|  |
| --- |
| Table 3 Compositions and rationale for tested Chinese herbal medicine  |
| Category | 　Medicine name (trial No.) | Compositions | Rationale |
| Patent drugs | Lianhua Qingwen granule/capsules (2) | Fructus Forsythiae (Lianqiao), Lonicerae Japonicae Flos (Jinyinhua), Ephedrae Herba (Mahuang), Armeniacae Semen Amarum (Kuxingren), Isatidis Radix (Banlangen), Dryopteridis Crassirhizomatis Rhizoma (Mianmaguanzhong), Houttuyniae Herba (Yuxingcao), Pogostemonis Herba (Guanghuoxiang), Rhei Radix et Rhizoma (Dahuang), Rhodiolae Crenulatae Radix et Rhizoma (Hongjingtian), and Glycyrrhizae Radix et Rhizoma (Gancao), along with l-Menthol (Bohenao) and a traditional Chinese mineral, Gypsum Fibrosum (Shigao) | In vitro: Significantly inhibits the SARS-COV-2 replication, affects virus morphology and exerts anti-inflammatory activity in vitro. These findings indicate that LH protects against the virus attack, making its use a novel strategy for controlling the COVID-19 disease.[8] |
|  | Jinyebaidu granule (1) | Lonicerae Japonicae Flos (Jinyinhua), Isatidis Folium (Daqingye), Taraxaci Herba (Pugongying), Houttuyniae Herba (Yuxingcao) | NA |
|  | Kangbingdu granule (1) | Isatidis Radix (Banlangen), Lonicerae Japonicae Caulis (Rendongteng), Sophorae Tonkinensis Radix et Rhizoma (Shandougen), Iridis Tectori Rhizoma (Chuanshegan), Houttuyniae Herba (Yuxingcao), Paridis Rhizoma (Chonglou), Cyrtomium fortune J. Sm. (Guanzhong), Paeoniae Radix Alba (Baizhi), Artemisiae Annuae Herba (Qinghao), along with Sucrose | In silico: The active compounds in Kangbingdu Keli can interact with angiotensin-converting enzyme II (ACE2) to target PTGS2, HSP90AB1, and PTGS1 to regulate multiple signal pathways, thereby exerting therapeutic effects on COVID-19.[9] |
|  | Xiao'er Huatan Zhike granule (1) | Flow extract of Radix platycodonis (Jiegeng), Flow extract of Mori Cortex (Sangbaipi), Tinctura Ipecacuanhae (Tugending), Ephedrine Hydrochloride, along with Citric Acid, Sodium Citrate, Sucrose and essence. | NA |
|  | Jingyin granule (1) | Schizonepetae Herba (Jingjie), Lonicerae Japonicae Flos (Jinyinhua), Arctii Fructus (Niubangzi), Isatidis Folium (Daqingye), Ilicis Chinensis Folium (Sijiqing) | NA |
|  | Huaier granule (1) | Aqueous extract of Trametes robiniophila Murr | NA |
|  | Ganke Shuangqing capsule (1) | Baicalin (Huangqigan), Andrographolide (Chuanxinlianneizhi) | SR: The whole effectiveness of Ganke Shuangqing Capsules for acute upper respiratory tract infections was better than ribavirin．However, this conclusion needs more high quality study to confirm.[10] |
|  | Keqing capsule (1) | Reineckia Carnea (Jixiangcao), Papaveris Pericarpium (Yingsuqiao), Ardisiae Japonicae Herba (Aidicha), Saxifraga stolonifera (Huercao), Eriobotryae Folium (Pipaye), Mori Cortex (Sangbaipi) | In vivo: As the first-line drugs for novel coronavirus pneumonia, Keqing capsules and Kesuting syrups have significant therapeutic effect on the mouse model combining disease and syndrome of human coronavirus pneumonia with cold-dampness pestilence attacking lung, and the mechanism may be related to regulating immune function and reducing cytokine storm.[11] |
|  | Kesuting syrup (1) | Eriobotryae Folium (Pipaye), Ephedrae Herba (Mahuang), Papaveris Pericarpium (Yingsuqiao), Radix platycodonis (Jiegeng), Mori Cortex (Sangbaipi), Reineckia Carnea (Jixiangcao), Disporum Cantoniense et Rhizoma (Baiweishen), Saxifraga stolonifera (Huercao), Polygonati Rhizoma (Huangjing) | As above |
|  | Shuanghuanglian liquid (2) | Fructus Forsythiae (Lianqiao), Lonicerae Japonicae Flos (Jinyinhua), Scutellariae Radix (Huangqin) | In vitro: Shuanghuanglian liquid may have the antiviral activity against the H5N1 virus infection by inhibiting viral replication and alleviating lung injury.[12] |
|  | Ba-Bao-Dan (2) | Bovis Calculus Artifactus (Rengong Niuhuang), Snake bile (Shedan), Saigae Tataricae Cornu (Lingyangjiao), Margarita (Zhenzhu), Notoginseng Radix Et Rhizoma (Sanqi), Moschus (Shexiang) | NA |
