Under or Overtransfusion n=15 10c

All cases of under or overtransfusion were clinical errors. One undertransfusion was also delayed (and included in those numbers) due to a laboratory misunderstanding.

There were 3 patients that were undertransfused and 12 over transfused, 3 of these in relation to major haemorrhage. There were 6 paediatric cases: 1 undertransfused and 5 overtransfused.

Deaths n=1

There was 1 death related to overtransfusion. This is described in Case 10c.4.

Undertransfusion n=3

Case 10c.1: Confusion about dose of red cells in a young child

A young child was given a smaller volume of red cells than required due to confusion over the calculations and involving two units of red cells.

Case 10c.2: Transfusion not monitored properly after patient transfer

An elderly woman admitted with gastrointestinal bleeding received O D-negative blood in the emergency department but about 6 hours later checking established that only a small volume had been given. The transfusion had not been properly monitored and repeat Hb results suggested this might also have been an avoidable transfusion.

Case 10c.3: A second case of inadequate monitoring of transfusion

An elderly woman with fractured neck of femur was undertransfused. Six hours after a unit of red cells was set up it was noted that the pump had been switched off and the patient had not received the full unit. The patient died but this was unrelated to the transfusion.

Overtransfusion n=12

The 3 cases that relate to major haemorrhage are described earlier (see Cases 10a.13 to 10a.15).

Case 10c.4: Death related to overtransfusion

A patient in her 70s, weight 38kg, presenting with a rectal bleed was overtransfused, receiving three units. The pre-transfusion Hb was 158g/L and post transfusion was 195g/L. The patient was venesected but 2 days later had a cerebral event. She died 5 days after the transfusion and a further cerebral event. The transfusion was thought to be contributory to her death.

Further overtransfusion cases can be found in the supplementary information on the SHOT website www.shotuk.org.

Commentary

It is notable that the death occurred in an elderly woman of low weight, whose Hb was normal prior to transfusion. Such cases have been reported in previous years. GI bleeding can be difficult to assess and this is a reminder that such vulnerable patients need continued re-assessment for the evidence of bleeding and Hb monitoring.

As in previous years 5 cases were errors in volumes given in children, particularly 4 overtransfusions in infants. An additional case classified as a handling and storage error is noted in Chapter 23, Paediatric Cases (Case 23.7); a child received an excessive volume because of incorrect pump setting.

These cases reinforce the recommendation from last year, that clinical staff authorising or prescribing for children should receive training in weight-based prescribing (Bolton-Maggs et al. 2018, p170).

Reference

Bolton-Maggs PHB (Ed), Poles D et al. (2018) on behalf of the Serious Hazards of Transfusion (SHOT) Steering Group. The 2017 Annual SHOT Report. https://www.shotuk.org/shot-reports/ [accessed 30 May 2019].