRA (adalimumab) treatment.

Go online to www.abbviecare.co.nz

Call 0800 848 243
Juvenile plantar dermatosis (JPD) is a skin disorder of the feet that commonly affects children. It is characterized by peeling and cracking of the weight-bearing areas of the soles. Most cases are self-limiting and will clear spontaneously during childhood or adolescence (Burns et al., 2004).

**Epidemiology**

JPD is a poorly understood and understudied skin condition whose presentation may mimic that of numerous other common dermatoses. Its prevalence is not well documented due to a lack of published data (Bilowsk, 2010; Kumar et al., 2016). It is thought to occur mainly in children aged 3-14 years (Burns et al., 2004) with males slightly more often effected than females (Lim & Jibreal, 2016; Bolognia et al., 2012). Its peak onset seems to be in males aged four to eight years (Oakley, 1997) and the condition typically resolves by puberty and rarely occurs in adults. JPD is thought to occur more often since impermeable materials such as plastic and rubber have been used for sports shoes, which children often wear for long periods (Bologna et al., 2012).

**Aetiology and Pathogenesis**

The aetiology and pathogenesis of JPD is not well understood, but it is generally accepted it is likely to be multi-factorial. Theories include poor breathability of fabrics used in socks and shoes, repetitive frictional forces from physical activity and hyperhidrosis. Excessive moisture of the feet certainly seems to be a contributing factor (Bilowsk, 2010). Although it is thought atopic eczema more susceptible to being rubbed off by friction, leading to the glazed and thinned appearance (Bologna et al., 2012). With rapid drying they become super dehydrated and cracks and fissures can occur (American Osteopathic College of Dermatology).

**Clinical features**

The presenting features are redness and soreness on the balls of the feet and the toe pads. Often symmetrical, the skin surface has a shiny glazed appearance with scaling, painful cracking and fissuring (Burns et al., 2004; Bologna et al., 2012). Desquamation can occur. Generally the non-weight bearing instep and toe webs are spared distinguishing it from tinea pedis (Bilowsk, 2010). The condition tends to be chronic with an extended course of two to four years and is often worse in the summer (Bilowsk, 2010). Occasionally there is involvement of the hands with fissuring and soreness of fingertips and palms (Kumar et al, 2016).
Pathology
A biopsy for pathology is not routinely undertaken and may cause unnecessary morbidity in a young child for a condition that has a relatively benign course and spontaneous resolution. Histology shows mild, non-specific eczema and sometimes blockage of sweat ducts can be seen (Burns et al., 2004; Bolognia et al., 2012). Features include acanthosis with hyperkeratosis, lymphocytic infiltrate in the dermis around the sweat ducts and inflammation in the epidermis (Zagne et al, 2014).

Diagnosis and Differential diagnosis
Generally this condition is diagnosed clinically on examination of the feet. However it is sometimes difficult to tell JPD apart from other skin conditions such as atopic eczema, contact dermatitis, psoriasis or fungal infection (See Table 1) so skin scrapings for fungus and patch-testing for contact allergy may be helpful if there is any doubt about diagnosis (Oakley, 1997). Although JPD is frequently seen in children with eczema, this is not a requirement for diagnosis (American Osteopathic College of Dermatology).

Treatment
There is no specific treatment for JPD and management is focused around lifestyle modifications and self-help (see Self Help Tips) Strategies include avoidance of excess moisture through the selection of breathable footwear. This may help with both the amount of sweat formation and to minimize the occlusion and friction associated with peeling and cracking (Bilowsk, 2010). The use of occlusive, soothing ointment applied to the affected areas of the foot immediately after shoe removal or if the feet get wet helps keep the skin from drying out too rapidly. Topical steroid application to the skin rarely proves more effective than emollients. If potent steroids do help they should be reserved for flare-ups or if the skin is particularly red and itchy (Oakley, 1997).

