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Leukaemia Coagulation and Marrow Records

Practical 10 / Spotter and viva

Aim

Recognise abnormal white cell patterns and interpret platelet and coagulation data.

Principle

Abnormal morphology suggests hypotheses that require lineage and other confirmation. Platelet number, PT and aPTT examine different aspects of haemostasis.

Materials and Requirements

- Prepared films and marrow micrographs
- Fictional CBC, clotting and lineage summaries

Procedure

1. Compare normal mature white cells with atypical or blast-like cells in supplied fields.
2. Scan the prepared film at low power, then select well-spread fields. Describe atypical cells by size, chromatin, nucleoli and cytoplasm and compare with representative mature cells.
3. Record number and morphology and examine whether other lineages are affected in the CBC.
4. Verify which atypical forms recur across representative fields and record their locations. Review the current and previous Hb, white count and platelet count to identify affected lineages.
5. Compare PT and aPTT with the laboratory intervals and review medicines, specimen fill and platelet count.
6. Match the coagulation results with sample timing, tube fill, medicine history and clinical context. Identify which result may be unreliable and which bleeding finding requires prompt escalation.
7. Suggest a relevant confirmatory test and distinguish urgent notification from definitive diagnosis.
8. Review the supplied marrow morphology and the role of confirmation by flow cytometry or related testing. Separate what the available findings show from the classification still pending.
9. Prepare an urgent-result message with critical values, specimen quality and concern. State which result or test the responsible team must follow.

Precautions

- Do not assign leukaemia lineage from cell size alone.
- Review sample quality before interpreting an unexpectedly prolonged clotting time.

Observations and Interpretation

Leukaemia Coagulation and Marrow Records

Observations and Record

Item	What to record	What it tells you
Peripheral blood	Cell morphology and proportions	Flags a possible marrow or reactive process
Marrow or lineage report	Documented pattern and confirmation method	Supports classification
Coagulation	PT, aPTT and platelets	Defines the pattern requiring investigation

Worked Example

A fictional CBC flags possible blasts alongside anaemia and thrombocytopenia. Confirm the smear promptly and refer for the appropriate haematology assessment.

Result and Interpretation

Give a descriptive impression and a reasoned next test or escalation.

Viva Questions and Answers

What is a blast flag?

An analyser alert that prompts review and confirmation.

What do PT and aPTT reflect?

Different portions of the measured coagulation system under their assay conditions.

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