



WORKSHOP-1

BLEEDING PATIENT – A Hands-On Approach to Coagulation

Brief Introduction:

Managing a bleeding patient is an everyday challenge. This workshop is designed to equip participants with the knowledge and practical skills required to effectively assess bleeding disorders.

The program schedule is designed to have an interactive and comprehensive learning session on haemostasis and bleeding disorders, with ample time for hands-on experience and clinical application. By the end of the one-day workshop, the participants would have gained a deep understanding of coagulation and how to assess and evaluate an abnormal coagulation report and its further workup.

The workshop will cover:

1. **Systematic Workup for Bleeding Patients:**

Step-by-step approach to identifying the root cause of bleeding in patients.

2. **Approach to Abnormal First-Line Investigations:**

Interpretation of common diagnostic tests and understanding abnormal results in bleeding scenarios.

3. **Hands-On Training:**

Practical session on performing manual Prothrombin Time (PT), Activated Partial Thromboplastin Time (APTT), mixing studies, and inhibitor screening.

4. **Demonstration:** Factor assay on automated coagulometer

Number of Delegates: 20.

Venue: Victoria Hospital, BMCRI, Bangalore.



Session 1: Introduction to Coagulation (9:00 AM - 10:00 AM)

Objective: To provide a comprehensive understanding of the basic concepts of coagulation.

- **9:00 - 9:15 AM: Registration & Introduction**
 - Welcome and brief overview of the workshop objectives.
 - Introduction of the faculty and participants.
 - Overview of the day's schedule.
- **9:15 - 10:00 AM: Basic Mechanisms of Coagulation**
 - Overview of haemostasis: vascular spasm, platelet plug formation, and fibrin clot formation.
 - Coagulation cascade (intrinsic, extrinsic, and common pathways).
 - Role of clotting factors and their activation.
- **10:00 - 10:15 AM: Coagulation Disorders Overview**
 - Hemophilia, Vitamin K deficiency, and other clotting disorders.
 - Importance of monitoring coagulation in clinical settings.

Coffee break: 10:15 AM - 10:30 AM

Session 2: Coagulation Testing Techniques (10:30 AM - 12:00 PM)

Objective: Hands-on introduction to the most commonly used tests for evaluating coagulation function.

- **10:30 - 10:45 AM: Introduction to Coagulation Tests**
 - **Prothrombin Time (PT):** Measure of the extrinsic and common pathway.
 - **Activated Partial Thromboplastin Time (aPTT):** Measure of the intrinsic and common pathway.
 - **International Normalized Ratio (INR):** Standardization of PT across labs.
- **10:45 - 11:30 AM: Hands-on Lab: Performing PT and aPTT Tests (both manual and automated coagulometer)**
 - Participants will perform these tests using blood samples and reagents.
 - Step-by-step guidance from faculty on how to prepare and process samples.
- **11:30 - 12:00 PM: Interpretation of Coagulation Test Results**
 - Explanation of how to interpret PT, aPTT, and INR.
 - Discussion of abnormal results and their clinical implications (e.g., bleeding disorders, liver disease, warfarin therapy).
- **12:00 - 12:30 PM: Troubleshooting Common Errors in Coagulation Tests**
 - Common errors and how to avoid them.
 - Best practices in sample handling and reagent preparation.
 - Preanalytical errors contributing to the abnormal test results.

Lunch Break: 12:30 PM - 1:30 PM



Session 3: Advanced Coagulation Studies & Case Scenarios (1:30 PM - 3:30 PM)

Objective: To explore more advanced coagulation tests and real-world case applications.

- **1:30 - 2:00 PM: Advanced Coagulation Tests**
 - **D-Dimer:** Used for diagnosing thrombotic events like DVT, PE, DIC.
 - **Fibrinogen Level Testing:** Importance in clot formation and as an acute-phase reactant.
 - **Mixing studies:** Basic approach to the further workup of an abnormal PT or aPTT and how these simple tests help to narrow down the missing or affected factor.
 - **Inhibitor screening:** A basic screening test that helps identify if an inhibitor is the reason for an abnormal first line coagulation test result.
- **2:00 - 2:30 PM: Hands-on Lab: Performing Advanced Coagulation Tests on the Automated Analyser**
 - Participants will conduct a D-dimer test and fibrinogen level testing on the analyser with instructor guidance.
- **2:30 - 3:30 PM: Case Study Discussions with hands-on lab: Performing mixing studies and inhibitor screening manually**
 - Participants will be divided into groups and given clinical case scenarios involving coagulation disorders.
 - Each group has to discuss and present their lab approach in arriving at a diagnosis using coagulation tests.
 - Hands on performance of mixing studies and inhibitor screening.

Break: 3:30 PM - 3:45 PM

Session 4: Approach to Common Inherited Coagulation Disorders and Identifying a Pathologist's role in their care (3:45 PM - 5:00 PM)

Objective: To provide practical knowledge on how to approach inherited coagulation disorders in clinical practice.

- **3:45 - 4:15 PM: Overview of Coagulation Disorder Management**
 - Clinical presentation of common inherited bleeding disorders (Hemophilia) and how to apply the knowledge of coagulation in differentiating them from other causes of bleeding (Vitamin K deficiency, factor inhibitors, lupus anticoagulant).
 - Use of clotting factor concentrates and fresh frozen plasma.
- **4:15 - 4:45 PM: Practical Management Scenarios**
 - Participants will be divided into groups and given real-life scenarios with coagulation test results to help arrive at a diagnosis of a coagulation disorders.
- **4:45 - 5:00 PM: Interpretation of Factor Assay Test Results**
 - Participants will be provided already run results of factor assay for interpretation.

Pre-Conference Workshop:

10th July 2025

Conference:

11th 12th 13th July 2025



Auditoriums on 4th floor & 6th floor,
Administrative Block BMCRI,
Bangalore

Bangalore Medical College & Research Institute

in association with

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Closing Remarks: Q&A and Wrap-up (5:00 PM - 5:30 PM)

- Open floor for questions and discussion of challenges in laboratory approach to coagulation disorders.
- Recap of key takeaways.
- Feedback collection and Vote of Thanks.

**Faculty:**

1	Dr. Sree Lakshmi K MBBS, MD Professor Department of pathology BMCRI, Bangalore	
2	Dr. Ramya. B S MBBS, MD Professor Department of pathology BMCRI, Bangalore	
3	Dr. Mangal V Kulkarni MBBS, MD Specialist Department of pathology BMCRI, Bangalore	

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Technical staff

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