

**STUDENT WORKBOOK
IN DERMATOLOGY**

**Department of Medicine
Faculty of Medicine
Sabaragamuwa University of Sri Lanka**

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*2021 Department of Medicine
Faculty of Medicine
Sabaragamuwa University of Sri Lanka*

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CLINICAL APPOINTMENT IN DERMATOLOGY

1. Name of the student

.....

2. Year passed GCE Advanced level Examination

.....

3. Duration of the appointment

From...../...../..... To/...../.....

4. Name of the consultant

.....

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PREFACE

Students of the Faculty of Medicine, Sabaragamuwa University of Sri Lanka, study Dermatology as a separate appointment of 2 weeks at Teaching Hospital Ratnapura. During this period, they will be attached to the Dermatology Unit under the Consultant Dermatologist(s) appointed by the Ministry of Health

This workbook in dermatology is compiled to help students achieve essential knowledge and skills in respiratory medicine expected from an undergraduate when they qualify to work in medical wards as intern house officers. Thus, the workbook will guide the student during their dermatology short appointment.

This workbook is a joint effort of the academic staff of the Department of Medicine, SUSL and the current Dermatologist of the Teaching Hospital Ratnapura. Students are expected to organize their classes and do self-studies in order to complete the tasks set out in the workbook.

We value your feedback to improve the workbook.

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CHAPTER 1

INTRODUCTION

Dear Students,

We have prepared a series of workbooks to guide you during your medical appointments. These include 3rd year workbook, 4th year workbook and workbook for each short appointment and a workbook for the professorial appointment.

The appointments in finer specialties are organized based on the University Grants Commission guidelines and according to the needs of the Ministry of Health.

The short appointment in Dermatology will give you the opportunity to study Dermatology with exposure to specific case scenarios in more detail. This workbook is prepared to provide guidance to the students during the Dermatology appointment to cover the essential areas expected from an undergraduate. You are expected to learn the management plans in further detail. This includes the investigation, treatment of common medical conditions, management of common emergencies, which are essential clinical topics for an intern medical officer. This knowledge, skills and experience you gather during the short appointments will help you to understand patient problems in greater depth.

Your continuous assessments will be based on these workbooks.

Learning Outcomes in Dermatology

At the end of the appointment students should be able to

1. Obtain histories, elicit physical signs and interpret physical signs, principles of management and prognosis of patients having the following conditions,
 - a. Leprosy, eczema, psoriasis, lichen planus, bullous dermatosis,
 - b. Cutaneous fungal, bacterial and viral infections,
 - c. Urticaria, drug eruptions, Steven Johnsons Syndrome, vasculitis,
 - d. Acne, miliaria, papular urticaria and generalized pruritis
 - e. Cutaneous malignancies as melanoma, squamous cell carcinoma, basal cell carcinoma, Bowen's disease
 - f. Pigmentary disorders, nail and hair diseases, Geno dermatosis
 - g. Erythroderma
 - h. Cutaneous manifestations of systemic disorders (SLE, Systemic sclerosis)
2. Describe the indications, limitations and principles of investigations and treatment modalities that are relevant to the following
 - a. Skin biopsy
 - b. Cauterization
 - c. Laser therapy
 - d. UV therapy
 - e. Patch test
3. Describe the principles of therapy of skin diseases including the appropriate use of topical steroids
4. Obtain consent for investigations and treatment and communicate the prognosis of common dermatological disorders
5. Write case notes, daily status, referrals, discharge summaries, clinic notes and prescriptions.
6. Demonstrate empathy and maintain high ethical standards
7. Be an effective member of the healthcare team.

CHAPTER 2

CORE CLINICAL KNOWLEDGE AND SKILLS

At the end of the dermatology appointment, you should be competent in the technique of history taking, physical examination (general examination and examination of skin lesions) and clinical reasoning at a level of a student about to enter the final year.

In addition to the cases you are allocated during the appointment, you are advised to see the following presentations given in the next section on “Topics to Cover during Dermatology Appointment”

2.1 Clinical Presentations: Dermatology Appointment

These are some of the key presentations that ought to be ‘covered’ during the Dermatology Appointment.

- Itchy skin rash
- Urticaria
- Generalized pruritus with and without rash
- Scaly eruptions
- Vesicular and bullous lesions
- Vasculitis and Skin ulcers
- Hypopigmented lesions
- Erythematous skin lesions

2.3 EMERGENCIES

Emergencies in dermatology are limited and listed below

1. Eczema herpeticum
2. Toxic epidermal necrolysis
3. Stevens-Johnson syndrome
4. Erythroderma
5. Allergic reaction with angioedema and/ or anaphylaxis
6. Drug reactions
7. Lepra reaction
8. Staphylococcal Scalded Skin Syndrome (SSSS)
9. Vasculitic rash (or mimics of vasculitis)

2.2 Topics in Dermatology

These topics are often termed as the theoretical aspects of dermatology and require didactic teaching (e.g., lectures) or self-study using standard textbooks.

