

**STUDENT WORKBOOK
IN SEXUALLY TRANSMITTED DISEASES**

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

First Edition 2021

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

ALL rights are reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission in writing from the author.

ISBN 978-624-97939-1-0

CLINICAL APPOINTMENT IN SEXUALLY TRANSMITTED DISEASES

1. Name of the student

.....

2. Year passed GCE Advanced level Examination

.....

3. Duration of the appointment

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

4. Name of the consultant

.....

CONTENTS

CHAPTER	<i>Page</i>
Preface	04
Authors	05
1. Introduction	06
2. Core clinical knowledge and skills	09
3. Taking history from a patient	10
4. Examination of a patient	14
5. Laboratory diagnosis of STDs	17
6. Exercises	19
7. Case scenarios	27

PREFACE

Students of the Faculty of Medicine, Sabaragamuwa University of Sri Lanka, study Venereology as a separate appointment of one week at Teaching Hospital Ratnapura. During this period, they will be attached to the venereology unit (STD Clinic) under the Consultant venereologist appointed by the Ministry of Health.

This workbook in venereology is compiled to help students acquire essential knowledge and skills 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 venereology short appointment.

This Workbook is a joint effort between academic staff of the Department of Medicine, SUSL and the current consultant venereologist 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.

Dr Udayangani Ramadasa
Dr Champika Gamakaranage
Professor Saroj Jayasinghe

AUTHORS

Dr. G. Udayangani Ramadasa (UR). MBBS, MD, FCCP, Dip Pall Med (Clinical) RACP
Consultant Physician
Head and Senior Lecturer (Grade I), Department of Medicine, Sabaragamuwa University of Sri Lanka

Dr. Champika Gamakaranage (CG). MBBS, MD (Col), MRCP (Lond), FRCP (Lond)
Consultant Physician
Senior Lecturer (Grade I), Department of Medicine, Sabaragamuwa University of Sri Lanka

Dr Gayani Nanayakkara(GN). MBBS, PgDip VEN, MD VEN
Consultant Venereologist
Teaching Hospital Ratnapura

Emeritus Prof. Saroj Jayasinghe (SJ). MBBS, MD, MD (Bristol), FRCP (Lond), FCCP, PhD (Col)
Consultant Physician
Consultant to the Department of Medicine, Sabaragamuwa University of Sri Lanka
Former Chair Professor, Department of Clinical Medicine, University of Colombo

Contribution

UR – Wrote the initial draft, compiled the history taking, examination, investigations and exercises sections and updated all the sections

CG – Updated and edited all the sections

GN – Assessed and updated all the sections

SJ – Conceptualized the production of this book, compiled the examination section of the initial book and mind map section and updated all the sections

OTHER CONTRIBUTORS

Dr. K. S.N. Prasangani (KP) – Contributed with language editing
BA (Hons) in Languages (SUSL), MA in Linguistics (Kelaniya), PhD in Applied Linguistics (UNIMAS, Malaysia)

Dr. U.U.K. Udumulla (UUK) – Contributed with designing mind maps and document editing (MBBS), Demonstrator at Department of Medicine, Sabaragamuwa University of Sri Lanka

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 Venereology will give you the opportunity to study Venereology with exposure to specific case scenarios in more detail. This workbook is prepared to provide guidance to the students during the Venereology 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 the STD appointment

