**Supplementary**

* **Table S1: The median of laboratory findings in COVID-19 infected medical staffs.**
* **Table S2: The frequency of clinical symptoms in COVID-19 infected patients**
* **Table S34: The frequency of comorbidity in COVID-19 infected patients**
* **Table S4: Final clinical Outcome of both patients and medical staffs**

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| --- | --- | --- | --- | --- | --- | --- |
| **Table S1:** The median of laboratory findings in COVID-19 infected medical staffs. | | | | | | |
| **Characteristics** | Chu at al.1 | Liu et al.2 | Liu et al.3\* | Hu et al.4 | McMichael et al.5 | Liu et al.6\*\* |
| **Country** | China | China | China | China | Washington | China |
| **Type of study** | C.S | C.S | C.C | C.S | C.S | C.C |
| **Laboratory data**  WBC (× 10⁹/L)  Lymphocyte (× 10⁹/L)  Neutrophil (%)  Eosinophil (× 10⁹/L)  Hemoglobin(mg/dL)  Platelet (× 10⁹/L)  PT (S)  PTT (S)  FDP  D-dimer(mg/L)  Fibrinogen (g/L)  AT (%)  ESR (mm/h)  CRP≥8.0(mg/L)  PCT (ug/L)  LDH(U/L)  Creatinine  CK(U/L)  CK-MB(U/L)  AST(U/L)  ALT(U/L)  Alb(g/L)  BUN (mmol/L)  Bilirubin(μmol/L)  Myoglobin  Glucose | N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R | 4.7  1.4  56.9  N/R  13  188  N/R  N/R  N/R  0.2  N/R  N/R  10  29  2  189  66.6  60  N/R  21.5  17.5  N/R  N/R  10  N/R  N/R  N/R | N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R | N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R | N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R | N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R  N/R |
| **Final finding** | All medical staff should train to prevent infection. | Further studies need to identifying the exact patterns of COVID-19 infection among medical staff. | The adverse events in infected medical staffs were not independently associated with CVMs. | Infected medical staffs have better response to treatment due to fewer comorbidities. | Appropriate infection  prevention is necessary for protecting medical staff to COVID-19. | The strong protection is necessary to prevent medical staffs. |

**Abbreviations: C.S:** Cross-sectional, **NAT:** nucleic acid test; SARS-CoV-2: severe acute respiratory syndrome coronavirus 2, **CK‐MB:** creatine kinase‐MB; **CRP:** C‐reactive protein; **PCT:** procalcitonin; **WBC:** white blood cell; **C.C:** case-control; **ESR:** Erythrocyte sedimentation rate; **PT:** Prothrombin time; **LDH:** lactate dehydrogenase**; Eos:** Eosinophils; **BUN:** Blood urea nitrogen; **PTT:** Partial thromboplastin time; **Alb:** albumin; **N/R:** not reported; **ARDS:** acute respiratory distress syndrome; **CVMs:** cardiovascular manifestations

\*Liu et al. reported the mean of laboratory findings, in the current table median is reported.

\*\*Liu et al. reported the laboratory findings as the percentage decrease or increase

**Table S2:** The frequency of clinical symptoms in COVID-19 infected patients

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Authors** | **Fever (%)** | **Cough (%)** | **Fatigue (%)** | **Shortness of breath** | **Muscle ache (%)** | **Headache and mental disorder symptoms (%)** | **Sore throat (%)** | **Rhinorrhea (%)** | **Chest pain** | **Diarrhea (%)** | **Nausea and vomiting (%)** | **More than sign or symptom** |
| Chu et al.1 | 66.7 | 31.5 | 16.7 | N/R | 5.6 | 1.9 | 1.9 | 1.9 | N/R | 5.6 | 1.9 | N/R |
| Liu et al.2 | 67 | 47 | 34 | N/R | N/R | 13 | 25 | N/R | 3 | 5 | N/R | N/R |
| Liu et al.3 | 82.9 | 63.4 | 80.5 | N/R | N/R | 4.9 | N/R | 4-9.8 | N/R | 19.5 | N/R | N/R |
| Hu et al.4 | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R |
| McMichael et al.5 | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R |
| Liu et al.6 | 76.67 | 33.33 | 21 | 46.67 | N/R | 33.53 | N/R | N/R | N/R | N/R | 30 | N/R |

