Alopecia Scalp Biopsy - Full Clinical Guideline

Reference no.: CG-DERM/2023/004

1. Introduction

Alopecia can have a significant impact on patients' psychosocial well-being. The underlying cause of alopecia is not always clear clinically. Histological samples can help support clinicians in making an accurate diagnosis. There are major discrepancies in the way biopsies of the scalp are taken by clinicians from patients suffering from alopecia.

2. Aim and Purpose

We have devised a standard protocol for clinicians to follow when sending off scalp samples for alopecia investigation. This will allow clarity in the processing of samples by histology staff and maximise effectiveness of histology reporting.

3. Definitions, Keywords

Scarring alopecia (cicatricial alopecia) - In scarring alopecia, inflammation destroys the hair follicle, with subsequent scarring. Examples include lichen planopilaris, lupus, frontal fibrosing alopecia, and folliculitis decalvans.

Non-scarring alopecia- Usually characterised by a lack of permanent destruction of the hair follicle. Examples include alopecia areata, female/male pattern hair loss, telogen effluvium, and traction alopecia.

Alopecia biopsy protocol

All punch biopsies for alopecia cases must be booked on a **DOCTORS LIST ONLY** with a 30 minute slot.

All punch biopsies must be 5 mm in size and should be orientated in the direction of hair growth in order to minimize oblique transection of follicles. The biopsy should extend into the subcutaneous fat.

All samples to be sent for histological assessment with specialist alopecia scalp biopsy histology form. The histology form should include relevant clinical details to facilitate histological interpretation and clinic-pathological correlation.

Scarring alopecia biopsy protocol with IMF:

Take two punch biopsies from the active area of alopecia. Send one 5 mm punch biopsy sample in a formalin pot for histology. This will be processed for horizontal sectioning. The other 5 mm punch biopsy should be bisected, with half sent to histology in a separate formalin pot for vertical sectioning. The other half should be sent for IMF in normal saline. Please label carefully.

Scarring alopecia biopsy protocol without IMF:

Take two punch biopsies from the active area of alopecia. Send the 5 mm punch biopsy samples in separate formalin pots for histology. One will be processed for horizontal sectioning and the other for vertical sectioning, please label pots as such.

Non- scarring biopsy alopecia protocol:

Take three 5 mm punch biopsies, two from the affected area and one from the unaffected area (Occiput). All three samples will be sent for histology in separate formalin pots. One sample will be processed for horizontal sectioning, one will be processed for vertical sectioning and the control sample from the occiput will be processed for horizontal sectioning.

Unsure of diagnosis? Unsure if scarring or non-scarring alopecia?

If the clinician cannot differentiate clinically if a patient has scarring or non-scarring alopecia then please use the non-scarring alopecia protocol. If IMF is required then bisect the punch biopsy intended for vertical sectioning and send half to histology for vertical sectioning and half for IMF.

Form of hair loss suspected clinically

Scarring alopecia

Non-scarring alopecia / **Unsure**

Immunofluorescence required?

Yes

No

1 x punch biopsy for **horizontal sectioning** from **affected area**.

1 x punch biopsy from **affected area**.

Bisect (see below) and submit **half** for **vertical sectioning to histology**.

Submit other **half** for **IMF to immunology**.

1 x punch biopsy for **horizontal sectioning** from **affected area**.

1 x punch biopsy for **vertical sectioning from affected area**.

1 x punch biopsy for **horizontal sectioning from affected area.**

1 x punch biopsy for **vertical sectioning** from **affected area.**

Control from occiput required?

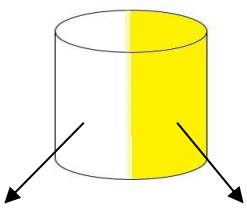
1 x punch biopsy for **horizontal sectioning** from **non-affected area**.

If unsure if scarring or non-scarring alopecia

Then

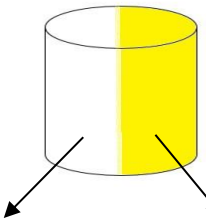
Bisect (see below) and submit **half** for **vertical sectioning to histology**.

Submit other **half** for **IMF to immunology**.



For histology

For IMF



For histology

For IMF

4. References (including any links to NICE Guidance etc.)

Griffiths C, Barker J, Bleiker T, Chalmers R, Creamer D. *Rook's Textbook of Dermatology*, 9th ed. Oxford: Wiley Blackwell; 2016

Sperling LC, Cowper SE, EA Knopp. An Atlas of Hair Pathology with Clinical Correlations. 2nd ed. London: Informa Healthcare; 2012

5. Documentation Controls

Reference Number CG-DERM/2023/004	**Version: 2**		**Status** Final	
Version / Amendment History	Version	Date	Author	Reason
	2	11.12.23	Dr. Kid Wan Shum	Update to biopsy guidance to include if unclear whether scarring or non-scarring alopecia
Intended Recipients: Dermatology clinicians				
Training and Dissemination: Email				
Development of Guideline: Dr Shinhmar SpR, Dr Ferguson Consultant, Dermatology				
Consultation with: Dr Gandhi, Dr Regan, Dr Hawari, Dr Shum, Dr Nambi				
Linked Documents:				
Keywords: Scarring alopecia (cicatricial alopecia), Non-scarring alopecia				
Business Unit Sign Off			Medical Division - 21/8/18 Dermatology Dept - Dec 2023	
Divisional Sign Off			**Group:Medicine Division** **Date:**	
Original Date of Upload			August 2018	
Review Date **Updated on**			August 2021 11.12.23	
Contact for Review			Dr. Ferguson, Consultant Dermatologist	