1. Common dermatological conditions and terminology in dermatology
2. Urticaria, eczema and pruritus
3. Toxic Epidermal Necrosis (TEN), Stevens Johnson syndrome
4. Papulosquamous diseases
5. Therapeutics in dermatology and drug reactions
6. Psoriasis
7. Infections of the skin
8. Dermatological manifestation of systemic disease
9. Leprosy

CHAPTER 3

HISTORY TAKING IN A PATIENT WITH A DERMATOLOGICAL DISORDER

PRESENTING COMPLAINT

Patients with a dermatological disorder will present with various complaints such as a rash, blistering, discoloration of skin, itching, bleeding or a discharge.

HISTORY OF PRESENTING COMPLAINT

In the history of presenting complaint, you ask about the **site** of the lesion: whether it is localized or generalized skin lesions. Then find out the **onset**, whether it is gradual onset or skin lesions appeared suddenly. **Character** of the lesion, pain, itching burning or even anesthetic and whether lesion is palpable, how many lesions, color and the shape of the lesion. **Time course** of the lesion, whether it appears and disappears or spreading and worsening. What are the factors that **exacerbate or relieve** such as drugs, food or any contacts? Ask about associated constitutional symptoms like fever, malaise.

Ask the patient whether they have taken any treatments, western medical or ayurvedic or tried any home remedies. Any preceding events/symptoms before the appearance of the rash. (e.g., sore throat, new medications, use of hair dye, cosmetics usage)

Find out whether the patient has any contacts with patients with skin disease or infectious diseases.

SYSTEMIC INQUIRY

Systemic: Appetite, weight loss, fever, joint pain, peripheral oedema

Cardiovascular: Chest pain, shortness of breath, palpitations

Respiratory: Wheezing, shortness of breath on excretion

Gastrointestinal: Abdominal pain, loose stools, dyspepsia, difficulty in swallowing

Neurological: Altered level of consciousness, numbness or weakness of any area of the body

PAST MEDICAL HISTORY

Any medical conditions such as diabetes mellitus, hypertension, ischemic heart disease renal, thyroid dysfunctions or liver disease and its complications, duration and control need to be asked.

Ask whether patient has any systemic illnesses like ulcerative colitis, Chron's disease, SLE or malignancies.

Ask whether there is a history suggestive of photosensitivity.

ALLERGIES

Find out any history of drug or food allergy, chronic urticaria or Angio oedema. If present, what kind of a reaction, whether it is a mild rash or anaphylaxis

DRUG HISTORY

Any recently commenced drug or any long-term drug usage, any medications prescribed for skin rash or any herbal remedies used need to be asked.

FAMILY HISTORY

Ask about family history of dermatological disorders, allergies, malignancies or any connective tissue disorders.

PERSONAL AND SOCIAL HISTORY

Explore the social context of the patient and identify risk factors for dermatological disorders.

Ask about the type of accommodation, who else is in the family, the health and occupation of the caregivers. Find out the financial state of the patient and family and the supportive network.

Find out whether patient has the ability to get the activities of daily living done and the ability to continue the occupation.

Any recent change in the home or working environment and the possibility of contact with the irritants to cause skin lesions.

Find out whether the skin lesion gets worse when they work and whether it improves during holidays. Find out the exposure to the sun at work. Explore the stress at home or work place. Ask whether the rash exacerbated during periods of stress specially in hair loss and psoriasis.

Smoking

Ask whether the patient smokes, if so, calculate the pack years

Alcohol

Type, amount and the frequency of alcohol usage and the state of dependence. Ask whether rash exacerbate with the intake of alcohol.

Recreational drugs

Usage and the possibility of IV drug use

Diet

Ask the patient whether any recent change of diet or any recently taken food type which could have been the trigger for the rash.

Sexual history

Ask about partners specially if coming with genital ulcers or discharges

CHAPTER 4**EXAMINATION OF PATIENTS WITH SKIN LESIONS**

HOW DO YOU DESCRIBE SKIN LESIONS?

