Table 1. Scale assessment of the quality of the studies

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Author | Year | Location | Study | Group | Cases | Gender | | Age | The completion rate of  two-step surgery (n) | The sufficient FLR growth | Overall postoperative  complication rate | Mortality within  90 days | Newcastle – Ottawa scale |
| Male | Female |
| Adam R (18) | 2016 | France | Retrospective | LAPPS | 17 | 12 | 5 | 58 (23～75) | 17 | 30.5±8.9 | 17 | 7 | 9 |
| PVE | 41 | 23 | 18 | 58 (32～75) | 26 | 35±9.4 | 22 | 11 |
| Chan A(11) | 2019 | China | Retrospective | LAPPS | 46 | 42 | 9 | 58.5 (26～80） | 45 | 254.8±21 | 9 | 0 | 7 |
| PVE | 102 | 64 | 5 | 60 (27～85) | 69 | 115.7±22 | 31 | 1 |
| Chia DKA(14) | 2018 | Singapore | Retrospective | LAPPS | 10 | 8 | 2 | 61 (4.6～68.8) | 8 | 58.1±17.6 | 4 | 1 | 9 |
| PVE | 29 | 22 | 7 | 60 (27～85) | 17 | 11.8±9.4 | 6 | 0 |
| Junichi Shindoh(12) | 2013 | American | Retrospective | LAPPS | 25 | 14 | 11 | 63 (32～75) | 25 | 90.3±42.8 | 16 | 3 | 6 |
| PVE | 144 | 106 | 38 | 58 (33～79) | 104 | 62±63.1 | 10 | 6 |
| Knoefel W.T(16) | 2013 | Germany | Retrospective | LAPPS | 7 | - | - | - | 7 | 63±29 | 5 | 0 | 7 |
| PVE | 15 | - | - | - | 15 | 37±29 | 6 | 2 |
| Croome(17) | 2015 | Canada | Retrospective | LAPPS | 15 | 11 | 4 | 55.9±12.1 | 15 | 84.3±7.8 | 2 | 0 | 7 |
| PVE | 53 | 31 | 22 | 59.5±11.3 | 42 | 36±27.2 | 12 | 2 |
| Matsuo K (15) | 2016 | Japan | Retrospective | LAPPS | 8 | 4 | 4 | 68 (62～78) | 8 | - | 3 | 0 | 8 |
| PVE | 14 | 9 | 5 | 72 (35～81) | 14 | - | 8 | 0 |
| Ratti F(19) | 2015 | Italy | Retrospective | LAPPS | 12 | 7 | 5 | 59 (51～79) | 12 | 66.3±29.6 | 7 | 1 | 9 |
| PVE | 36 | 17 | 19 | 59 (42～66) | 34 | 41±12.5 | 4 | 1 |
| Sandström P(9) | 2018 | Sweden | Retrospective | LAPPS | 48 | 32 | 16 | 65.4±8.9 | 49 | 37.1±7.5 | 30 | 4 | 9 |
| PVE | 49 | 36 | 13 | 64.9±11.7 | 28 | 26.1±6.7 | 19 | 3 |
| Schadde E(10) | 2014 | Switzerland | Retrospective | LAPPS | 48 | 29 | 19 | 57 (48.5～65) | 48 | 272±9.5 | 35 | 7 | 6 |
| PVE | 83 | 57 | 26 | 61 (54～69) | 54 | 132±11.1 | 40 | 5 |
| Tanaka K(13) | 2015 | Japan | Retrospective | LAPPS | 11 | 7 | 4 | 68 (50～78) | 11 | 39.3±9.6 | 5 | 1 | 8 |
| PVE | 54 | 33 | 21 | 63 (35～75) | 48 | 31.9±8.6 | 21 | 1 |