On completion of the appointment in STD, the students will be able to,

1. Obtain a relevant history from patients, carry out genital examination, analyze the clinical features and arrive at a most probable diagnosis.
2. Describe the clinical features, pathophysiology, complications, laboratory diagnosis and management plan of following common STDs
 - a. Genital herpes
 - b. Syphilis
 - c. Chancroid
 - d. Gonorrhoea
 - e. Non gonococcal urethritis
 - f. Trichomoniasis
 - g. Genital warts
 - h. HIV /AIDS
3. State the investigations needed to arrive at a diagnosis, management plan including contact tracing and epidemiological treatment of the partner.
4. Describe the following procedures
 - a. Obtaining a vaginal swab for gram staining.
 - b. Obtaining a cervical smear for gram staining and GC culture.
 - c. Obtaining a urethral smear for gram staining and GC culture
 - d. Examination of saline wet smear.
 - e. Obtaining specimens for Dark Ground examination and Giant cells from genital ulcer.
5. Write case notes, clinic notes, prescriptions, referrals and know about EIMS (Electronic Information Management System) in the clinic.
6. Identify counselling as an integral part of comprehensive STD care and concept of pretest and posttest counselling of HIV.
7. Manage occupational injuries among health care workers and start post exposure prophylaxis for HIV in a potential exposure.
8. Describe the importance of maintaining confidentiality, and concept of 'shared confidentiality' and prevention of Stigma and discrimination on STD and HIV.
9. Understand the programme of EMTCT of Syphilis and HIV (Elimination of Mother to Child Transmission of Syphilis and HIV) and its approaches.
10. Describe the principles and strategies for prevention of STD/HIV among general population, vulnerable population and key population in Sri Lanka.

11. Describe current situation and trends in STD and HIV. (global and Sri Lankan situation).
12. Function as an effective member of the healthcare team, knowing the health facilities, capacities, services and social support available for patients through the STD clinics in Sri Lanka.

CHAPTER 2

CORE CLINICAL KNOWLEDGE AND SKILLS

At the end of the STD appointment, you should be competent in the technique of history taking, physical examination 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 study the presentations given in the next section “Topics in STD Appointment” .

2.1 Clinical Presentations: STD Appointment

Following are some of the key presentations that ought to be covered during the STD Appointment.

Vaginal discharges - (Gonorrhoea, Trichomoniasis, Bacterial Vaginosis, Candidiasis)

Urethral discharges - (Gonorrhoea, Chlamydia, Non-Gonococcal urethritis)

Lower Abdominal Pain - (PID and possible other causes)

Genital ulcers - (Genital Herpes, Syphilis, chancroid,)

Genital lumps - (Genital warts, Molluscum))

Scrotal pain and swelling - (epididymo- orchitis)

Those clinical presentations may be caused by STD or Non-STD illnesses and you should be able to arrive at a probable diagnosis/differential diagnoses at the end of history taking and examination.

2.2 Topics in STDs

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

1. HIV and AIDS
2. Common STDs and their presentations.

CHAPTER 3

HISTORY TAKING AND COMMUNICATION WITH A PATIENT ATTENDING TO STD CLINIC

There are important principles you have to follow when taking a history of a patient attending to STD clinic. A welcoming, confidential and conducive environment should be in place to facilitate good history taking. First you need to ensure the privacy and confidentiality and it has to be maintained at all times. When you communicate, you should be professional. When you ask questions, be open minded and non-judgmental. Ask only appropriate questions. Good communication skills which include verbal and nonverbal skills are of utmost importance in overall management of the patient. Do not show that you are embarrassed or shy and care should be taken to avoid conflicts between clinician's values and attitudes towards sexuality and sexual behaviours of the patient.

Note the reason/s for attendance

Patients may be voluntarily attending to the clinic without symptoms or with symptoms, such as genital lesions, genital discharge, or any other symptom e.g., rash, red eyes, fever, joint pain. They may also visit a clinic as a contact because the partner was diagnosed to have STD. Sometimes there are referrals from other wards or from local hospitals seeking expert opinion and management. There are some patients referred for STD screening for medicolegal purposes such as victims of sexual assaults and as court referrals of commercial sex workers.

PRESENTING COMPLAINT

Initially use open ended questions and find out the main complaint of what brought the patient to the hospital.

HISTORY OF PRESENTING COMPLAINT

In symptomatic male and female patient:

Ask about nature, duration, severity of symptoms, associated symptoms, and involvement of other relevant sites. Ask about similar episodes earlier. If so, any treatment taken, and details of treatment, duration, partner/s been symptomatic at present or past.