**Abbreviations:** **N/R:** not reported

**Table S3:** The frequency of comorbidity in COVID-19 infected patients

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Authors** | **Hypertension (%)** | **CVD (%)** | **Diabetes (%)** | **Malignancy (%)** | **CBD (%)** | **COPD (%)** | **kidney disorder (%)** | **liver disorder (%)** | **Gastrointestinal disorder (%)** | **Endocrine disorder (%)** |
| Chu et al.1 | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R |
| Liu et al.2 | 5 | N/R | 2 | N/R | N/R | N/R | 3 | N/R | 2 | 2 |
| Liu et al.3 | 4.9 | 2.4 | 4.9 | 4.9 | N/R | 2.4 | N/R | 4.9 | N/R | N/R |
| Hu et al.4 | 2.6 | 0 | 0 | 0 | N/R | 0 | N/R | N/R | N/R | N/R |
| McMichael et al.5 | 44.3 | 40.7 | 22.8 | 9 | N/R | N/R | 25.7 | 3.6 | N/R | N/R |
| Liu et al.6 | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R | N/R |

**Abbreviations:** **CVD:** Cardiovascular disease; **CBD:** Cerebrovascular disease; **COPD:** chronic obstructive pulmonary disease; **N/R:** not reported

**Table S4: Final clinical Outcome of both patients and medical staffs**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Final outcome** | **Population** | **N** | **ES (95% CI)** | **Between subgroups**  **(P-value)** | **I2** | **Chi-square**  **(P-value)** | **Egger test**  **(P-value)** |
| **Died** | Patients | 15 | 0.08 (0.04 – 0.13) | 0.15 | 96 | 347.08  (P <0.001) | 0.57  (P=0.29) |
| Medical Staff | 6 | 0.02 (0.0 – 0.10) | 91 | 57.9  (P <0.001) | 2.53 (P=0.008) |
| **Discharged** | Patients | 11 | 0.39 (0.20 – 0.61) | 0.11 | 98 | 718.6  (P <0.001) | 3.71  (P=0.04) |
| Medical Staff | 6 | 0.73 (0.38 – 0.97) | 96 | 111.8  (P <0.001) | 10.20  (P=0.21) |
| **Remained in hospital** | Patients | 12 | 0.51 (0.27 – 0.75) | 0.23 | 99 | 1128.5  (P <0.001) | 4.25  (P=0.05) |
| Medical Staff | 6 | 0.26 (0.04 – 0.59) | 95 | 99.04  (P <0.001) | 9.82  (P=0.18) |

**References:**

1. Chu, J. *et al.* Clinical Characteristics of 54 medical staff with COVID-19: A retrospective study in a single center in Wuhan, China. *J. Med. Virol.* (2020). doi:10.1002/jmv.25793

2. Liu, J. *et al.* Epidemiological, Clinical Characteristics and Outcome of Medical Staff Infected with COVID-19 in Wuhan, China: A Retrospective Case Series Analysis. *medRxiv* (2020). doi:10.1101/2020.03.09.20033118

3. Liu, R. *et al.* Association of Cardiovascular Manifestations with In-hospital Outcomes in Patients with COVID-19: A Hospital Staff Data. *medRxiv* (2020). doi:10.1101/2020.02.29.20029348

4. Hu, J. & Wang, W. Clinical characteristics of survivors and non-survivors , medical and non-medical staff members with 2019- nCoV pneumonia in Wuhan , China : a descriptive study. 1–18 (2019). doi:10.21203/rs.3.rs-20714/v1

5. McMichael, T. M. *et al.* COVID-19 in a Long-Term Care Facility - King County, Washington, February 27-March 9, 2020. *MMWR. Morb. Mortal. Wkly. Rep.* **69**, 339–342 (2020).

6. Liu, M. *et al.* [Clinical characteristics of 30 medical workers infected with new coronavirus pneumonia]. *Zhonghua jie he he hu xi za zhi = Zhonghua jiehe he huxi zazhi = Chinese J. Tuberc. Respir. Dis.* **43**, 209–214 (2020).