

# QML PATHOLOGY

newsletter November 08

## >>Four Lesser Known Skin Conditions

**Dr Inara Strungs, Histopathologist, Histology Department**

Pigmented purpuric dermatosis (PPD), porokeratosis, Grover's disease and miliaria are some lesser known skin diseases that occur frequently enough to cause confusion and warrant review. (Please note that treatment advice is taken from dermatology textbooks <sup>(ref.1,2)</sup> and is not meant to be definitive).

## >> Four Lesser Known Skin Conditions

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### Pigmented Purpuric Dermatoses (PPD) (Capillaritis)

**PPD is a generic name for a group of chronic diseases that have lesions comprising a background of yellow-brown pigmentation with superimposed petechiae and share certain histological features. The aetiology is unknown, except for occasional cases that are caused by drugs or food additives, and rare cases that overlap with mycosis fungoides.**

#### Clinical features

- Many overlapping variants, e.g. Schamberg's disease (most common; irregular patches on legs), Majocchi's disease (annular plaques), lichen aureus (often solitary, rust coloured, on leg), itching purpura (similar to Schamberg's but itchy).
- Predilection for lower extremities of young adults, but also children and older adults, and other sites.
- Most are chronic but 2/3 improve or clear eventually; itching purpura is of shorter duration.

#### Histopathology

- Lymphohistiocytic infiltrate in upper dermis, often filling papillary dermis.
- Lymphocytic vasculitis with endothelial swelling and extravasation of red blood cells, and haemosiderin deposition.

#### Treatment options

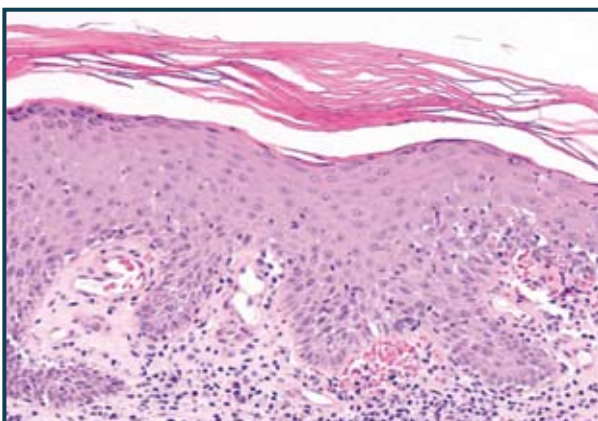
- Resistant to therapy.
- Explanation without intervention, or short term topical steroids may be helpful, especially for itch.



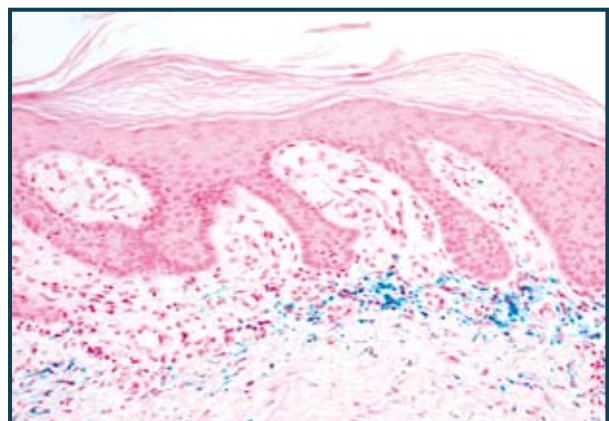
PPD (lichen aureus). Brown discoloration with petechiae.



PPD (Schamberg's disease). Orange-brown patches on legs.



PPD (H&E). Lymphohistiocytic infiltrate in papillary dermis, endothelial swelling and extravasation of red blood cells.



PPD (Perls stain). Highlights haemosiderin deposition in upper dermis.