As an example;

If a male patient presented with urethral discharge ask whether it is a clear, milky or mucoid discharge. Find out whether he has associated symptoms like dysuria, urethral itching, frequency or urgency. Ask whether there is scrotal swelling, pain or redness. Find out if he has a rectal discharge or pain during defecation that could indicate an ulcer or infection.

Ask whether he has skin rash or painful joints which are seen as associated symptoms in syphilis (e.g., rash in secondary syphilis) or gonococcal arthritis or septicaemia.

In a female patient, following additional questions should be asked:

- Contraception method and duration of use.
- Menstrual history; First day of the last menstrual period (LMP), duration, length of the cycle, regular/irregular, inter menstrual bleeding,
- Details of pregnancies; current or previous with outcomes.
- Breast feeding.
- Post coital bleeding.
- Date of last cervical cytology (Pap smear) and results.

PREVIOUS STDs

Name/s, or symptoms, date of diagnosis details of treatment, prior Syphilis and HIV serology test dates and results.

PAST MEDICAL AND SURGICAL HISTORY

- Significant illnesses in the present or past with hospital admissions. (ischemic heart disease, hypertension, diabetes mellitus, bronchial asthma)
- Current Medications, any long-term medications, Hepatitis B immunization status if the patient is a homosexual male.
- Past history of transfusions of blood/ blood products – reason, dates, within Sri Lanka, in government hospital or private hospital or in overseas: name of the country.

ALLERGY TO DRUGS

Identify the drugs and type of reaction

SOCIAL HISTORY

Understand the social context of the patient. Education, occupation, details of the Partner/s (marital partner and children). Residence and environment, travelled abroad with details, recreational activities, alcohol, and smoking. Ask about recreational drug history; current use, date of last use, mode of use, possibility of sharing needles.

RISK ASSESSMENT AND THE SEXUAL HISTORY

Taking proper sexual history is essential in management of patient and the partner/s. However, you have to ask sensitive questions regarding their very personal issues related to sex and sexuality. This may be challenging and some patients may find some questions resentful. Therefore, clearly explain to all patients, why you are asking such questions as indicated below. Assure confidentiality of the information gathered.

- **Gender of the partner/s;** to identify gay/bisexual men in order to take rectal and pharyngeal samples, Hepatitis screening and to recommend vaccination for Hepatitis B.
- **Sites of the sexual exposure (oral, vaginal, anal);** to identify which sites need to be sampled.
- **Relationship with the partner and the duration of relationship;** to facilitate partner notification, and contact tracing.
- **Details of condom use;** to facilitate condom promotion and to assess risk.
- **Date of last sexual exposure;** to discuss the need of repeat testing if still within the 'window period' and to assess the need of emergency contraception and need of post exposure prophylaxis for HIV where relevant.

In all patients, following details should be asked

- **Details of the last sexual exposure (LSE);** date, gender of the partner, type of the partner (marital/regular/casual/ commercial), sites of the exposures, details of the condom use or the reasons for not using.
- **Details of the previous exposures;** number of partners during past one month, three months, twelve months and life time with their gender, types of the partner/s, sites, and details of condom use as given above.
- **Details of first sexual exposure (coitarche);** date/period, gender, type, sites, condom use.
- **Details of sexual contacts overseas;** date/period, gender, type, sites of exposure, condom use.

After the sexual history is completed, check with the patients that they have no other concerns that have not been addressed yet. This may include psychological concerns like anxiety, feeling guilty, sexual abuse, possibility of unwanted pregnancy and safety in relationships etc.

SYSTEMIC INQUIRY

- General- weight loss, long standing fever, malaise, generalized lymphadenopathy
- Cardiovascular- Palpitations, shortness breath or chest pain
- Respiratory- Wheezing, shortness of breath, cough
- Gastrointestinal- Long standing diarrhea, constipation, rectal bleeding
- Musculoskeletal- Joint pain, muscle pain

Complete this table assuming your patient is a female patient.