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Differential Diagnosis of Juvenile Plantar Dermatosis</th>
</tr>
</thead>
</table>
| **Allergic contact dermatitis**  
A skin problem caused by an allergy to something coming into contact with the dorsal aspect of the feet. Patch testing maybe considered to identify specific contact allergens. |  |
| **Atopic eczema**  
A common, chronic, itchy skin condition in children but may occur at any age. It is also known as eczema and atopic dermatitis. |  |
| **Exfoliative keratolysis**  
Similar appearance to JPD but usually affects the hands |  |
| **Tinea pedis**  
Fine scale with or without maceration of the instep and interdigital spaces with onychomycosis. Tinea pedis is uncommon in children |  |
| **Psoriasis**  
Psoriasis is a chronic inflammatory skin condition characterised by clearly defined, red and scaly plaques. |  |
| **Dyshidrotic eczema**  
A type of eczema (dermatitis) of unknown cause characterized by a pruritic, vesicular eruption on the fingers, palms and soles. The condition affects teenagers and adults and may be acute, recurrent or chronic. |  |
Juvenile plantar dermatosis

**SELF HELP TIPS**

Avoid skin irritants such as soap and shampoo
Use a soap substitute

Use barrier creams
Use keratolytics if prescribed
Only use topical steroid creams when the skin ‘flares-up’ particularly if the skin is red or itchy

Wear cotton socks
Change cotton socks regularly
Wearing two pairs of cotton socks can help to reduce friction
Avoid wearing damp socks

Try to wear well-fitting leather shoes

Cover fissures or cracks in feet with sticky plaster
Try not to walk too much when skin is cracked
A sun allergy rash of unknown cause appearing on the light exposed skin of the ears, usually in boys and young men in early spring

Go to http://www.dermnetnz.org/topics/juvenile-spring-eruption

**JUVENILE SPRING ERUPTION**

A sun allergy rash of unknown cause appearing on the light exposed skin of the ears, usually in boys and young men in early spring

Go to http://www.dermnetnz.org/topics/juvenile-spring-eruption

**References**
Everyone will recognise at least one of these messages – protect the skin you’re in, there is no such thing as a healthy tan, save your skin, Slip, Slap, Slop and Wrap, be Sun-Smart. Slogans about protecting your skin from exposure to the harmful effects of ultraviolet radiation (UV) have been around for about 20 years. You also know that sun protection is important all year round and in all-weather since UV is present even on a cloudy day.

Summer is here. Everyone is planning holidays and time with family. In NZ that means being close to a beach, enjoying the outdoors and long warm days. The importance of sun protection to prevent skin aging, skin damage and skin cancer should be an important part of your preparation.

So………

**ALWAYS** apply SPF50+ sunscreen every day and reapply often when outdoors
**ALWAYS** wear a wide brimmed hat and cover up with closely woven clothing. Men watch your bald patch.
**ALWAYS** wear wraparound sunglasses
**ALWAYS** protect children from the sun
**ALWAYS** check for skin lesions regularly and see a doctor if you are concerned
**AVOID** sun exposure, seek shade or use an umbrella

But what about wearing makeup? Many people think the sunscreen in makeup is enough. Sunscreens are tested against rigorous standards and makeup may not always provide optimum daily broad spectrum protection from the sun. Play it safe and wear a sunscreen under makeup. Let it dry for a few minutes so it has a chance to absorb into the skin properly before applying makeup.

Our catchphrase to grab your attention about sun protection this summer is: 
**It Is Never Too Late to Be Safe In the Sun When Having Fun!**
What is an endocrinology nurse and how do you become an endocrinology nurse?

Endocrinology is a sub-speciality of internal medicine evaluating and treating disorders of the endocrine glands, most commonly pituitary, thyroid, adrenal, ovaries, testes, pancreas and skeletal system. The glands produce and secrete hormones directly into the bloodstream to regulate the body’s metabolism, growth, development and reproduction. The endocrine system is a very complicated negative feedback system to reduce fluctuations in output whether caused by changes in input or by other disturbances.

I began my career in endocrinology nursing after spending nine years working in a children’s cardiac unit at Starship Children’s Health, Auckland District Health (ADHB), Auckland, NZ. I needed a new focus without shift work. I remembered the first area I worked in at Auckland Hospital in the late 1970’s, a general medical ward and a patient with an endocrine condition, excessive growth hormone production termed acromegaly. I had always been fascinated about all things endocrine. Part time work became available in the endocrinology department at Greenlane Clinical Centre, the ADHB outpatient facility. I accepted this role and discovered my paediatric nursing was beneficial for paediatric endocrine testing as were the phlebotomy skills I learnt in primary care.

There is no specific education pathway for endocrinology nursing in NZ, however, there is a pathway in England.

What is a typical day in your work life like and what are the most important skill and abilities you need each day?

Being an endocrine nurse can be very challenging. It requires strong observational skills and an ability to sift through sometimes large amounts of information to find the most important signs of disorders.