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### Porokeratosis

**This condition is characterised by annular lesions with an atrophic centre and a grooved elevated border from which a keratotic core (cornoid lamella) projects. It is probably due to expanding mutant clones of keratinocytes.**

#### Clinical features

- Various forms, some familial, others sporadic, some associated with immunosuppression.
- Most common form - disseminated superficial actinic porokeratosis (DSAP) - many lesions up to 10mm on sun-exposed sites in middle-aged individuals; resemble solar keratoses.
- Prototypic form - porokeratosis of Mibelli - single or scanty larger lesions beginning in childhood.
- Other forms - linear, giant, punctate (palmoplantar).
- Premalignant potential - SCC may develop in all forms except punctate.

#### Histopathology

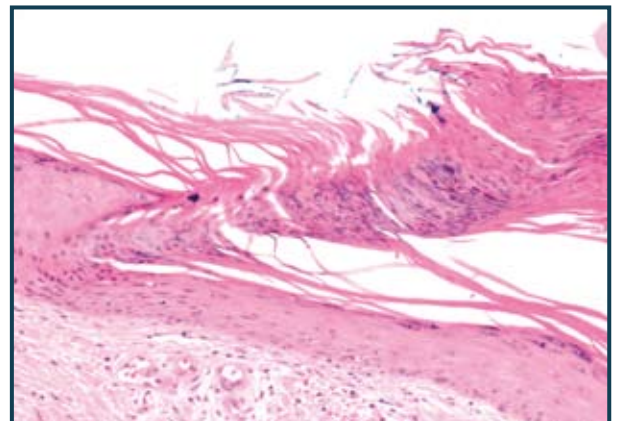
- Biopsy should be taken from the raised border to be diagnostic.
- *Sine qua non* is the cornoid lamella (thin column of parakeratotic cells) with underlying hypogranulosis, vacuolation and dyskeratosis of keratinocytes, and often a lichenoid reaction.

#### Treatment options

- Treatment may be unnecessary.
- Cryotherapy, 5-fluorouracil, laser, shave excision, curettage, oral acetretin used with varying degrees of success.



Porokeratosis (DSAP).  
Annular keratotic lesions with raised margins.



Porokeratosis. Cornoid lamella (parakeratotic column) with underlying hypogranulosis and vacuolated keratinocytes.



### Dr Inara Strungs MBBS FRCPA BA(Hons)

Consultant Histopathologist

Ph: (07) 3121 4677

Email: Inara.Strungs@qml.com.au

A graduate of the University of Queensland (1981), Dr Strungs trained in pathology at the Queen Elizabeth Hospital, Adelaide before obtaining her fellowship.

Dr Strungs has worked as a Staff Pathologist at Toowoomba Base Hospital and Gramp Skin Pathology in Adelaide as well as in various other VMO and locum positions.

Dr Strungs joined QML Pathology in 2001 as a dermatopathologist and has written articles and presented papers related to dermatopathology.

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### Grover's Disease (Transient/Persistent Acantholytic Dermatoses)

**This is a pruritic eruption that shows focal acantholytic dyskeratosis on histology. The aetiology is unknown but precipitating factors are sweating, sun exposure, ionising radiation and some drugs.**

#### Clinical features

- Acute eruption of pruritic greyish pink papules or papulovesicles.
- Occurs most commonly on trunk of middle-aged and elderly Caucasian men.
- Transient version lasts weeks to months, more persistent form has chronic relapsing course over years
- May occur on background of other skin diseases.

#### Histopathology

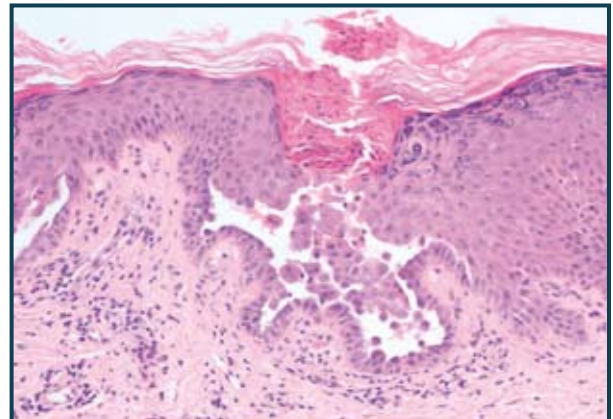
- Acantholytic dyskeratosis that is characterised by suprabasilar clefting, acantholysis and dyskeratotic cells (which may include corps ronds and grains).
- Superficial perivascular lymphohistiocytic infiltrate with occasional eosinophils.
- Direct immunofluorescence is negative.