Symptom	Analysis of the symptom	Causes
Lower abdominal and pelvic pain		1.
		2.
		3.
Post coital bleeding		1.
		2.
		3.
Post-menopausal bleeding		1.
		2.
		3.
Abnormal vaginal discharge		1.
		2.
		3.
Vulval ulcers		1.
		2.
		3.
Dyspareunia		1.
		2.
		3.
Dysuria		1.
		2.
		3.
Vulval Itching and genital skin changes		1.
		2.
		3.

CHAPTER 4

EXAMINATION OF THE PATIENT

- Always offer patients a chaperone.
- Assure privacy.
- Describe the examination procedure to the patient and get the consent.
- Carry out a thorough general examination.
- Systemic examination and examination of the abdomen is particularly important.
- Do a complete genital examination including perineal and perianal area.
- Take relevant specimens while examination.

4.1 General examination

Look for built, eyes, mouth, skin, joints (specially palms and soles) for pallor, rashes, red eyes, lumps. Inspect the oropharynx for ulcers warty lesions and look for generalized lymphadenopathy.

4.1.1 Genital examination of a male patient

Have a chaperone of the same sex of the patient to accompany you. Avoid the possibility of others walking in to the room and close the door. Adequate exposure is important preferably from umbilicus up to mid-thigh. Position the patient and use a suitable light and wear gloves.

Inspection

- Pubic area - blisters, ulcers, warts, nits, folliculitis, other skin lesions
- Inguinal area - rashes, ulcers, visible swellings
- Shaft of the penis, prepuce, glans of the penis, coronal sulcus - swelling, rash, ulcers, warts, phimosis, fissures, skin changes(erythema/macules/papules)
- Urethral meatus- discharge, erythema, oedema, meatal warts, ulcers, if no obvious discharge, milk the urethra and look for discharge at the meatus
- Scrotum - skin rash, swelling, other skin lesions
- Perineal area - ulcers, warts, rash
- Perianal area - discharge, rash, ulcers, warty lesions, fissures, fistula, haemorrhoids
- Rectum if indicated - proctoscopy to look for mucosal erythema, ulcers, pus discharge, warts, bleeding.

Palpation

Pay attention to following during palpation

- Genital ulcers – number, tenderness and presence of induration
- Inguinal lymph nodes - size, tenderness, discrete or matted, mobile or fixed, soft or firm. Rule out hernia.
- Palpate the scrotal sac – look for tenderness, consistency of testicles. Rule out, hernia, hydrocele, varicocele, and testicular torsion and tumours.
- Spermatic cord - tenderness, thickening, varicocele
- Epididymis - tenderness, swelling, cysts

4.1.2 Genital examination of a female patient

Female patients should be placed in the lithotomy position for genital examination.

Inspection

- Abdomen - scars
- Pubic area - blisters, ulcers, warts, other skin lesions, folliculitis
- Inguinal area - erythema, rash, swelling, ulcers
- Labia majora and minora - erythema, oedema, blisters, ulcers, warts, fissuring and other skin changes
- Urethral meatus - discharge, warts, furuncle
- Vagina introitus - discharge, erythema, ulcers, warts
- Bartholin gland - enlargement
- Perineal and perianal area - warts, discharge, ulcers, fissures, skin changes, haemorrhoids

Palpation

Pay attention to following during palpation

- Lower abdomen – tenderness, guarding, palpable masses
- Genital ulcers – tenderness, induration
- Inguinal lymph nodes - size, tenderness, discrete or matted, mobile or fixed, soft or firm. Rule out hernia.
- Bartholin glands - lies in the posterior half of labia majora, palpable when it is enlarged or fibrotic.

Speculum examination

Done with the consent of the patient who had penetrative vaginal sex. Before inserting speculum check whether the patient has passed urine. Use sterile speculum and wet with normal saline before insertion. Avoid any other lubricants.

Inspect following during examination.

- Vaginal walls for erythema, warts, and note the nature, colour of the discharge present.
- Take appropriate vaginal specimens.
- Inspect cervix - look for cervical discharge, oedema, erythema, warts, cervical ulcers and ectropion.
- Take appropriate cervical specimens and evidence for contact bleeding.