A typical day varies depending on scheduled tests and treatments. We make all appointments because tests may involve specific food requirements such as individual fasting times or dietary modifications and changes or additions to medications. We also support clinicians during clinics, taking bloods due to the sometimes specialized nature of these requests. We may take serial blood pressures,
explain complex information and make education understandable about treatments such as hormone replacements, undertake short dynamic tests for assessment or diagnosis of endocrine conditions and complete short intravenous infusions for osteoporosis. We undertake growth hormone testing in children to assess possible low growth velocity and short stature. Children who have had radiation therapy following brain surgery may develop growth (GH) or other hormone deficiencies and we follow them up and test them throughout their childhood. GH dynamic testing involves stimulating the pituitary gland with two consecutive stimulants and taking serial blood samples over more than three hours while managing the side effects of the stimulants such as low blood pressure.

We are often contacted from hospitals and general practices throughout NZ for clinical advice on dynamic testing and protocols.

What are the most rewarding aspects of your job?

This is a very holistic type of care. A very rewarding aspect of our job is caring for children with precocious puberty. This is when a child’s body begins changing into that of an adult too soon. They require injections, X-rays, and blood tests coordinated with paediatric endocrinology appointments. We develop close relationships with these children and families over sometimes many years. People with active acromegaly which causes abnormal growth of the hands, feet, and face are another group we manage with monthly intramuscular injections for life.

What kinds of nursing decisions do you make and how much autonomy do you have when making decisions?

We are required to cannulate adults and children for all serial blood tests and treatments. We make decisions primarily based on our test guidelines and protocols and discuss issues with the nursing team. If we still require clarification we would contact the relevant endocrinology medical team.

An example would be a Water Deprivation Test for deciding if someone had diabetes insipidus. Diabetes insipidus is an uncommon disorder caused by decreased ability or secretion of antidiuretic hormone released by the pituitary gland at the base of the brain, after being made nearby in the hypothalamus. This leads to an imbalance of water in the body with intense thirst even after drinking and passing large amounts of urine. It is not related to diabetes mellitus and there is no cure, but treatments are available. We take hourly urine and bloods samples which require results reported promptly by the laboratory. Assessing these results to determine when to administer intravenous anti diuretic hormone is not always a clear cut decision.

Can you relate a short story to illustrate the uniqueness and importance of the role of the endocrinology nurse?

Mr A who has hypopituitarism and takes an oral steroid hydrocortisone, arrives very anxious about the dynamic Insulin Tolerance Test required to assess for growth hormone deficiency. He has heard his blood sugar levels are going to become very low (termed hypoglycaemia) during the test. He requires reassurance that he is in safe hands with nurses who know how to manage induced hypoglycaemia. During the test he is stimulated with intravenous insulin and his glucose blood sugar level drops as predicted but he did not experience any change in his brain function and behaviour. Intravenous glucose is administered as ordered which has a good and immediate effect. However, his glucose blood levels are still unstable an hour later. I requested the clinicians advice whether extra hydrocortisone was appropriate as it was clear that his usual dose was inadequate under these stressful conditions. This was an especially challenging dynamic test because Mr A did not show any signs of hypoglycaemia, however the outcome of this was a positive experience for him.

How common are skin related problems in your work and how do you deal with these?

Endocrine disorders can effect the skin in a number of ways including hyperpigmentation, thick, thin and coarse skin, pruritus or itching, chronic urticarial rashes and brittle nails. A particularly difficult feature of some endocrine disorders in women is increased facial hair called hirsutism. Few permanent hair removal treatments are available. We are able to refer people with skin conditions to the dermatology department or the person’s family doctor.
There are several kinds of jellyfish found in the sea in New Zealand that can deliver a painful sting, including blue bottle jellyfish, moon jellyfish, mauve stinger jellyfish and lion's mane jellyfish. Here are the signs and symptoms of jellyfish stings and first aid if you or a family member gets stung.

Jellyfish sting through nematocysts which are released from their tentacles. Nematocysts are tiny spine covered tubules. The spines anchor themselves in the skin and when the nematocysts fire, various chemicals are injected into the skin. In some cases, thousands of nematocysts attach to the skin after coming in contact with a tentacle, not all of which may fire right away. Jellyfish stings rarely cause significant harm but can cause severe pain.

