**Table Is – Clinical – laboratoristic characteristics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **CLINICAL-LABORATORISTIC CHARACTERISTICS (PRE-POST MCS)** | | | | | | | |
| **Strong Outcomes** | | | | | | | |
| **MAP (mmHg)** | | | | | | | |
| **First Author, Year** | **Sample size** | **PRE** | **ICU return** | **POST (6h)** | **POST (24h)** | **POST (48 h)** | **p value** |
| Mastroianni [4] 2016 | 14 | 59,6±8,9 | - | - | 74,3±9,1 | - | 0,01 |
| Lima [5] 2016 | 40 | 71±11 | - | - | 82±20 | - | 0,01 |
| Griffith [6] 2013 | 16 | 71,4±12,5 | - | - | 83,1±7,5 | - | 0,01 |
| Gaudard [7] 2015 | 40 | 65 (58-74) | 76 (66-86) | 76(71-80) | 79 (74-88) | 80 (75-86) |  |
| **CI (l/min/mq)** | | | | | | | |
| **First Author, Year** | **Sample size** | **PRE** | **ICU return** | **POST (6h)** | **POST (24h)** | **POST (48 h)** | **p value** |
| Mastroianni [4] 2016 | 14 | 1,6±0,4 | - | - | 2,8±0,3 | - | 0,001 |
| Lima [5] 2016 | 40 | 1,81±0,52 | - | - | 2,88±0,7 | - |  |
| Hall [8] 2018 | 58 | 1,8±0,6 | - | - | 2,8±0,6 | - | 0,0001 |
| Chung [9] 2019 | 100 | 1,8 (1,4-2,3) | - | - | 3,1 (2,6-3,6) | - |  |
| Griffith [6] 2013 | 16 | 1,6±0,4 | - | - | 2,5±0,4 | - | 0,0001 |
| **PCWP (mmHg)** | | | | | | | |
| **First Author, Year** | **Sample size** | **PRE** | **ICU return** | **POST (6h)** | **POST (24h)** | **POST (48 h)** | **p value** |
| Mastroianni [4] 2016 | 14 | 22±4 | - | - | 14±4 | - | 0,01 |
| Hall [8] 2018 | 58 | 28±9 | - | - | 19±11 | - | 0,002 |
| **SvO2 (%)** | | | | | | | |
| **First Author, Year** | **Sample size** | **PRE** | **ICU return** | **POST (6h)** | **POST (24h)** | **POST (48 h)** | **p value** |
| Mastroianni [4] 2016 | 14 | 55±4 | - | - | 71±5 | - | 0,001 |
| Gaudard [7] 2015 | 40 | 62 (56-68) | 74 (68-77) | 70 (65-77) | 75 (70-80) | 70 (69-73) |  |
| **Lactate (mmol/L)** | | | | | | | |
| **First Author, Year** | **Sample size** | **PRE** | **ICU return** | **POST (6h)** | **POST (24h)** | **POST (48 h)** | **p value** |
| Schibilsky [10] 2016 | 8 | 2,3±1,0 | - | ~~-~~ | 1,3±0,5 | - | 0,06 |
| Mastroianni [4] 2016 | 14 | 4,7±1,2 | - | ~~-~~ | 1,7±0,6 | - | 0,001 |
| Gaudard [7] 2015 | 40 | 3,8 (1,7-5,9) | 3,4 (1,7-5,1) | 2,5 (1,5-3,4) | 1,6 (1,2-2,8) | 1,5 (1,0-2,1) | ~~-~~ |
| **Systolic Blood Pressure (mmHg)** | | | | | | | |
| **First Author, Year** | **Sample size** | **PRE** | **ICU return** | **POST (6h)** | **POST (24h)** | **POST (48 h)** | **p value** |
| Hall [8] 2018 | 58 | 89±16 | - | - | 103±19 | ~~-~~ | 0,002 |
| Lima [5] 2016 | 40 | 90±16 | - | - | 105±20 | ~~-~~ | 0,001 |
| **Cardiac Power Output (W)** | | | | | | | |
| **First Author, Year** | **Sample size** | **PRE** | **ICU return** | **POST (6h)** | **POST (24h)** | **POST (48 h)** | **p value** |
| Hall [8] 2018 | 58 | 0,6±0,3 | - | - | 1,1±0,5 | ~~-~~ | 0,0001 |
| Lima [5] 2016 | 40 | 0,54±0,17 | - | - | 1,18±0,61 | ~~-~~ | 0,002 |
| **Vasoactive inotropic score** | | | | | | | |
| **First Author, Year** | **Sample size** | **PRE** | **ICU return** | **POST (6h)** | **POST (24h)** | **POST (48 h)** | **p value** |
| Gaudard [7] 2015 | 40 | 51 (13-112) | 47 (17-96) | 43 (18-82) | 24 (8-56) | ~~-~~ | 9 (0-32) |
| **Inotrope score** | | | | | | | |
| **First Author, Year** | **Sample size** | **PRE** | **ICU return** | **POST (6h)** | **POST (24h)** | **POST (48 h)** | **p value** |
| Gaudard [7] 2015 | 40 | 10 (1-17) | 5 (0-15) | 1 (0-9) | 0 (0-4) | 0 (0-4) | ~~-~~ |
| **NT-proBNP (ng/L)** | | | | | | | |