Lesion	Description	Examples of skin diseases
Macule		
Papule		
Patch		
Plaque		
Nodule		
Wheal		
Vesicle		
Bullae		
Pustule		
Abscess		
Scale		
Crust		
Erythema		
Telangiectasia		
Purpura		
Scale		

DISTRIBUTION OF SKIN LESIONS

Distribution	Description	Give one example
Acral		
Extensor		
Flexural		
Dermatomal		
Follicular		
Seborrheic		

CONFIGURATION OF THE LESION

Configuration	Description	Give one example
Discrete		
Confluent		
Linear		
Discoid		
Target		
Annular		

COLOUR OF THE LESION

Colour	Describe how	example
Hyperpigmented	Excess melanin production	Addison's disease
Hypopigmented		
Depigmented		
Erythematous		
Purpuric		

EXAMINATION OF A SKIN LESION

General examination

Inspect the nails, scalp, the hair and the mucosal surfaces (e.g., conjunctivae, lips, gums, tongue, buccal mucosa and genital examination)

Look for evidence of systemic diseases (e.g., xanthoma, café-au-lait spots, acanthosis nigricans)

Inspection of the lesion

Distribution

Find out whether the skin lesions are symmetrically distributed or unilateral or localized, whether it is distributed in particular regions such as sun exposed areas, whether it has a particular pattern such as linear, grouped, diffuse, annular or scattered. Examine for healed scars and the Koebner phenomenon.

Colour

See the colour, whether it is red, purple, brown or black.

Shape

Inspect the shape, the size and the border of the lesion

Special features

Whether the rash has features of excoriation, ulcerations, weeping, crusting, scales, increased vasculature

Odor

Unpleasant, foul smelling or fishy odor.

Palpation

See whether the skin lesion is tender to touch or exceptionally fragile. Run your finger slowly over the lesion and feel the surface. it may be smooth or rough.

Find out whether it is scaly, or palpable. If it is a red color lesion examine to see the blanching.

Palpate to see whether there is skin atrophy, press for the firmness or whether there is fluid filled

Check for temperature, oedema or crepitus

Presentation of a short case: Hypopigmented patch over left arm

There's a well-defined hypopigmented macule over the lateral aspect of left arm close to the elbow.

It's 4 by 3 cm in size. Margin is not palpable.

Surface is dry with reduced hair over the patch.

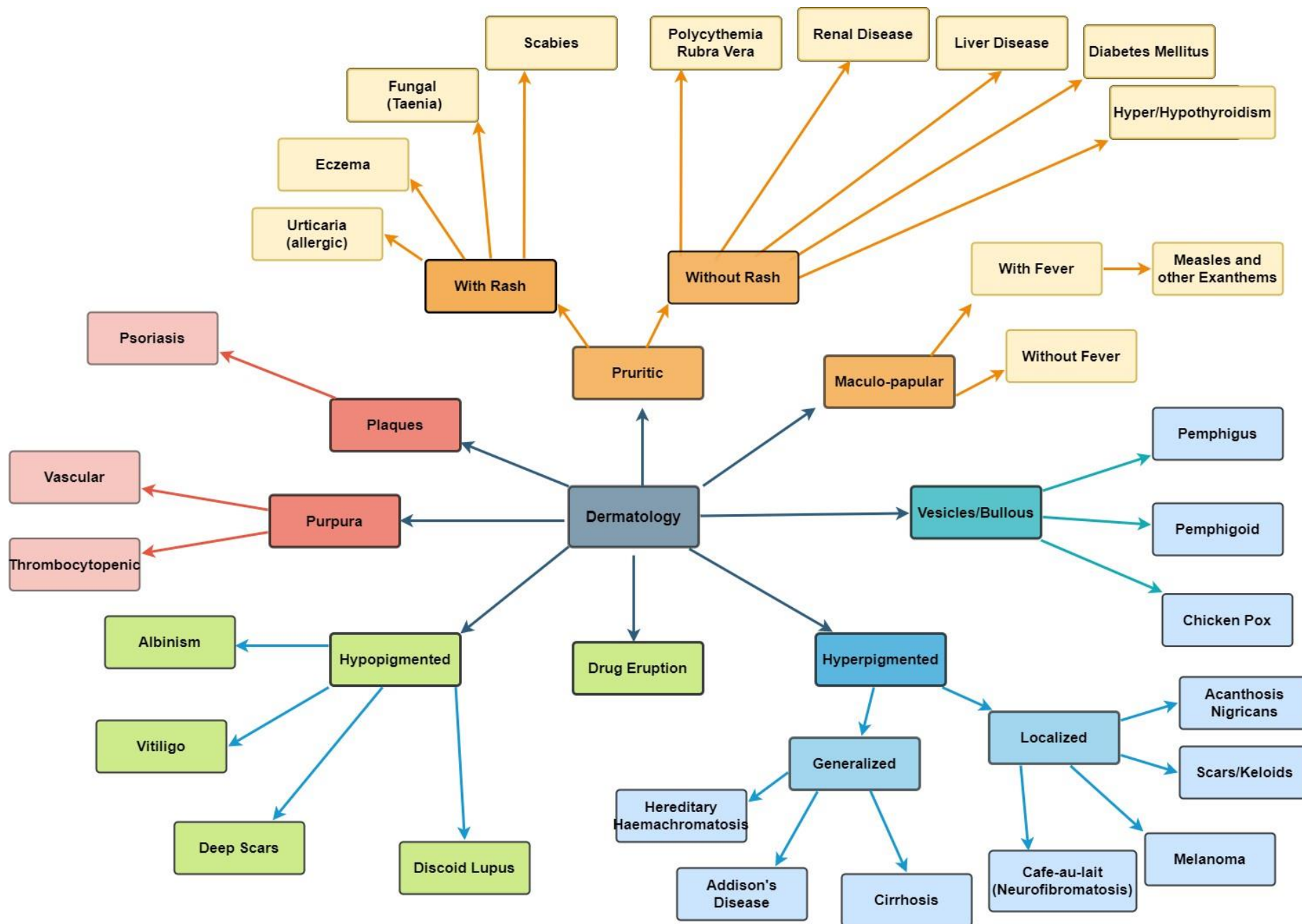
There's impairment of pain and touch sensation over the patch. Satellite lesions are not seen.