#### Treatment options

- Treatment difficult.
- Avoid exacerbating factors.
- Milder cases - antihistamines, topical steroids, calcipotriol.
- More severe cases - oral steroids (but relapse when cease), etretinate, isotretinoin, PUVA.



Grover's disease. Multiple erythematous papules on chest wall.



Grover's disease. Suprabasilar cleft, acantholysis, dyskeratotic cells and lymphohistiocytic infiltrate in superficial dermis.

## Surgical Audit

QML Pathology has recently introduced a Surgical Audit Report that enables doctors to conduct a systematic review of skin lesion cases within their practice and compare with the results of other practices.

Data will be collected from all registered participants, and collated into a graphical report, featuring statistics and data on:

- Histological and provisional diagnosis

- Number of new and previously biopsied specimens in audit
- Ratio of malignant lesions to total lesions - both individual and group results
- Diagnostic sensitivity and accuracy for lesion types
- Type and number of biopsies performed
- Definitive management and number of procedures performed
- Margin clearance.

This information can then be used to further inform and improve surgical practice with the ultimate goal of improving the quality of care for patients.

Doctors taking part in the audit are also eligible for 40 category 1 points from the RACGP for participation in an **Individual ALM**.

For further information or to register please contact your local Liaison Officer or phone Brisbane Liaison Department on (07) 3121 4943.

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## >> Four Lesser Known Skin Conditions

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### Miliaria

**This is a heterogeneous group of diseases due to the obstruction of the outflow tract of the sweat duct, and is associated with excessive sweating. The three forms (crystallina, rubra and profunda) vary according to the level of the obstruction.**

#### Miliaria crystallina

- Obstruction is superficial within stratum corneum and vesicle is subcorneal.
- Symptomless crops of clear thin-walled vesicles, 1-2mm in diameter.

#### Miliaria rubra (prickly heat)

- Obstruction is in spinous layer of epidermis.
- Develops in hot conditions (climatic, occupational, occlusion).
- Large numbers of minute erythematous papules, usually on trunk and intertriginous areas.
- Intense discomfort with unbearable pricking sensation.
- Histology shows spongiosis with exocytosis of lymphocytes and vesiculation around the epidermal sweat duct unit and a light lymphocytic infiltrate in the papillary dermis.
- The term *miliaria pustulosa* is used if the lesions become pustular.

#### Miliaria profunda

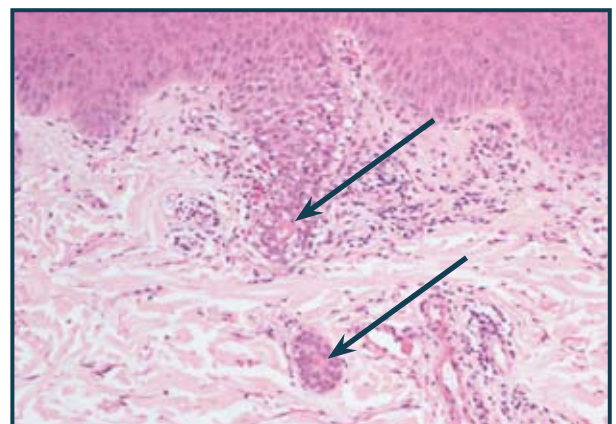
- Obstruction is at dermoepidermal junction (with subepidermal vesiculation and periductal inflammation).
- Flesh-coloured papules like gooseflesh.
- May be associated with anhidrosis and heat stress (which may also occur in severe miliaria rubra).

#### Treatment options

- Only effective treatment is avoidance of sweating, if only for a few hours a day (e.g. air conditioning).
- Acclimatisation may occur.
- Large number of treatments advocated but ineffective unless sweating reduced - calamine lotion plus emollient, cornstarch, ascorbic acid, oral retinoids.
- Antibiotics only effective if gross secondary sepsis.



