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ABO and Rh Grouping and Haemostasis Demonstration

Practical 03 / Teaching laboratory

Aim

Identify an ABO/RhD reaction pattern and interpret legacy bleeding and clotting time teaching records.

Principle

Forward grouping detects red cell antigens. In appropriate samples, reverse grouping helps check expected ABO antibodies. Bleeding and clotting times are historical teaching tests with limitations.

Materials and Requirements

- Non-biological blood grouping trainer or validated recorded reactions
- Recorded bleeding, clotting and coagulation results

Procedure

1. Identify the anti-A, anti-B and anti-D reaction fields and verify the control and reading method.
2. On the non-biological trainer label the reaction areas and match the cards to the correct identifiers. Keep reaction areas separate and use the demonstration's own controls and reading interval.
3. Read forward grouping from the anti-A and anti-B reaction areas. Compare serum reactions with the labelled A and B reagent cells in the reverse grouping example.
4. Assess the anti-D reaction separately with the required control. Mark a mixed field, weak reaction or disagreement as unresolved and refer it to the instructor.

Continue with step 5 on the next page.

Procedure Continued

ABO and Rh Grouping and Haemostasis Demonstration

5. Read anonymised bleeding-time and clotting-time records and describe their different endpoints.
6. In each historical haemostasis record identify the start time, documented endpoint and elapsed interval. Record units and flag missing or unreadable observations.
7. Compare those historical endpoints with the purpose of platelet assessment, PT and aPTT using supplied reports.
8. Read the supplied PT and aPTT against the printed laboratory intervals. Compare the recorded platelet count and identify which finding assesses cell number or clot formation in the reported method.
9. Write the ABO and RhD interpretation only for a concordant panel with valid controls. Record haemostasis findings in a separate field and state the limits of the historical tests.

Precautions

- Use simulation for learner grouping and historical bleeding-time data. Avoid a teaching skin incision.
- Treat weak or discrepant reactions as unresolved and refer them to the laboratory.

Observations and Interpretation

ABO and Rh Grouping and Haemostasis Demonstration

Observations and Record

Item	What to record	What it tells you
Forward ABO	Anti-A and anti-B reactions	Establishes red cell antigen pattern
RhD and controls	Anti-D and valid control results	Read under the stated method
Haemostasis	Method and observation endpoint	Distinguishes primary haemostasis and coagulation assessment

Worked Example

A supplied adult panel has anti-A positive, anti-B negative and anti-D positive with valid controls and concordant reverse grouping. The teaching interpretation is A RhD positive.

Result and Interpretation

State the supported group and describe why transfusion requires an approved identity and compatibility workflow.

Viva Questions and Answers

What is reverse grouping?

It tests plasma against known reagent red cells to help verify the ABO group.

Is blood group alone a compatibility decision?

Transfusion requires product and patient identity, antibody and other compatibility checks.

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