between melanoma and AFX/PDS. Collision tumours of the skin can result in misleading clinicopathological presentation and appropriate diagnostic techniques with high index of suspicion and multiple immunohistochemical stains are essential for precise diagnosis and management.

12. A RARE SKIN RASH ASSOCIATED WITH VIRAL INFECTION IN THE IMMUNOSUPPRESSED: A CASE OF TRICHODYSPLASIA SPINULOSA

Donya Tohidi-Esfahani¹, Rashi Minocha², Stephen Lee², Renee C. F. Chan³, Paul David Kirwan³, Peter M. Ferguson¹

¹Department of Tissue Pathology and Diagnostic Oncology, Royal Prince Alfred Hospital, Sydney, Australia; ²Department of Dermatology, Royal Prince Alfred Hospital, Sydney, Australia; and ³Department of Anatomical Pathology, Concord General Repatriation Hospital, Sydney, Australia

Background: Trichodysplasia spinulosa (TS) is a rare skin pathology which clinically presents as a folliculocentric facial eruption with central keratin spines, pruritis and alopecia. The aetiological agent is trichodysplasia spinulosa polyoma virus (TSPyV), a ubiquitous virus that induces circulating antibodies detectable in 60–80% of adults. Pathological infection resulting in TS is limited to patients who have received iatrogenic immunosuppression. An effective treatment for TS has not been established, but some patients will respond to a reduction of immunosuppression and/or antiviral therapy.

Aims: Here we describe a case of TS with serial biopsies that exhibited some previously undescribed clinical and pathological features.

Methods: A 54-year-old woman presented with a pruritic rash with papules and pustules affecting the nose, cheeks and forehead. This was 4 months after completing rituximab treatment for high grade transformed follicular lymphoma. The rash did not respond to treatment for rosacea, developing over 3 months into keratotic scaly papules centred on hair follicles, now involving the back, trunk and limbs in addition to the face (with sparing of the scalp).

Results: The biopsies showed a corresponding temporal evolution of histological findings from suppurative folliculitis, to folliculotropic lichenoid dermatitis, until the classic folliculodystrophic features developed: dilated hair follicles, abnormal hair shafts, proliferation of inner root-sheath cells with enlarged trichohyalin granules. Electron microscopy demonstrated virions within the nuclei of follicular cells, consistent with polyoma virus. The patient has received no further immunosuppressive medication and despite treatment with oral antiviral therapy (valgancyclovir), has not shown sustained resolution of her rash.

Conclusions: Trichodysplasia spinulosa is a rare condition, with fewer than 30 published cases since the first description in 1999. The diagnosis is made by distinctive clinical and histological findings, supported by viral identification by electron microscopy or PCR. This case presented with a previously unreported rosacea-like prodrome before the characteristic diagnostic features emerged.

References

1. Nguyen KD, Chamseddin BH, Cockerell CJ, *et al.* The biology and clinical features of cutaneous polyomaviruses. *J Invest Dermatol* 2019; 139: 285–92.
2. Fischer MK, Kao GF, Nguyen HP, *et al.* Specific detection of trichodysplasia spinulosa-associated polyomavirus DNA in skin and renal allograft tissues in a patient with trichodysplasia spinulosa. *Arch Dermatol* 2012; 148: 726–33.

3. van der Meijden E, Janssens RW, Lauber C, *et al.* Discovery of a new human polyomavirus associated with trichodysplasia spinulosa in an immunocompromised patient. *PLoS Pathog* 2010; 6: e1001024.
4. Haycox CL, Kim S, Fleckman P, *et al.* Trichodysplasia spinulosa – a newly described folliculocentric viral infection in an immunocompromised host. *J Invest Dermatol Symp Proc* 1999; 4: 268–71.

13. METASTATIC MELANOMA WITH DIVERGENT DIFFERENTIATION: PCR AND COMPARATIVE GENOMIC HYBRIDIZATION IN THREE CASES

M. Duffy¹, A. Mahadevan², M. Hitchcock³, G. Hayward⁴
^{1,2,3}Anatomical pathology services, Auckland, New Zealand; and ⁴North Shore Hospital, Auckland, New Zealand

Metastatic malignant melanoma is well known for its morphologic diversity and mimicry, sometimes resembling carcinoma, lymphoma or sarcoma. Most of the time immunohistochemistry is helpful in arriving at the diagnosis, however occasionally the melanocytic markers are negative. This can create a diagnostic dilemma for pathologists and can even result in wrong diagnoses, unless there is high index of suspicion and awareness about the ability of melanoma for divergent differentiation.

Aim: We present two cases of metastatic melanoma and a primary lesion with divergent differentiation along with PCR for BRAF mutation and comparative genomic hybridization (CGH).

Method: The first case is a case of metastatic melanoma treated with BRAF inhibitor. The metastatic tumour was morphologically distinct from the original tumour. The tumour showed histological and immunohistochemical features of a high grade neuroendocrine neoplasm. This immunoprofile misled the pathologist to consider non melanocytic tumours such as neuroendocrine carcinoma, Ewing's and Ewing's-like sarcomas and even synovial sarcoma in the differential diagnosis.

The second case is a case of primary scalp nodular melanoma and an adjacent collision tumour, consisting of AFX and desmoplastic melanoma.

The third case is a case of metastatic melanoma with fibrosarcomatous differentiation.

Result: BRAF mutation studies performed on the first and third cases showed the same mutations in the original tumour and the subsequent metastases with divergent differentiation. Comparative genomic hybridization studies performed on these cases showed similar and high ranges of chromosomal gains and losses in the original tumour and the dedifferentiated tumour. CGH was able to demonstrate that the original tumour and the metastases, evolved from the same clone.

Conclusion: Clinical significance of divergent differentiation in melanoma needs further research. The pathologist should always consider melanoma in the differential diagnosis of a poorly differentiated tumour even if the melanoma markers are negative, particularly in the presence of a history of melanoma.

14. ANCIENT MELANOCYTIC NAEVUS (AN): A SIMULATOR OF MALIGNANT MELANOMA

A. Spasich¹, K. Manoharan¹, B. Dutta²

¹Laverty Pathology, Sydney, Australia; and ²Kossard Dermatopathologists, Sydney, Australia

Background and aims: Ancient melanocytic naevus (AN) is an unusual but distinct melanocytic neoplasm within the spectrum