Miliaria rubra. Excoriated erythematous papules.



Miliaria rubra. Spongiosis and lymphocytes in and around epidermal portion of sweat duct (arrows on sweat duct).

#### Acknowledgements

We would like to thank Dr Roland Noakes and DermnetNZ for clinical photos.

#### References

1. Bologna JL, Jorizzo JL, Rapini RP, editors. *Dermatology*. E-dition. Philadelphia: Elsevier Mosby, 2003
2. Burns T, Breathnach S, Cox N, Griffiths C, editors. *Rook's Textbook of Dermatology*. 7th ed. Oxford: Blackwell, 2004.
3. McKee PH, Calonje E, Granter SR, editors. 3rd ed. *Pathology of the Skin with Clinical Correlations*. Elsevier Mosby, 2005.
4. Weedon D. *Skin Pathology*. 2nd ed. London: Churchill Livingstone, 2002.



## Infectious Diseases Report - Geographic Distribution - October 2008

ORGANISM	Regions (as per key below)															Total			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Oct	Sep	Aug	Jul
Adenovirus (not typed)	1	9		1		1	7		2	7	6	14	3	4		55	41	36	23
Adenovirus (typing pending)		9	2				8		9	9	4	6	1		6	54	82	86	35
Barmah Forest virus	4	1		1			3		4	2	4	3	1	1	5	29	31	30	37
Bordetella pertussis	1	29	12				14		12	5	25	9	4		1	112	78	56	53
Brucella species									1	2						3	4	8	8
Campylobacter jejuni		1										1				2	0	0	0
Chlamydia pneumoniae																0	0	0	0
Chlamydia trachomatis, not typed	69	68	21	23	4	1	80	1	56	32	111	51	17	20	16	570	454	538	578
Coxiella burnetii		3	1				2			2		2	1			11	6	9	10
Cryptococcus species							1									1	1	2	2
Cytomegalovirus (CMV)		3	4	4			10		10	1	21	9	2		2	66	73	71	64
Entamoeba histolytica		1														1	0	3	0
Enterovirus - not typed		2							1		1		1			5	5	4	1
Epstein-Barr virus (EBV)	5	8	7	4			19		16	8	29	15	6	3	4	124	137	102	125
Flavivirus unspecified		1				1			2			1	1			6	4	2	11
Hepatitis A virus																0	2	6	6
Hepatitis B virus	7	9	3		3		5		5		36	1		1	2	72	71	80	72
Hepatitis C virus	19	50	23	3	1		40		18	6	72	26	13	10	4	285	308	252	254
Hepatitis D virus											1					1	0	0	1
Hepatitis E virus															2	2	0	0	0
Herpes simplex Type 1	15	43	8	7	1	1	43		28	7	68	32	7	7	2	269	220	264	268
Herpes simplex Type 2	13	42	6	1			33		16	6	51	26	2	4	4	204	177	154	172
Herpes simplex virus - not typed	4	12	2	4	1		13		12		12	8		2	2	72	64	77	72
HIV-1	3	2					4		1		1					11	4	11	2
HTLV-1																0	0	0	0
Influenza A virus	1	6					8		3	2	8			1	1	30	140	168	43
Influenza B virus	2	2	1			1	4		2			3		2	1	18	165	225	23
Legionella species																0	0	0	0
Leptospira species	2		1				1									4	1	5	9
Measles																0	0	1	0
Mumps virus											1					1	0	2	1
Mycoplasma pneumoniae	2	7	3				15		10	5	12	5	3	1	3	66	58	64	41
Neisseria gonorrhoeae	2	6		1			6			1	5	1		2		24	34	29	31
Parainfluenza virus Type 1																0	0	4	1
Parainfluenza virus Type 2																0	1	2	0
Parainfluenza virus Type 3		7	2			1	10		6	2	7	1	1	1		38	52	15	11
Parvovirus		2	1				9		13		13	2	2			42	21	28	23
Pneumocystis carinii																0	3	2	0
Respiratory Syncytial virus		5					6		3	3	2	2	3		2	26	46	76	90
Ross River virus	3		2	2			5		4	7	6	12	4	5	5	55	73	65	74
Rubella virus																0	0	1	2
Salmonella paratyphi A																0	0	0	0
Salmonella paratyphi B																0	0	0	0
Salmonella typhi																0	0	1	0
Shigella dysenteriae																0	0	0	0
Shigella flexneri																0	0	0	0
Streptococcus Group A	13	19	2	1	6		22	1	10	10	10	11	1	4	1	111	122	124	128
Toxoplasma gondii	1						1									2	1	2	0
Treponema pallidum	18	10	9	3	2		30	1	8	11	34	3	1	6	3	139	132	117	133
Trichomonas vaginalis	7													1		8	6	13	14
Varicella Zoster virus	12	24	16	1		3	30		23	18	62	29	7	11	9	245	229	172	192
Yersinia enterocolitica																0	0	0	0
TOTAL	204	381	126	56	18	9	429	3	275	146	602	273	81	86	75	2764	2846	2907	2610

