**Supplemental figures**

***Supplemental figure 1****.* ***Measured sildenafil concentration-time profiles per tested IV dose.***

*Dotted lines represent the start of sildenafil administration and washout. (\*)= concentration above the upper limit of quantification.*



**Supplemental tables**

***Supplemental table S1. Fetal blood gases per tested IV sildenafil dose.***

*Fetal blood gases per intravenously administered dose. (\*) = missing value due to no blood gas taken. (\*\*) = missing value due to i-Stat error.*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Fetal blood gas** | | | | | | | | |
| **Dose (experiment n°)** | **3mg/kg/d**  **(2)** | **5mg/kg/d**  **(1)** | **7mg/kg/d**  **(4)** | **7mg/kg/d**  **(6)** | **7mg/kg/d**  **(11)** | **10mg/kg/d**  **(9)** | **10mg/kg/d**  **(12)** | **12mg/kg/d**  **(10)** |
| **Baseline** | | | | | | | | |
| *pH* | 7.21 | 7.37 | \* | 7.29 | 7.38 | \* | 7.35 | 7.38 |
| *Lactate* | 0.42 | 4.19 | \* | \*\* | 2.20 | \* | 1.25 | 1.83 |
| *PO2* | 25 | 12 | \* | 14 | 20 | \* | 17 | 19 |
| *PCO2* | 17.3 | 51.2 | \* | 32.4 | 38.0 | \* | 43.0 | 52.3 |
| *HCO3* | 21.0 | 29.6 | \* | 15.2 | 22.2 | \* | 23.1 | 30.1 |
| *BE* | -7 | 4 | \* | -11 | -2 | \* | -2 | 5 |
| **6 hours** | | | | | | | | |
| *pH* | 7.45 | 7.24 | 7.43 | 7.27 | 7.38 | 7.42 | 7.35 | 7.37 |
| *Lactate* | 0.4 | 0.93 | 1.38 | \*\* | 1.84 | 1.89 | 1.41 | 2.99 |
| *PO2* | 36 | 13 | 18 | 21 | 15 | 14 | 15 | 15 |
| *PCO2* | 31.1 | 30.9 | 21.8 | 26.3 | 50.5 | 34.0 | 51.9 | 47.6 |
| *HCO3* | 21.5 | 13.0 | 14.5 | 11.7 | 28.9 | 21.5 | 27.9 | 26.9 |
| *BE* | -3 | -14 | -10 | -15 | 4 | -2 | 3 | 2 |
| **24 hours** | | | | | | | | |
| *pH* | 7.45 | 7.41 | 7.39 | 7.28 | 7.39 | 7.44 | 7.36 | 7.38 |
| *Lactate* | 0.67 | 1.71 | 1.35 | \*\* | \*\* | 1.82 | 1.3 | 1.62 |
| *PO2* | 34 | 12 | 18 | 16 | \*\* | 20 | 19 | 13 |
| *PCO2* | 37.3 | 44.5 | 46.0 | 26.2 | 53.8 | 36.9 | 57.1 | 51.6 |
| *HCO3* | 25.8 | 27.9 | 27.1 | 12.4 | 32.1 | 24.5 | 31.2 | 29.6 |
| *BE* | 2 | 3 | 3 | -14 | 8 | 0 | 6 | 5 |

***Supplemental table S2. One-way repeated measures ANOVA analysis of fetal blood gases per tested IV sildenafil dose.***

|  |  |  |
| --- | --- | --- |
|  | F | P |
| *pH* | F (1, 7) = 0.860 | 0.422 |
| *Lactate* | F (2, 15) = 0.548 | 0.589 |
| *PO2* | F (2, 18) = 0.037 | 0.964 |
| *PCO2* | F (2, 19) = 0.855 | 0.441 |
| *HCO3* | F (2, 19) = 1.553 | 0.237 |
| *BE* | F (2, 19) = 1.452 | 0.259 |

***Supplemental table S3. Maternal blood gases per tested IV sildenafil dose.***

*Maternal blood gases per intravenously administered dose. (\*) = missing value due to no blood gas taken. (\*\*) = missing value due to i-Stat error.*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Maternal blood gas** | | | | | | | | |
| **Dose (experiment n°)** | **3mg/kg/d**  **(2)** | **5mg/kg/d**  **(1)** | **7mg/kg/d**  **(4)** | **7mg/kg/d**  **(6)** | **7mg/kg/d**  **(11)** | **10mg/kg/d**  **(9)** | **10mg/kg/d**  **(12)** | **12mg/kg/d**  **(10)** |
| **Baseline** | | | | | | | | |
| *pH* | 7.44 | \* | \* | 7.51 | 7.58 | \* | 7.45 | \* |
| *Lactate* | 1.26 | \* | \* | \*\* | 1.60 | \* | 2.97 | \* |
| *PO2* | 34 | \* | \* | 43 | 44 | \* | 46 | \* |
| *PCO2* | 36.1 | \* | \* | 32.6 | 35.0 | \* | 34.4 | \* |
| *HCO3* | 24.9 | \* | \* | 25.6 | 32.6 | \* | 23.3 | \* |
| *BE* | 1 | \* | \* | 3 | 11 | \* | 0 | \* |
| **6 hours** | | | | | | | | |
| *pH* | 7.45 | \* | 7.50 | 7.54 | 7.53 | 7.48 | 7.49 | 7.44 |
| *Lactate* | 0.4 | \* | 0.35 | \*\* | 0.40 | 0.94 | 0.45 | 0.33 |
| *PO2* | 36 | \* | 41 | 49 | 48 | 50 | 49 | 46 |
| *PCO2* | 31.1 | \* | 27.0 | 33.8 | 42.6 | 29.3 | 43.1 | 41.0 |
| *HCO3* | 21.5 | \* | 20.9 | 28.2 | 35.2 | 21.3 | 32.3 | 27.3 |
| *BE* | -3 | \* | -2 | 6 | 13 | -2 | 9 | 4 |
| **24 hours** | | | | | | | | |
| *pH* | 7.45 | \* | 7.47 | 7.49 | 7.48 | 7.50 | 7.45 | 7.47 |
| *Lactate* | 0.67 | \* | 0.85 | \*\* | 0.48 | 1.26 | 0.32 | 0.47 |
| *PO2* | 34 | \* | 39 | 39 | 45 | 55 | 52 | 43 |
| *PCO2* | 37.3 | \* | 41.2 | 39.2 | 37.6 | 28.4 | 42.4 | 40.7 |
| *HCO3* | 25.8 | \* | 29.8 | 29.6 | 27.3 | 21.9 | 29.2 | 29.2 |
| *BE* | 2 | \* | 7 | 7 | 4 | 0 | 6 | 6 |

***Supplemental table S4. One-way repeated measures ANOVA analysis of maternal blood gases per tested IV sildenafil dose.***

*(\*) = significance reached (p<0.05)*

|  |  |  |
| --- | --- | --- |
|  | F | P |
| *pH* | F (2, 15) = 0.435 | 0.655 |
| *Lactate* | F (2, 12) = 11.11 | 0.002\* |
| *PO2* | F (2, 15) = 0.484 | 0.626 |
| *PCO2* | F (2, 15) = 0.754 | 0.487 |
| *HCO3* | F (2, 15) = 0.0874 | 0.917 |
| *BE* | F (2, 15) = 0.0823 | 0.921 |