Inflammatory skins

- How to approach
- Standard stains
- How to report
- Clinicopathological correlation
- Inflammatory patterns

How to approach

The quality of any histology report relies on the enthusiasm of the pathologist for that speciality, but the usefulness to the clinician and in turn the patient should not rely on this.

As a result all reports should reach a **minimum** standard.

To achieve this all inflammatory skin biopsies should be dealt with in a considered and systematic way in the same way you would approach an inflammatory renal/liver/lung or GI biopsy.

The clinician has taken the biopsy as they often are unsure of the diagnosis so don't expect a simple straightforward "textbook" example.

Standard stains

- Ellipses – bisect longitudinally as the clinician has usually biopsied across the edge of the lesion allowing you to compare normal and abnormal.

- Punch biopsies - >4mm then bisect, punch biopsies smaller than this cannot be easily bisected so lots of levels are better.

- ALL NEED LEVELS at least x3 at first.
  If ordering more levels get the lab to save some immunospares otherwise all the tissue maybe gone when you decide it maybe mycosis fungoides!!

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- ALL NEED Alcian blue/PAS
  - Fungi – easily seen on PAS and easily missed if not requested.
  - Interstitial mucins – by ordering Alcian blue on all you can get a feel for normal and abnormal amounts of mucins.

How to report

- Describe the skin from:
  - Keratin layer (eg hyperkeratosis, parakeratosis)
  - Epidermis (eg acanthotic, spongiotic, atrophic)
  - Upper dermis (eg perivascular inflammation, lichenoid inflammation, diffuse inflammation)
  - Deep dermis (eg inflammation extending deep around adnexae)
  - Fungal/mucin stains

- Other special stains (eg Immunofluorescence)

- CONCLUSION
  - Subtype the inflammatory pattern (see below)

  - Give broad differential diagnosis

Rashes and spots tend to change with time and the clinical appearance may also change so ALWAYS give a differential diagnosis rather than simply agreeing with the clinical diagnosis.

  - Discuss if any fit with the clinicians diagnoses BUT don't be tempted to issue a dogmatic diagnosis if one of their differentials seems to fit as there is ALWAYS a differential diagnosis in inflammatory skins!!

  - Exclude any diagnoses given by clinician

Clinicopathological correlation

- If no diagnostic features THEN MORE LEVELS

- If still no diagnostic features THEN ADVISE CPC

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INFLAMMATORY PATTERNS

- Lichenoid (eg lichen planus, lupus, fixed drug eruption, PLC)
- Psoriasiform (eg psoriasis, chronic atopic dermatitis)
- Spongiotic (eg atopic dermatitis (avoid the term eczema as it is more of a descriptive term then a diagnosis), contact allergies, drug reaction)
- Vesiculobullous (eg bullous pemphigoid, pemphigus, arthropod bite, drug reaction, PCT – see separate presentation)
- Granulomatous (eg granuloma annulare, sarcoid, TB, foreign body, rosacea)
- Vasculopathic (eg acute hypersensitivity, PAN)

  Lymphocytic vasculitis – *debated term* – (eg Jessner's, Lupus, lymphoma, annular erythemas, toxic erythema, drug reaction, lymphocytoma cutis)

- Panniculitis (eg erythema nodosum, traumatic fat necrosis)
- Cutaneous infiltrates (eg lymphoma, Sweets)

AVOID

"Chronic non-specific dermatitis"
"Chronic dermatitis NOS"

These diagnoses do not exist!!

Most represent lymphocytic vasculitis (see above)

READ Chapters 1 and 2 of WEEDON Skin Pathology

REMEMBER YOU WILL SEE MORE INFLAMMATORY SKINS AS A CONSULTANT PATHOLOGIST THAN LIVER BIOPSIES.

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