| **First Author, Year** | **Sample size** | **PRE** | **ICU return** | **POST (6h)** | **POST (24h)** | **POST (48 h)** | **p value** |
| Gaudard [7] 2015 | 40 | 3736 (1436-8024) | - | - | 1638 (799-5689) | 1780 (745-3931) | ~~-~~ |
| **Creatinine (µmol/L)** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **PRE** | **POST (10h)** | **p value** |  |  |  |
| Schibilsky [10] 2016 | 8 | 1,3+-0,8 | 1,1+-0,5 | 0,9 |  |  |  |
|  | - | ~~-~~ | **POST (implantation)** | ~~-~~ |  |  |  |
| Bansal [11] 2016 | 24 | 2.17 mg/dl | 1.50 mg/dl | 0,0043 |  |  |  |
| **INTERMACS score** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **INTERMACS 1** | **INTERMACS 2** | **INTERMACS 3** |  |  |  |
| Lima [5] 2016 | 40 | 32% | 66% | ~~-~~ |  |  |  |
| Chung [9] 2019 | 100 | 57,00% | 33% | 10% |  |  |  |
| **LV ejection fraction (%)** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **PRE** | **POST - impella removal** | **p value** |  |  |  |
| Gaudard [7] 2015 | 40 | 10% (IQR 7-10) | 30 % (IQR 15-40) | 0,001 |  |  |  |
|  |  |  |  |  |  |  |  |
| **Soft outcomes** | | | | |  |  |  |
| **LDH (U/L)** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **PRE** | **POST (10 days)** | **p value** |  |  |  |
| Schibilsky [10] 2016 | 8 | 953,8±617,4 | 856+-360,5 | 0,9 |  |  |  |
| Monteagudo-Vela [2] 2019 | 57 | 1094(756-1435) | ~~-~~ | ~~-~~ |  |  |  |
| **Base excess (mmol/L)** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **PRE** | **POST (24h)** | **p value** |  |  |  |
| Schibilsky [10] 2016 | 8 | 1,80±5,3 | 2,6±2,4 | 0,83 |  |  |  |
| **AST/GOT (U/L)** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **PRE** | **POST (10 days)** | **p value** |  |  |  |
| Schibilsky [10] 2016 | 8 | 181,0±224,5 | 82±23 | 0,69 |  |  |  |
| **ALT/GPT (U/L)** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **PRE** | **POST (10 days)** | **p value** |  |  |  |
| Schibilsky [10] 2016 | 8 | 131,2±136,8 | 56,2±28,5 | 0,84 |  |  |  |
| **Pulmonary Artery Diastolic Pressure (mmHg)** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **PRE** | **POST (24h)** | **p value** |  |  |  |
| Lima [5] 2016 | 40 | 34±8 | 24±7 | 0,0001 |  |  |  |
| Griffith [6] 2013 | 16 | 28,0±3,9 | 19,8±3,2 | 0,0001 |  |  |  |
| **Heart Rate (beats/min)** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **PRE** | **POST (24h)** | **p value** |  |  |  |
| Mastroianni [4] 2016 | 14 | 105±23 | 94±15 | 0,12 |  |  |  |
| **Diastolic Blood Pressure (mmHg)** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **PRE** | **POST (24h)** | **p value** |  |  |  |
| Lima [5] 2016 | 40 | 62±10 | 71±17 | 0,01 |  |  |  |
| **Cardiac Output (l/min)** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **PRE** | **POST (24h)** | **p value** |  |  |  |
| Lima [5] 2016 | 40 | 3,7±1,25 | 5,8±1,38 | 0,0001 |  |  |  |
| **First Author, Year** | **Sample size** | **PRE** | **ICU return** | **POST (6h)** | **POST (24h)** | **POST (48 h)** |  |
| Gaudard [7] 2015 | 40 | - | 3,5 (2,6-3,9) | 3,8 (2,4-4,3) | 3,7 (2,5-4,2) | 3,9 (3,3-4,2) |  |
| **CVP (mmHg)** | | | |  |  |  |  |
| **First Author, Year** | **Sample size** | **PRE** | **POST (24h)** |  |  |  |  |
| Chung [9] 2019 | 100 | 15(11-18) | 6(4-9) |  |  |  |  |
| **MELD score** | | | |  |  |  |  |
| **First Author, Year** | **Sample size** | **Implantation** | **POST-implantation** | **p value** |  |  |  |
| Bansal [11] 2016 | 24 | 21.17 | 14.88 | 0,0014 |  |  |  |
| **Neurological status (CPC>3)** | | | |  |  |  |  |
