

INPLASY PROTOCOL

Coagulopathy in patients with Coronavirus Disease 2019 (COVID-19): a systematic review and meta-analysis

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Zhang, X¹; Yang, X²; Jiao, H³; Liu, X⁴.

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Corresponding author:
Xiaolin Zhang

zhangxiaolin0001@126.com

Author Affiliation:
Peking University First
Hospital

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**Review Stage at time of this
submission:** Preliminary
searches.

Conflicts of interest:
The authors declare that they
have no conflicts of interest.

Review question / Objective: We compare the coagulation parameters between severe and mild cases of COVID-19 patients, including Platelet count (PLT), activated partial thromboplastin time (APTT), prothrombin time (PT) and D-dimer (D-D) levels. Coagulation parameters between survivors and non-survivors are also explored. We conducted meta regression to explore the risk factor of COVID-19-related coagulopathy.

Condition being studied: COVID-19 is widely spread and poses a critical threat to global health. Coagulopathy in severe patients of COVID-19 have been reported in several studies. Emerging evidence shows that severe COVID-19 can be complicated with coagulopathy, with high risk of disseminated intravascular coagulation, venous thromboembolism and other thrombotic events. We aim to conduct a systematic review and meta-analysis of coagulopathy in patients with COVID-19. Coagulopathy may be an indication of severity and poor prognosis. Clinicians should pay more attention to coagulopathy in COVID-19.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 02 May 2020 and was last updated on 02 May 2020 (registration number INPLASY202050004).

INTRODUCTION

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METHODS

Search strategy: 1) "Covid-19" OR "2019 novel coronavirus infection" OR "SARS-CoV-2" AND "characteristics" (2) "Covid-19" OR "2019 novel coronavirus infection" OR "SARS-CoV-2" AND "coagulation" OR "coagulopathy" (3) "Covid-19" OR "2019 novel coronavirus infection" OR "SARS-CoV-2" AND "coagulation".

Participant or population: Patients with COVID19.

Intervention: Observational study: serve group.

Comparator: Mild group.

Study designs to be included: We included all research articles in adult patients diagnosed with COVID-19 with information on coagulation and clinical grouping or outcome of the cl.

Eligibility criteria: Articles other than original research (e.g., review articles, letters, or commentaries); original research with samples below 20 or case reports and series; articles on research in pediatric populations.

Information sources: PubMed, EmBase, Cochrane, WanFang Database and CNKI, medRxiv (<https://www.medrxiv.org>), SSRN (<https://www.ssrn.com>).

Main outcome(s): The coagulation parameters including PLT, PT, APTT, D-dimer are evaluated.

Quality assessment / Risk of bias analysis: All the search results were evaluated according to Newcastle-Ottawa Scale.

Strategy of data synthesis: Meta-analysis is carried out using Stata14.0 software. Heterogeneity among studies is tested using the Cochran Chi-square test and I². When I² is less than 50% a fixed-effects model is used and when I² is more than 50%, a random-effects model is used.

Subgroup analysis: We conduct subgroup to patients from China and other country.

Sensibility analysis: Sensitivity analysis is conducted to determine the source of heterogeneity by excluding one study at a time.

Language: English.

Country(ies) involved: China.

Keywords: COVID19, coagulopathy, coagulation.

Contributions of each author:

Author 1 - Xiaolin Zhang.

Author 2 - Xue Yang.

Author 3 - Hongmei Jiao.

Author 4 - Xinmin Liu.