**Supplementary materials**

**Table S1.** Differences in baseline characteristics and intraoperative variables between the smaller and larger volume red blood cell transfusion groups

| Variables                        | Smaller volume transfusion | Larger volume transfusion | P -Value |
|----------------------------------|----------------------------|----------------------------|----------|
|                                  | n  | Data            | n  | Data            |          |
| Age (years)                      | 39 | 22.2 ± 4.7      | 10 | 20.5 ± 2.8      | 0.424    |
| Gender (male/female)             | 14/25 | 35.9/64.1%     | 4/6 | 40/60.0%     | 1.000    |
| Body weight (kg)                 | 39 | 58.4 ± 11.6     | 10 | 50.7 ± 7.6     | 0.064    |
| Height (cm)                      | 39 | 164.9 ± 7.7     | 10 | 160.8 ± 9.9    | 0.274    |
| BMI (kg/m²)                      | 39 | 21.3 ± 3.1      | 10 | 19.7 ± 3.5     | 0.092    |
| Adjunctive surgical procedures   |    |                 |    |                 |          |
| Genioplasty                      | 22 | 56.4%           | 9  | 90.0%           | 0.070    |
| Segmental osteotomy of the maxilla | 8 | 20.5%           | 4  | 40.0%           | 0.233    |
| Turbinectomy                     | 8  | 20.5%           | 1  | 10.0%           | 0.663    |
| Extraction                       | 11 | 28.2%           | 6  | 60.0%           | 0.075    |
| Mandibular angle reduction       | 12 | 30.8%           | 6  | 60.0%           | 0.141    |
| Glossectomy                      | 0  | 0.0%            | 1  | 10.0%           | 0.204    |
| Iliac bone graft                 | 1  | 2.6%            | 0  | 0.0%            | 1.000    |
| Face lifting                     | 1  | 2.6%            | 0  | 0.0%            | 1.000    |
| Past medical history             |    |                 |    |                 |          |
| Cardiovascular disease           | 1  | 2.6%            | 0  | 0.0%            | 1.000    |
| Pulmonologic disease             | 0  | 0.0%            | 0  | 0.0%            |          |
| Hematologic disease              | 1  | 2.6%            | 0  | 0.0%            | 1.000    |
| Endocrine disease                | 0  | 0.0%            | 0  | 0.0%            |          |
| Hepatologic disease              | 0  | 0.0%            | 0  | 0.0%            |          |
| Psychologic disease              | 1  | 2.6%            | 0  | 0.0%            | 1.000    |
| Genetic disease                  | 0  | 0.0%            | 1  | 10.0%           | 0.204    |
| Neurologic disease               | 0  | 0.0%            | 0  | 0.0%            |          |
| Allergy                          | 5  | 12.8%           | 2  | 20.0%           | 0.620    |
| Others            | 1   | 2.6% | 0   | 0.0% | 1.000 |
|-------------------|-----|------|-----|------|--------|
| **Past surgical history** |     |      |     |      |        |
| Orthognathic surgery | 1   | 2.6% | 0   | 0.0% | 1.000 |
| Surgery related with intraoral cleft | 1   | 2.6% | 1   | 10.0% | 0.370 |
| Orofacial surgery  | 5   | 12.8%| 1   | 10.0%| 1.000 |
| Chest surgery     | 1   | 2.6% | 0   | 0.0% | 1.000 |
| Abdomen surgery   | 2   | 5.1% | 1   | 10.0%| 0.504 |
| Limb surgery      | 1   | 2.6% | 0   | 0.0% | 1.000 |
| Spine surgery     | 1   | 2.6% | 0   | 0.0% | 1.000 |
| Others            | 4   | 10.3%| 0   | 0.0% | 0.569 |
| **ASA Classification** |     |      |     |      |        |
| Class I           | 37  | 94.9%| 9   | 90.0%| 0.504 |
| Class II          | 2   | 5.1% | 1   | 10.0%|        |
| **ABO type**      |     |      |     |      |        |
| A                 | 9   | 23.1%| 4   | 40.0%|        |
| B                 | 7   | 17.9%| 2   | 20.0%|        |