### REGIONS

1 Cairns	4 Mackay	8 Northern Territory	12 Sunshine Coast
2 Gold Coast/Northern Rivers	5 Mount Isa	9 Redcliffe	13 Toowoomba
3 Ipswich	6 New England	10 Rockhampton	14 Townsville
	7 North Brisbane Suburbs	11 South Brisbane Suburbs	15 Wide Bay/Burnett

September 2008 and further historical clinical data can be obtained by contacting your local Medical Liaison Officer

The Pathologists and staff at  
QML Pathology would like to  
wish you a joyous festive season,  
filled with peace and good health.



## >> Additions to the QML Pathology Specific IgE (RAST) Allergen Menu

Dr David Heyworth-Smith, Consultant Clinical Immunologist

### **Tropomyosin**

Recombinant shrimp tropomyosin (rPen a 1) is a major allergenic determinant in crustaceans and molluscs. Detection of tropomyosin specific IgE is helpful in the diagnosis of seafood allergy.

### **Parvalbumin**

Recombinant carp parvalbumin (rCyp c 1) is an archetype of fish parvalbumin, a fish muscle protein which is a major allergenic determinant in fish allergy. Detection of parvalbumin specific IgE is helpful in the diagnosis of fish allergy.

### **Squid**

Allergy to squid (e.g. calamari) may occur in isolation or more often in patients allergic to other seafoods especially crustaceans and molluscs. Squid allergens have not been well characterised.

### **Oyster**

Allergy oyster may occur in isolation or more often in patients allergic to other seafoods especially crustaceans and molluscs. Oyster allergens have not been well characterised.

### **MUXF3**

MUXF3 is a "cross-reactive carbohydrate determinant" which may be responsible for false positive reactions in patients with hymenoptera (bee and wasp) venom allergy.

For example, bee allergic patients may have low positive wasp venom specific IgE tests despite no clinical manifestation of wasp venom allergy. This cross-reactivity may be due to the presence of carbohydrates of plant origin found in both insects' venoms (cross-reactive carbohydrate determinants (CCD). Positive MUXF3 IgE in patients with positive specific IgE tests to both bee and wasp venom suggests the weaker venom specific IgE result may be a false positive. Clinical correlation is required. (The definitive diagnosis of venom allergy is by skin prick and intradermal allergy testing.)

### **Recombinant latex**

rHev b 5 is a recombinant latex protein that is a major allergenic determinant in latex allergic patients with type 1 latex hypersensitivity. Measurement of rHev b 5 specific IgE in addition to the standard "latex RAST" may enhance the sensitivity of detection of latex IgE by approximately 10%.

### **Chlorhexidine**

Chlorhexidine is a widely used antiseptic and disinfectant. Allergy is most common with urethral mucosal exposure, for example with lignocaine/chlorhexidine gel used in urinary catheter insertion. Chlorhexidine allergy is uncommon but may be suspected with unexplained allergy or anaphylaxis following any procedure involving chlorhexidine exposure. (The definitive diagnosis of chlorhexidine allergy is by skin prick and intradermal allergy testing.)