Pap smear test

For the females who attend to STD clinic, get an opportunity to have Pap smear test, if they haven't had it at well women clinics/any other occasion. Pap smear can be done after collecting specimens for STI screening. If a woman is menstruating, PAP should be postponed and advise to have it at the earliest opportunity.

Bimanual pelvic examination

Before completion carry out bimanual pelvic examination at the end.

- Note any warmth, tenderness in the vagina.
- Feel the consistency of the cervix.
- Move the cervix side to side and check for cervical motion tenderness.
- Assess the size and position of the uterus. Check the mobility and any uterine tenderness.
- Feel the adnexa both sides, note any tenderness and masses.

- c. Although Pap smear is done for early detection of cervical cancers there are STDs that can be detected in routine Pap smear report. Name two of them.
 - 1.
 - 2.

6. Urethral swabs in males

- a. Explain the procedure of specimen collection of urethral swabs in a male patient

- b. What are the tests you may order in several urethral swabs?

7. Genital ulcers

- a. What are the specimens you are going to take from a genital ulcer?

- 1.
- 2.

- b. Explain how do you to collect specimen for Tzanck smear (Giant cells examination) from genital ulcer.

2. Trichomoniasis

- a. Write the clinical presentation of a female with *Trichomonas vaginalis* infection.

- b. How do you diagnose Trichomoniasis?

- c. What is the recommended treatment for Trichomoniasis and briefly outline the other components of the management?

3. Genital herpes (Herpes Simplex Virus)

- a. Explain what is meant by primary HSV infection and non-primary infection.

- b. What are the clinical features of symptomatic first clinical episode of HSV infection?

- c. What are the tests available for the diagnosis of HSV infection?

- d. Out of those tests, what is the simple and rapid diagnostic test available in the STD clinic to assist in diagnosis?

- e. How do you manage first clinical episode of HSV? Describe under following.
 - i. Drug treatment
 - ii. Supportive treatment and general advice
 - iii. Counselling and Follow up

- f. How do you manage patient with recurrent HSV infection?

4. Syphilis

- a. Describe clinical features of
- I. Primary syphilis

II. Secondary syphilis

III. Latent syphilis

IV. Tertiary syphilis

- b. What are the tests that can be carried out in the diagnosis of syphilis in the STD Laboratory?

- 1.
- 2.
- 3.

- c. How do you identify organism 'Treponema pallidum' under Dark field microscopy?

- d. Mention treatment for each stage of Syphilis including duration of therapy.

5. Chancroid

a. What are the clinical features of chancroid?

b. What is the organism responsible?

c. How do you treat?

6. Genital Warts

a. Name the virus responsible for development of genital warts?

b. What are the virus types that cause genital tract dysplasia and cancers associated with genital warts?

c. What are the other differential diagnoses to consider with a patient having warty lesions in the genitals?

d. What are the treatments available for genital warts?