| AB                | 10  | 25.6%| 2   | 20.0%| 0.736 |
| O                 | 13  | 33.3%| 2   | 20.0%|        |
| **Technique of anesthesia** |     |      |     |      |        |
| Total intravenous anesthesia | 19  | 48.7%| 7   | 70.0%| 0.299 |
| Gas anesthesia    | 20  | 51.3%| 3   | 30.0%|        |
| **HBsHg**         | 0   | 0.0% | 0   | 0.0% |        |
| Anti_HCV_B        | 1   | 2.6% | 0   | 0.0% | 1.000 |
| Anti_HBs_B        | 18  | 46.2%| 4   | 40.0%| 1.000 |
| **Preoperative condition** |     |      |     |      |        |
| Systolic blood pressure (mmHg) | 39  | 116.5 ± 15.6 | 10  | 108.8 ± 19.5 | 0.118 |
| Diastolic blood pressure (mmHg) | 39  | 77.0 ± 12.0 | 10  | 69.1 ± 6.3 | 0.087 |
| Heart rate (beats/min) | 39  | 83.4 ± 12.5 | 10  | 78.4 ± 14.7 | 0.321 |
| Body temperature (°C) | 39  | 36.9 ± 0.4 | 10  | 36.8 ± 0.4 | 0.525 |
| Hemoglobin (g/dL)   | 39  | 13.0 ± 1.8 | 10  | 12.7 ± 1.7 | 0.611 |
| Hematocrit (%)      | 39  | 38.6 ± 5.1 | 10  | 37.6 ± 5.0 | 0.527 |
|                         | 39                | 10               |                 |              |              |
|-------------------------|-------------------|------------------|----------------|--------------|--------------|
| Platelet count (X10^9/L)| 252.9 ± 54.3      | 241.5 ± 52.1     | 0.585           |              |              |
| aPTT (seconds)          | 38.4 ± 3.6        | 39.4 ± 3.9       | 0.700           |              |              |
| INR                     | 1.0 ± 0.1         | 1.1 ± 0.1        | 0.196           |              |              |
| PT (seconds)            | 95.1 ± 8.4        | 89.8 ± 10.5      | 0.184           |              |              |
| Serum calcium level (mg/dL) | 9.3 ± 0.3         | 9.2 ± 0.5        | 0.980           |              |              |
| Serum phosphorus (mg/dL) | 3.7 ± 0.4         | 3.6 ± 0.4        | 0.357           |              |              |
| Blood glucose level (mg/dL) | 87.4 ± 7.2        | 88.0 ± 7.9       | 0.526           |              |              |
| Blood urea nitrogen (mg/dL) | 11.6 ± 3.7        | 10.6 ± 2.5       | 0.662           |              |              |
| Uric acid (mg/dL)       | 5.2 ± 1.5         | 4.7 ± 1.1        | 0.464           |              |              |
| Cholesterol (mg/dL)     | 180.8 ± 32.6      | 159.5 ± 23.0     | 0.061           |              |              |
| Total protein (g/dL)    | 7.6 ± 0.4         | 7.6 ± 0.4        | 0.871           |              |              |
| Albumin (g/dL)          | 4.6 ± 0.2         | 4.5 ± 0.2        | 0.670           |              |              |
| Total bilirubin (mg/dL) | 0.8 ± 0.3         | 0.9 ± 0.4        | 0.293           |              |              |
| Alkaline phosphatase (IU/L) | 62.7 ± 13.4      | 65.4 ± 14.4      | 0.427           |              |              |
| Aspartate transaminase (IU/L) | 21.0 ± 5.8       | 18.5 ± 4.1       | 0.242           |              |              |
| Alanine transaminase (IU/L) | 18.1 ± 11.3     | 14.2 ± 5.8       | 0.486           |              |              |
| Creatinine (mg/dL)      | 0.8 ± 0.2         | 0.8 ± 0.2        | 0.573           |              |              |
| Sodium (mEq/L)          | 141.4 ± 1.6       | 141.6 ± 2.0      | 0.770           |              |              |
| Potassium (mEq/L)       | 4.3 ± 0.3         | 4.2 ± 0.2        | 0.161           |              |              |
| Chloride (mEq/L)        | 104.0 ± 1.8       | 103.8 ± 2.3      | 0.589           |              |              |
| Surgical time (min)     | 436.0 ± 116.3     | 497.0 ± 100.9    | 0.059           |              |              |
| Anesthetic time (min)   | 484.7 ± 121.2     | 551.5 ± 104.8    | 0.051           |              |              |