| **First Author, Year** | **Sample size** | **Implantation** | **POST-implantation (30 days)** | **p value** |  |  |  |
| Bernhardt [12] 2019 | 22 | 0 | 15 | 0,01 |  |  |  |
| **Neurological status (improvement in Rankin Scale 0-3)** | | | |  |  |  |  |
| **First Author, Year** | **Sample size** | **Implantation** | **POST-implantation (30 days)** | **p value** |  |  |  |
| Bernhardt [12] 2019 | 22 | 0 | 14 | 0,001 |  |  |  |
| **mPAP (mmHg)** | | | |  |  |  |  |
| **First Author, Year** | **Sample size** | **PRE** | **POST (24h)** |  |  |  |  |
| Chung [9] 2019 | 100 | 35(30,3-40,8) | 22(17,6-26,7) |  |  |  |  |
| **PaO2/FiO2 ratio** | | | | | | |  |
| **First Author, Year** | **Sample size** | **PRE** | **ICU return** | **POST (6h)** | **POST (24h)** | **POST (48 h)** |  |
| Gaudard [7] 2015 | 40 | 204 (160-311) | 188 (121-280) | 203 (132-324) | 245 (187-327) | 244 (172-335) |  |
| **SOFA score** | | | | | | |  |
| **First Author, Year** | **Sample size** | **PRE** | **ICU return** | **POST (6h)** | **POST (24h)** | **POST (48 h)** |  |
| Gaudard [7] 2015 | 40 | 12 (9,8-14) | 9 (7-11) | - | 8,5 (7-11) | 8 (5-10) |  |
| **Cardiotoracic ratio** | | | | | | |  |
| **First Author, Year** | **Sample size** | **PRE** | **ICU return** | **POST (6h)** | **POST (24h)** | **POST (48 h)** |  |
| Gaudard [7] 2015 | 40 | 0,58 (0,52-0,66) | - | - | 0,55 (0,5-0,6) | 0,54 (0,49-0,59) |  |
| **Mean PH at 6 h** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **Impella 5.0** | **Impella 2.5** | **p value** |  |  |  |
| Engstrom [1] 2011 | 34 | 7,29±0,11 | 7,29±0,16 | 0,93 |  |  |  |
| **Mean PH at 48 h** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **Impella 5.0** | **Impella 2.5** | **p value** |  |  |  |
| Engstrom [1] 2011 | 34 | 7,39±0,08 | 7,41±0,06 | 0,56 |  |  |  |
| **Lactate at 48 h** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **Impella 5.0** | **Impella 2.5** | **p value** |  |  |  |
| Engstrom [1] 2011 | 34 | 2,8±1,5 | 3,3±1,1 | 0,48 |  |  |  |
| **mean arterial blood pressure > 70 mmHg (%) at 6 h** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **Impella 5.0** | **Impella 2.5** | **p value** |  |  |  |
| Engstrom [1] 2011 | 34 | 4 (50%) | 9 (45%) | 1 |  |  |  |
| **mean arterial bloot pressure > 70 mmHg (%) at 48 h** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **Impella 5.0** | **Impella 2.5** | **p value** |  |  |  |
| Engstrom [1] 2011 | 34 | 4 (50%) | 6 (46%) | 0,86 |  |  |  |
| **> 1 inotropic agent 6 h (%)** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **Impella 5.0** | **Impella 2.5** | **p value** |  |  |  |
| Engstrom [1] 2011 | 34 | 6 (67%) | 15 (75%) | 0,64 |  |  |  |
| **> 1 inotropic agent 48 h (%)** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **Impella 5.0** | **Impella 2.5** | **p value** |  |  |  |
| Engstrom [1] 2011 | 34 | 6 (75%) | 8 (57%) | 0,4 |  |  |  |
| **MV at 6 h (%)** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **Impella 5.0** | **Impella 2.5** | **p value** |  |  |  |
| Engstrom [1] 2011 | 34 | 9 (100%) | 17 (85%) | 0,22 |  |  |  |
| **MV at 48 h (%)** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **Impella 5.0** | **Impella 2.5** | **p value** |  |  |  |
| Engstrom [1] 2011 | 34 | 6 (75%) | 7 (50%) | 0,17 |  |  |  |
| **Hemodialysis 6 h (%)** | | | | |  |  |  |
| **First Author, Year** | **Sample size** | **Impella 5.0** | **Impella 2.5** | **p value** |  |  |  |
| Engstrom [1] 2011 | 34 | 1 (11%) | 0 (0%) | 0,13 |  |  |  |