Common signs and symptoms of jellyfish stings include:
- Burning, prickling, stinging pain
- Red, brown or purplish tracks on the skin
- Itching
- Swelling
- Tingling and numbness
- Throbbing pain that radiates up a leg or arm

First aid
- Remove any pieces of jellyfish tentacle from the skin by rinsing with seawater. Don't rinse with fresh water or rub the area with a towel, as these actions may activate more stingers.
- Try gently scraping off the stingers with the edge of an ID card or a credit card.
- Avoid getting sand on the wound.
- Take pain relief such as Paracetamol if needed.
- Antihistamines may relieve itching and swelling. A cream with hydrocortisone will reduce inflammation.
Spitz naevus is named after Sophie Spitz an American pathologist who in the 1940's recognised and described benign melanocytic tumours resembling malignant melanomas clinically and microscopically that affected children. These tumours were initially interpreted as juvenile melanoma, since lesions have features that can be indistinguishable from melanoma clinically and histologically. Due to this variability they are classified into common Spitz naevus, atypical Spitz tumours and Spitzoid melanoma because of features that make the diagnosis of melanoma impossible to rule out (Dermnet, 2016; Luo et al., 2011; Wolff, Johnson & Saavedra, 2013).

**Epidemiology**

Seventy percent of Spitz tumours occur in those less than 20 years of age and rarely in people over the age of 40 years. They develop on the face and limbs, grow rapidly over months and appear most frequently in people with skin type classified as Fitzpatrick skin types 1 and 2 (skin that always burns, never tans or usually burns, with minimal tan). Tumours have also been reported in black, Hispanic and Asian groups (Dermnet, 2016; “Rook”, 2016; Wolff, Johnson & Saavedra, 2013).

**Clinical presentation**

Spitz naevus present with a rapidly growing smooth, round, dome shaped, slightly scaling nodule in children. These can be pink, brown, dark brown, tan or black in colour. They usually occur on the head and neck in children (37%) and lower extremities in young adults (28%) (Burgdorf et al., 2000; Wolff, Johnson & Saavedra, 2013). Following this rapid growth over 3-6 months, the lesion plateaus in its growth. Spontaneous involution has been reported as has conversion to common types of melanocytic naevi.

Reed naevus is a deeply pigmented variant of Spitz naevus. It presents in young females as a solitary irregular, dark brown to black heavily pigmented lesion most commonly on the thigh.

Desmoplastic Spitz naevus are a rare subtype most common in adults which often appear as a red/pink raised nodule in the scar after incomplete surgical removal of a common Spitz naevus (“Rook”, 2016).

Atypical Spitz tumours present with an irregular pigment network, and asymmetrical border and can be a larger ulcerated lesion (“Rook”, 2016).

Differential diagnosis of Spitz tumours include melanoma, dermatofibroma, melanocytic naevus, pyogenic granuloma, haemangioma, angiofibroma, keloid and xanthogranuloma (Burgdorf et al., 2000).

**Pathology**

Spitz naevi, although benign, are histologically similar to melanoma with distinct spindle and epithelioid melanocytes and require laboratory diagnosis by an experienced dermatopathologist (Dermnet, 2016; Malvehy et al., 2006). A Spitz naevus >1 mm in depth with asymmetry, ulceration and poor circumscription has an atypical nature and increased metastatic potential. Recent evidence points to mitotic activity or the presence of dividing (proliferating) cells, mitosis at the base and inflammation as being a histopathological indication of the
aggressiveness of a Spitz tumour (Luo et al., 2011).

Cytogenetics, the study of inheritance in relation to the structure and function of chromosomes, reveal a higher rate of HRAS (also known as transforming protein p21) mutations in Spitz naevi signalling uncontrolled cell division which can result in the formation of non-cancerous and cancerous tumours. However, they contain a lower rate of BRAF gene, a protein involved in sending signals inside cells which direct cell growth and NRAS mutations than seen in melanoma and other melanocytic naevi (“Rook”, 2016).

Management

Complete excision of Spitz tumours is the general consensus in order to confirm diagnosis histologically. A margin of 1-3mm is recommended for diagnostic excision. Close clinical follow up is suggested for children with common Spitz naevus.

Sentinel node biopsy, a surgical procedure used to determine if a cancer has spread beyond a primary tumour into the lymphatic system should be considered on a case by case basis due to limited evidence of survival benefit from lymphadenectomy or removal of lymph nodes (“Rook”, 2016).

References


Dr O’Mahony is near the end of a dermatology registrar rotation at Auckland City Hospital and Greenlane Clinical Centre, Auckland, NZ, which has been an invaluable experience. She is completing her second year of general practice training.
emag sponsorship and advertising,
Connecting your skin care product with our people.