## WARFARIN DOSING OVER THE CHRISTMAS PERIOD

Over the upcoming Christmas period, the QML Pathology Warfarin Care Clinic will be closed. Please note that NO NEW REGISTRATIONS will be taken from 6.00pm on Friday, 19 December 2008, with the registration line re-opening at 7.00am on Monday, 5 January 2009.

During this period it is essential that any new patients on warfarin are supplied with instructions, as QML Pathology will be unable to monitor them until we re-open in January. Unfortunately QML Pathology cannot provide warfarin control for patients under a period of two weeks.

As a result, we would appreciate if you could arrange a colleague to supervise any warfarin patients you control while you are on leave. Please note that this also applies to interstate patients on holiday in Queensland.

## >> Doctor's Noticeboard

Introducing **Dr David Walker, Neurosurgeon**, from BrizBrain & Spine to the Tweed Day Surgery

Dr Walker has admitting rights at major private hospitals in Brisbane and commenced neurosurgical consultations in October at the QML Sessional Rooms at the Tweed Day Surgery.

Fully trained in all aspects of neurosurgical care including special interests in neuro-oncology and pituitary surgery. Dr Walker is also continually active in brain tumour research, both at the basic science level and in clinical trials.

Referrals can be made through the main rooms of BrizBrain & Spine via the following contact methods:

Phone: (07) 3833 2500

Fax: (07) 3833 2511

Online: [www.brizbrain.com.au](http://www.brizbrain.com.au).

**Dr Andrew Renaut, General and Colorectal Surgeon**, has recently established a new consulting suite at Brisbane Private Hospital on Wickham Terrace. His practice includes the full range of colorectal and anorectal conditions, such as bowel cancer, IBD, diverticular disease, haemorrhoids, fistulae and fissures. His general surgery practice includes conditions such as herniae and gallbladders.

For further information phone (07) 3831 9322 or visit [www.brisbanesurgeon.com.au](http://www.brisbanesurgeon.com.au).

### **Mother-Baby Hub Strathpine**

Female GPs part time or full time with interest in maternal or paediatric health required for new Mother-Baby hub to be located in Strathpine. Hub specialises in antenatal, postnatal and paediatric care. On-site child care provided. Allied health professionals located in same practice (physio, exercise physiologist, psychologist, dietician, midwives) as well as hairdresser and beauty therapy. Would suit mothers of young children or mothers-to-be perfectly. Please contact Christine Norton 0427 287 597 or [nortoncj@iinet.net.au](mailto:nortoncj@iinet.net.au) for further details.

## New Collection Centres

### **Pottsville**

Shop 8, Pottsville Plaza  
5 Coronation Ave

Phone: (02) 6676 0217

Opening Hours:

8.00am - 1.00pm (Mon-Fri)

## Relocated Collection Centres

### **Coorparoo**

332 - 338 Old Cleveland Road

Phone: (07) 3847 9254

Opening Hours:

7.30am - 12.30pm, 1.00pm - 3.30pm (Mon-Fri)

### **Lutwyche**

Shop 3, Centro Lutwyche Shopping Centre  
543 Lutwyche Rd

Phone: (07) 3857 6471

Opening Hours:

7.30am - 12.30pm, 1.00pm - 3.00pm (Mon-Fri)

8.00am - 11.00am (Sat)

### **Mackay (Brisbane Street)**

Shop 11A, The Gas Works Shopping Centre  
137 Shakespeare Street

Phone: (07) 4957 4061

Opening Hours:

7.00am - 4.30pm (Mon-Fri)

8.00am - 11.00am (Sat)

### **Sunnybank (McCullough St)**

Shop 19a  
Sunny Park Shopping Centre

Phone: (07) 3344 2309

Opening Hours:

7.00am - 6.00pm (Mon-Fri)

7.00am - 12.00pm (Sat).