| Anesthetic agent        |                   |                  |                 |              |              |
| Propofol                | 1996.2 ± 2117.5   | 2448.0 ± 2148.4  | 0.650           |              |              |
| Remifentanil            | 7.3 ± 4.3         | 8.8 ± 3.1        | 0.302           |              |              |
| Thiopental              | 73.1 ± 139.0      | 50.0 ± 108.0     | 0.721           |              |              |
| Muscle relaxant used    |                   |                  |                 |              |              |
| Esmerone                | 62.6 ± 25.6       | 64.5 ± 38.6      | 0.950           |              |              |
| Cisatracurium           | 0.6 ± 2.7         | 1.0 ± 3.2        | 0.591           |              |              |
| Parameter                        | Mean ± Standard Variation | n  | Mean ± Standard Variation | n  | p-Value |
|---------------------------------|---------------------------|----|---------------------------|----|---------|
| Crystalloid infused (mL)        | 4379.5 ± 1348.4           | 39 | 5035.0 ± 2059.5           | 10 | 0.479   |
| Volulyte infused (mL)           | 884.6 ± 388.3             | 39 | 1050.0 ± 158.1            | 10 | 0.119   |
| Fluid infused (mL)              | 5264.1 ± 1484.9           | 39 | 6085.0 ± 1992.1           | 10 | 0.315   |
| EBL (mL)                        | 739.5 ± 288.9             | 39 | 918.0 ± 424.9             | 10 | 0.205   |
| Urine output (mL)               | 1224.1 ± 7684             | 39 | 1400.0 ± 691.9            | 10 | 0.385   |
| mCompliance                     | 39.3 ± 10.1               | 29 | 32.8 ± 8.3                | 8  | 0.190   |
| mBIS                            | 41.6 ± 5.9                | 22 | 39.4 ± 6.5                | 7  | 0.575   |
| mSpO2                           | 99.2 ± 0.5                | 39 | 99.5 ± 0.4                | 10 | 0.126   |
| mEtCO₂                          | 32.3 ± 1.7                | 39 | 31.4 ± 2.5                | 10 | 0.165   |
| mPIP                            | 16.3 ± 2.7                | 39 | 15.7 ± 3.0                | 10 | 0.487   |
| mPulse                          | 82.1 ± 10.8               | 39 | 81.4 ± 17.5               | 10 | 0.766   |
| mTemp                           | 36.0 ± 0.5                | 39 | 35.3 ± 0.6                | 10 | 0.004   |
| mA_Syst                         | 107.7 ± 6.2               | 39 | 108.9 ± 11.2              | 10 | 0.941   |
| mA_Diast                        | 51.0 ± 5.3                | 39 | 51.7 ± 6.5                | 10 | 0.519   |
| mA_Mean                         | 67.5 ± 4.6                | 39 | 68.3 ± 7.9                | 10 | 0.951   |

The data values are expressed as the mean ± standard variation or percentage. Anti-HBs B: hepatitis B virus surface antibody blood test; Anti-HCV B: hepatitis C virus antibody blood test; aPTT: activated partial thromboplastin time; ASA: American Society of Anesthesiologists; BMI: body mass index; EBL: estimated intraoperative blood loss; HBsAG: hepatitis B virus surface antigen; INR: international normalized ratio; mA Diast: mean value of the arterial diastolic blood pressure; mA Mean: mean value of the arterial mean blood pressure; mA Syst: mean value of the arterial systolic blood pressure; mEtCO₂: mean value of the partial pressure of end tidal carbon dioxide; mPIP: mean value of the peak inspiratory pressure; mPulse: mean value of the pulse rate; mSpO₂: mean value of the percutaneous saturation of oxygen; mTemp: mean value of the body temperature; others of past medical history: otitis media, strabismus, scoliosis, and skin burn; PT: prothrombin time.