

Salvaging blood during cesarean section may have potential in emergency procedures

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Using cell salvage, the reinfusion of red blood cells lost during surgery, did not lead on average to a statistically significant reduction in the rates of blood transfusion needed by all women undergoing caesarean section, according to a study published this week in *PLOS Medicine* by Khalid Khan from Queen Mary University of London, UK, and colleagues.

Excessive hemorrhage during caesarean sections, one risk of the procedure, requires treatment by transfusion of donated blood components. In the new study, aiming to determine whether cell salvage could minimize the use of donor blood, researchers randomly assigned 3,028 women at risk of hemorrhage during [caesarean section](#) from 26 obstetric units to routine use of cell salvage (intervention group) or current standard of care without routine salvage use ([control group](#)).

Donor [blood transfusion](#) rates were 2.5% in the intervention group and 3.5% in the control group; the difference was not statistically significant (adjusted odds ratio 0.65; 95% confidence interval 0.42 to 1.01, $p=0.056$). In a planned subgroup analysis, the transfusion rate was lower in the intervention compared with control group for women undergoing emergency caesareans (3.0% vs 4.6%, adjusted odds ratio 0.58, 95% confidence interval 0.34 to 0.99), although additional research may be needed to confirm whether cell salvage could be effective in these women.

"There were around 75,250 caesareans carried out in 2013-14 in the NHS. Of these, around 42,500 were emergency caesareans, and these

potentially stand to gain from cell salvage" the authors say. "The benefit will depend on the extent to which the potential benefit would represent good value for money."

More information: Khalid S. Khan et al, Cell salvage and donor blood transfusion during cesarean section: A pragmatic, multicentre randomised controlled trial (SALVO), *PLOS Medicine* (2017). [DOI: 10.1371/journal.pmed.1002471](https://doi.org/10.1371/journal.pmed.1002471)

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