No palpable, thickened cutaneous nerves in the area. Ulnar nerve is not thickened.

No sensory or motor impairment of the left hand.

No similar lesions in other areas of the body.

It's a patch of tuberculoid Leprosy.



CHAPTER 5

COMMON INVESTIGATIONS

Observe and describe the indications, limitations and principles of following procedures

- a. Skin biopsy
- b. Cauterization
- c. Laser therapy
- d. UV therapy
- e. Allergy skin test

CHAPTER 6

EXERCISES

- 1) Obtain a history from a patient with Toxic Epidermal Necrosis (TEN) and complete the section below.
 - a) Write a summary of the presentation of the patient you encounter.
 - b) What are the complications you saw in this patient?
 - c) Brief the pathogenesis of development of TEN.
 - d) Outline how your patient is managed.

- 2) Study a patient with Steven Johnson's Syndrome and complete the work below.
 - a) Write a summary of the presentation.
 - b) What is the likely etiology of this condition? Explain your answer.
 - c) What are the likely complications that the patient could develop?
 - d) Outline the management of your patient.

- 3) Involve in acute management of a patient with allergic Urticaria/ Angioedema/ (with or without) anaphylaxis and complete the work below.
 - a) Write a summary of the clinical presentation of your patient.
 - b) What are the parameters you record to ensure the safety of the patient?
 - c) What is the likely aetiology? Reason out your answer.
 - d) Explain the pathogenesis of Urticaria and Anaphylaxis.

- 4) Study a patient on treatment for leprosy and complete the section below.
 - a) Describe clinical signs and symptoms that your patient is having which are compatible with the clinical picture of leprosy.
 - b) Explain the pathogenesis of those signs and symptoms of your patient.
 - c) Outline the clinical classification leprosy.
 - d) What are the investigations carried out on your patient, explain why they are done?
 - e) Outline the plan of management of your patient.
 - f) State the advice you give to the patient on discharge including education on disease, investigations, management plan and follow up plan.
 - g) Explain what lepra reaction is

- 5) Obtain history and examine a patient with a vasculitic rash and complete the section below
 - a) Write a summary of the presentation of your patient
 - b) How do you describe a vasculitic rash?
 - c) Mention the investigations you request and explain why they are performed?
 - d) Briefly describe the histological findings you see in the skin biopsy of your patient (or expected to see)
 - e) What are the mimics of vasculitis?

- 6) Study a patient with infected eczema and complete the section below
 - a) Write a summary of your patients' history and examination
 - b) Describe the lesion(s) that your patient is having
 - c) What are the differential diagnoses you consider for your patient?
 - d) What are the types of eczema?
 - e) What are the investigations you request on your patient and mention why you request them?
 - f) Outline the management of your patient

- 7) Make a picture collection (not of your patients) of following dermatological conditions and get the signature from the consultant to confirm the correct picture.

Describe the lesions

 - a. Maculo papular rash
 - b. Viral exanthem
 - c. Tinea skin infection / Tinea incognito
 - d. Intetrigo
 - e. Herpes zoster
 - f. Cold sore/ HSV
 - g. Carbuncle
 - h. Contact dermatitis
 - i. Eczema
 - j. Melanoma/SCC/BCC
 - k. Squamous cell carcinoma
 - l. Discoid lupus erythematosus (DLE)
 - m. Lichen planus
 - n. Bullous impetigo / non-bullous impetigo
 - o. Leprosy (tuberculous/ borderline/ lepromatous)
 - p. Seborrheic warts/ melanoma
 - q. Common viral infections- Viral warts, Molluscum, Hand foot and mouth disease, kerion

CHAPTER 7

CASE BASED SCENARIOS

In this section we expect you to write histories (minimum of 3 cases as complete documentations) of patients that you encountered during your dermatology appointment.

An OSCE will be held at the end of the appointment.

This book is peer reviewed and recommended as a teaching and learning material for the Department of Medicine, Faculty of Medicine Sabaragamuwa University of Sri Lanka, by the following experts,

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