CORRECTION

Correction: Role of heme in lung bacterial infection after trauma hemorrhage and stored red blood cell transfusion: A preclinical experimental study
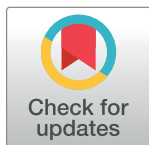
Brant M. Wagener, Parker J. Hu, Joo-Yeun Oh, Cilina A. Evans, Jillian R. Richter, Jaideep Honavar, Angela P. Brandon, Judy Creighton, Shannon W. Stephens, Charity Morgan, Randal O. Dull, Marisa B. Marques, Jeffrey D. Kerby, Jean-Francois Pittet, Rakesh P. Patel

There is an error in Panel B of Fig 6 and the associated caption. The authors have provided a corrected Fig 6 and caption here.

In the Results, in the subsection "Heme levels in patients after TH and resuscitation", there is an error in the fifth sentence of the first paragraph. The correct sentence is: Fig 6B plots the ratio of Hp/2:hemoglobin and Hpx:free heme. The ratio of Hp/2:hemoglobin was greater than 1 (median = 3.5, IQR 1.1–6.0, p<0.01 by one sample t-test and comparison to a theoretical mean of one), although variance is noted. For hemopexin:free heme, this ratio was lower (median = 0.56, IQR 0.34–0.86) and below one (p<0.01 by one sample t-test and comparison to a theoretical mean of one).

In the Discussion, there is an error in the seventh sentence of the eighth paragraph. The correct sentence is: While the absolute concentration of these mediators is important, the relative concentrations of hemoglobin and free heme, compared to Hp and Hpx respectively is likely of greater clinical significance; Hp and Hpx are the endogenous primary defense mechanisms protecting against hemolysis-dependent injury. We show that Hp levels were higher than Hpx, with the Hp:hemoglobin dimer ratio being greater than 1.

There is an error in the tab "Fig 6A–6B" of the S1 Data file. The authors have provided a corrected S1 Data file here.
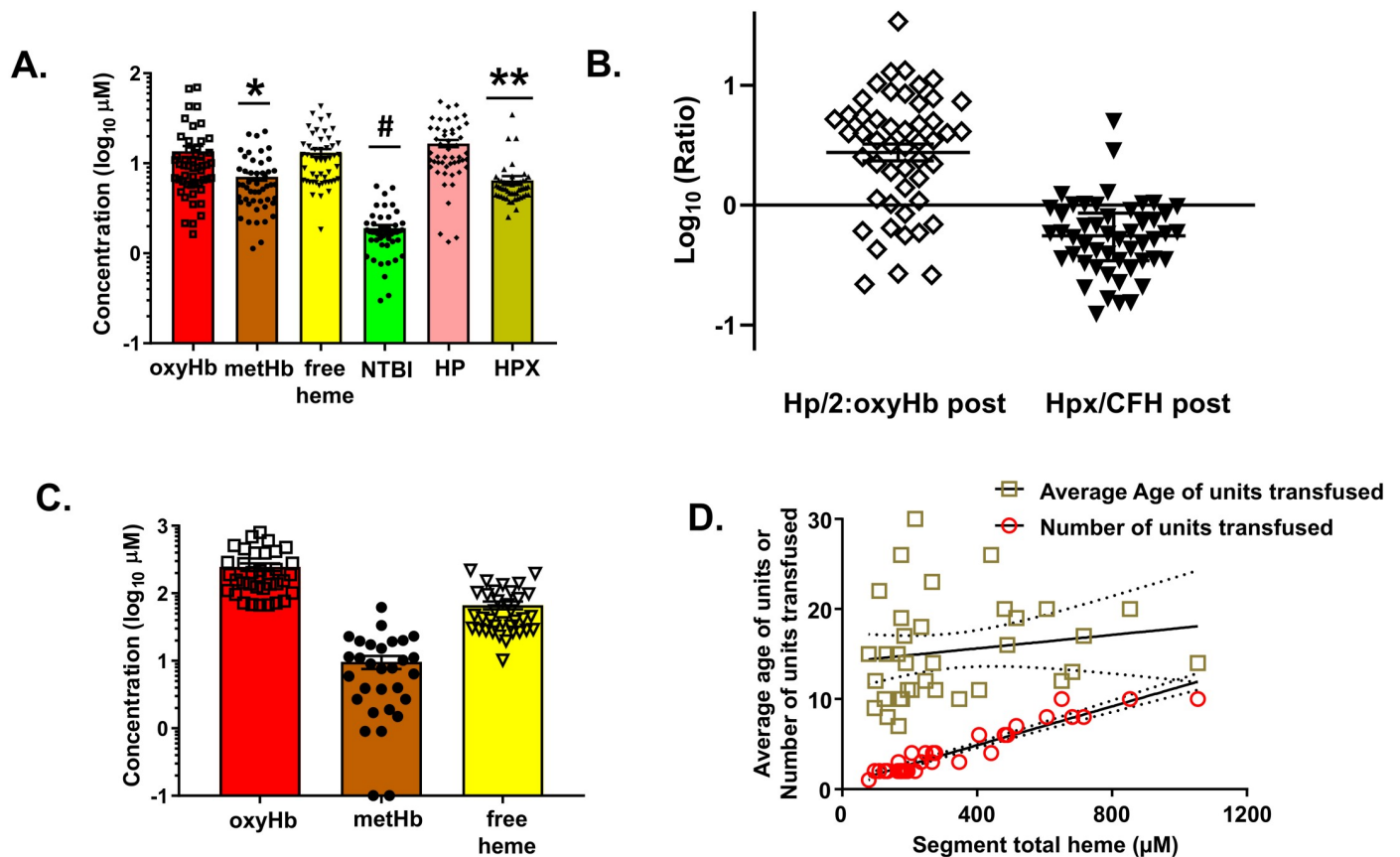
Fig 6. Measurement of hemolysis products and heme-sequestering proteins in transfused units and plasma in TH patients. Fifty TH patients requiring blood product resuscitation admitted to UAB ER between Jan 2015 and Apr 2016 were enrolled. Panel A: oxyHb, metHb, free heme, haptoglobin (Hp) and hemopexin (Hpx) concentrations in plasma from TH patients 2–3h after resuscitation. Data are mean ± SEM. *p = 0.0018 relative to free heme, #p<0.001 relative to oxyHb, metHb and free heme, **p<0.001 relative to Hp and free heme by Kruskal-Wallis with Dunn's multiple comparison test. Panel B: Molar ratios (log transformed) of Hp:hemoglobin dimer and Hpx:heme. The former is presented as Hp/hemoglobin dimer to reflect the fact that one haptoglobin binds to one hemoglobin dimer. Each data point reflects an individual patient. Data show mean ± SEM. Segments associated with RBC units transfused and plasma from patients after stable resuscitation was collected. Panel C: total oxyHb, metHb and free heme concentrations in segments of RBC units transfused (n = 35). Panel D: Segment concentrations of total heme were plotted against the average age of the transfused RBC or the number of units transfused. Line represents best fit by linear regression with 95% confidence intervals. Slope was significantly non-zero for number of units (r2 = 0.91, p<0.001).

https://doi.org/10.1371/journal.pmed.1002991.g001

Supporting information

S1 Data. Raw data presented in Figs 1–6.
(XLSX)

Reference

1. Wagener BM, Hu PJ, Oh J-Y, Evans CA, Richter JR, Honavar J, et al. (2018) Role of heme in lung bacterial infection after trauma hemorrhage and stored red blood cell transfusion: A preclinical experimental study. PLoS Med 15(3): e1002522. https://doi.org/10.1371/journal.pmed.1002522 PMID: 29522519