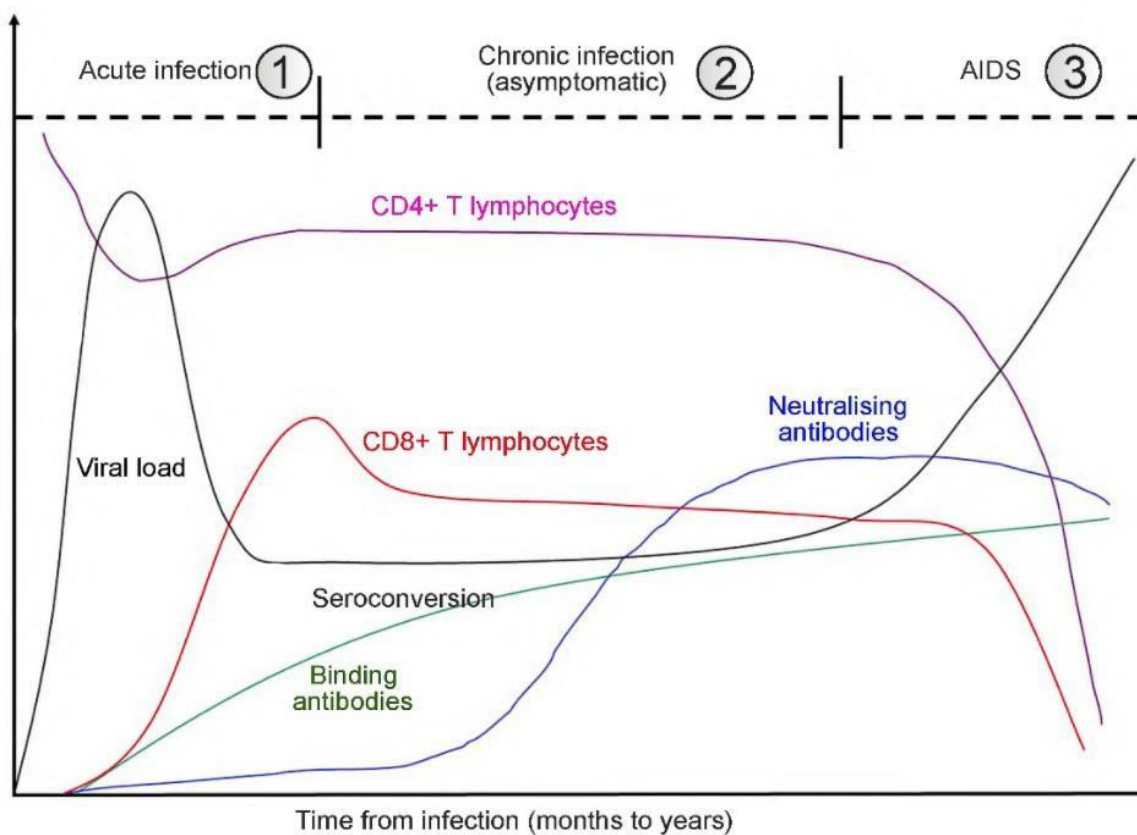
7. Pregnancy and STDs

- a. What are the STDs that can be transmitted from pregnant mother to her baby?
- 1.
 - 2.
 - 3.
 - 4.
 - 5.
- b. What are the strategies adopted in Sri Lanka to eliminate mother to child transmission of Syphilis and HIV? (EMTCT of Syphilis and HIV)

8. What are the vaccine preventable STDs?

- 1.
- 2.
- 3.

9. HIV and AIDS

HIV immunology and natural history

Laboratory diagnosis of HIV

- a. What are the HIV screening tests that are available in the STD clinic?

- b. What is known as HIV confirmatory test and where it is available in Sri Lanka?

- c. State the steps in carrying out HIV pre-test counselling.

- d. How do you send blood sample for HIV testing to STD lab, when you are working as intern medical officer?

Management of HIV.

- a. Write the benefits of Anti-Retroviral Treatment?

- b. What is meant by 'comprehensive care of HIV patient' and what are the components of comprehensive care?

- c. Outline the monitoring and follow up of the HIV patient in the STD clinic

CHAPTER 7

CASE SCENARIOS

Select 3 patients who have STDs, with the help of the consultant Venereologist. Write their case scenarios (history, examination, investigations, diagnosis, and management) and other points to note, that would help you to revise closer to the final MBBS examination.

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,

1. Dr. Niroshan Lokunarangoda

MBBS (Col). MD Medicine (Col), MRCP(UK), PGCME(Col),
MRCP (Acute Medicine), MSc (Med Toxicology). MRCP (London), FRCP(Edin)
Head and Senior Lecturer and consultant Cardiologist
Department of Medicine
Rajarata University of Sri Lanka

2. Dr. Dumitha Govindapala

MBBS. MD (Col). MRCP (UK). FRCP (Lon). FACP (USA)
Head and Senior Lecturer and consultant Physician
Department of Medicine
Faculty of Medicine
General Sir John Kotelawala Defence University, Sri Lanka