Interested in advertising or sponsorship? Connect with us here 2m2totalcover@gmail.com
We also had interesting presentations on lymphoedema, Mohs surgery, lower leg wounds, alopecia, isolated limb perfusion for cutaneous metastatic melanoma and eczema management.

John Camu an infection control nurse specialist spoke of the role of infection control in dermatology. He discussed the history of super bugs and their correlation with antibiotics. He informed us about an emerging invasive pathogen worldwide that is multi drug-resistant and usually associated with outbreaks in health-care settings called *Candida auris* (*C. auris*). *C. auris* is a yeast like fungus related to *Candida albicans*, a common human fungus. *C. auris* causes invasive infections mainly in the bloodstream, wounds and ear infections with a high death rate. A fungal infection to look out for!

Linda Flay from Melanoma NZ presented on the melanoma crisis in NZ and the importance of early detection, education, patient support and using dermoscopy when checking moles. She also discussed the recently available government funded medications for treatment of advanced melanoma nivolumab (Opdivo) which works by blocking a signal that prevents activated T cells from attacking the cancer allowing the immune system to clear the cells and pembrolizumab (Keytruda), a humanised antibody which destroys a protective mechanism on cancer cells and allows the immune system to destroy them.

Sarah Fitt from the NZ Pharmaceutical Management Agency (PHARMAC) gave a very informative presentation on the agency’s objective to look for the best health outcomes from within the amount of funding provided and the long term effect of drugs. PHARMAC are currently changing the way they make their decisions and are now including the patient, family and health system in their model. Also discussed was PHARMAC managing the national contracting and standardisation of medical devices/wound care products, to not only make savings but to free up money for new medicines and devices.

Thank you to the sponsors for providing trade displays and to Ego for sponsoring the delicious dinner at Cibo Restaurant in Parnell.

I would like to thank NZDNS for awarding me the scholarship to attend this ‘Illuminating’ conference.

Megan Croall is an RN in the Outpatient Department Christchurch Hospital, NZ
Jaundice – excessive circulating bilirubin with yellow/green skin colour also seen in cornea of the eye.

Jellyfish sting – jellyfish are aquatic invertebrates that can sting people who come into direct contact with them. Stingers, which are typically located on the ends of the jellyfish tentacles contain poisons that are often toxic to humans. Following contact with stingers the skin may have an abnormal tingling and prickling sensation or paraesthesia and become itchy and swollen with red bumps and patches often in a ladder-like pattern.

Jessner lymphocytic infiltration – an uncommon benign skin condition characterized by a persistent, papular, plaque like skin eruption that has a variable course, usually lasting months to years, with periods of remission and sometimes spontaneous resolution. The prevalence is unknown and usually affects adults younger than 50 years old. The gender predominance is debatable as some sources state there is a male predominance, while other sources disagree. There have been reported cases of familial occurrence. The cause of Jessner lymphocytic infiltration is unknown although there are proposed theories. Some studies indicate an association with the bacteria Borrelia, while other data suggest photosensitivity or sun allergy can be the cause. Some believe that this condition is a variant of lupus erythematosus.

Jock itch (tinea cruris) – a superficial fungal infection of the skin on either side of the body where the thigh joins the abdomen, known as the groin. It is often spread to the groin from tinea infection on the feet (tinea pedis or athlete’s feet).

Juvenile plantar dermatosis (sweaty sock syndrome) – a condition where the skin on the soles of the feet of children and young teenagers becomes scaly, red, hard and thickened. The cause is unknown though alternating moist and dry conditions may lead to the condition.

Juvenile xanthogranuloma (JXG) – a benign and typically self-limited skin disorder that is not commonly associated with systemic manifestations. The skin lesions of JXG usually present as reddened, yellowish-tan, slightly raised bumps. They generally appear on the head, neck, and trunk although they can appear on any part of the body including the lung, liver, heart, kidney and bone marrow. Most cases present as a single lesion and appear in infancy or childhood. However, JXG can present at any age and lesions may be multiple. JXG occurs more commonly in males than females, especially in younger patients with multiple lesions. The cause of JXG is not clearly understood but it is believed to result from an overproduction of a type of histiocyte cell used in the body’s immune system in response to nonspecific tissue injury. Histiocytes work in the immune system to fight bacteria and dispose of tissue waste products. Although rare, it is the most common type of non-Langerhans cell histiocytosis which disappear eventually over 2 to 3 years, usually without scarring. Incidence is unknown.
Save the Date
12th New Zealand Dermatology Nurses Conference
17-18 August 2017
www.nzdermatologynurses.nz
Queenstown 2017