A retrospective audit of fluid balance recording in Transfusion-Associated Circulatory Overload (TACO) reports analysed by the Serious Hazards of Transfusion (SHOT) scheme

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Background

Between 2008-2010 SHOT analysed 92 cases reported as transfusion-associated circulatory overload (TACO), which can develop following a relatively small volume of transfused blood components¹,²,³. Patients >70 years are particularly at risk of TACO following RBC transfusion in the absence of suspected acute haemorrhage. Patients <70 years are also at risk, particularly in the presence of risk factors that increase the risk of TACO: cardiac failure, renal impairment, hypoalbuminaemia and fluid overload. TACO generally occurs within 6 hours of transfusion but there is evidence from SHOT data that it can develop up to 24 hours post transfusion.

Reports to SHOT of mortality or morbidity from TACO and over transfusion have increased with TACO the mos

Aims

To establish the proportion of TACO reports in which fluid balance has been recorded.
To raise awareness of the lack of fluid balance recording in fluid balance charts
To highlight the importance of this element in the observation of patient's receiving a transfusion

Methods

A retrospective audit of fluid balance in 92 TACO reports submitted to SHOT since TACO became a stand alone chapter in 2008.

Results

In 45.7% (42/92) of all TACO cases submitted to SHOT between 2008-2010 there were no details of a fluid balance record. In 2008 44.4% (8/18) of cases had an incomplete or no fluid balance record, and this increased to 75% (30/40) of cases in 2010.

Discussion

The upward trend in the proportion of cases where fluid balance documentation is incomplete or absent, despite repeated emphasis as a learning point in successive SHOT reports¹,²,³ and being highlighted in the British Committee for Standards in Haematology (BCSH) guidelines⁴, is of concern.

All SHOT pulmonary complications of transfusion questionnaires have the facility to record fluid balance but Acute Transfusion Reaction (ATR) questionnaires do not. If a report is transferred from the ATR category to TACO following expert analysis, fluid balance information will not have been captured by the ATR questionnaire. SHOT is developing this reporting mechanism, together with other enhancements to the SHOT Dendrite, to enable more accurate categorisation of pulmonary complications of transfusion.

Learning Point

Clinical staff should measure and document fluid balance during transfusion episodes as fluid overload increases the risk of a patient developing TACO.

References