|  | Compound Houttuyniae Herba (2) | Houttuyniae Herba (Yuxingcao), Scutellariae Radix (Huangqin), Isatidis Radix (Banlangen), Fructus Forsythiae (Lianqiao), Lonicerae Japonicae Flos (Jinyinhua) | NA |
|  | Liu-Shen-Wan (1) | Bovis Calculus Artifactus (Rengong Niuhuang), Moschus (Shexiang), Bufonis Venenum (Chansu), Realgar (Xionghuang), Borneolum (Tianranbingpian), Margarita (Zhenzhu) | NA |
|  | Fuzheng Huayu Tablet (1) | Salviae Miltiorrhizae Radix Et Rhizoma (Danshen), Persicae Semen (Taoren), Schisandrae Chinensis Fructus (Wuweizi), Cordyceps (Dongchongxiacao), Gynostemma pentaphyllum (Jiaogulan), Pini Pollen (Songhuafen) | NA |
|  | T89 (1) | Salviae Miltiorrhizae Radix Et Rhizoma (Danshen), Notoginseng Radix Et Rhizoma (Sanqi) | Overview: Current SRs suggested potential benefits of CDDP for the treatment of CHD. However, high-quality evidence is warranted to support the application of CDDP in treating CHD. [13](T89 has a similar composition with CDDP and the trial on COVID-19 was aiming to improve oxygen saturation and clinical symptoms) |
| Injections | Xuebijing Injection (2) | Carthami Flos (Honghua), Paeoniae Radix Rubra (Chishao), Chuanxiong Rhizoma (Chuanxiong), Angelicae Sinensis Radix (Danggui), and Salviae Miltiorrhizae Radix Et Rhizoma (Danshen) | RCT: Significant improvement in the primary endpoint of the pneumonia severity index as well as significant improvement in the secondary clinical outcomes of mortality, duration of mechanical ventilation and duration of ICU stay.[14] |
|  | Tanreqing injection (1) | Scutellariae Radix (Huangqin), Pulvis Fellis Ursi (Xiongdanfen), Saigae Tataricae Cornu (Lingyangjiao), Lonicerae Japonicae Flos (Jinyinhua), Fructus Forsythiae (Lianqiao), along with Propylene Glycol | SR: Potentially beneficial effect in improving effective rates, reducing the time to resolution of fever, cough, crackles and absorption of shadows on X-ray on acute bronchitis disease.[15] |
|  | Reduning Injection (1) | Artemisiae Annuae Herba (Qinghao), Lonicerae Japonicae Flos (Jinyinhua), Gardeniae Fructus (Zhizi), along with Polysorbate 80 | RCT: The effect of RDNI was not worse than oseltamivir on the alleviation of influenza symptoms. RDNI was well tolerated, with no serious adverse events noted during the study period.[16] |
|  | Xiyanping injection (4) | Andrographolides sulfonate(Chuanxinlian) | Expert consensus statement: Non-severe patients without high risk factors for severe influenza can shorten the duration of fever, headache and cough; patients with severe or high risk factors for severe influenza can be given anti-influenza virus medication as soon as possible, and combined with Xiyanping injection can promote fever , Cough, sore throat, muscle soreness, headache and other symptoms; influenza high fever (armpit temperature>39℃) is recommended to use Xiyanping injection combined with neuraminidase inhibitor treatment.[17] |
|  | Shenqi Fuzheng Injection (1) | Codonopsis Radix (Dangshen), Astragali Radix (Huangqi),  | NA |
|  | Shenfu injection (1) | Ginseng Radix et Rhizoma Rubra (Hongshen), Aconiti Lateralis Radix Praeparata (Fuzi) | RCT: The application of Shenfu injection exhibited a positive and effective effect on removing the inflammation media during the treatment of elderly severe pneumonia.[18] |
| Decoctions | Jinyinhua decoction/honeysuckle oral liquid (2) | Lonicerae Japonicae Flos (jinyinhua) | In vivo and in vitro: MIR2911, a honeysuckle (HS)-encoded atypical microRNA, can directly target various Influenza A viruses and may represent a novel type of natural product that effectively suppresses viral infection.[19] |
|  | Ma-Xing-Shi-Gan-Tang and Sheng-Jiang-San (1) | Ephedrae Herba (Mahuang), Armeniacae Semen Amarum (Kuxingren), Glycyrrhizae Radix Et Rhizoma (Gancao), and a traditional Chinese mineral, Gypsum Fibrosum (Shigao);Bombyx Batryticatus (Jiangcan), Cicadae Periostracum (Chantui), Curcumae Longae Rhizoma (Jianghuang), Rhei Radix Et Rhizoma (Dahuang) | RCT: Oseltamivir and maxingshigan-yinqiaosan, alone and in combination, reduced time to fever resolution in patients with H1N1 influenza virus infection. These data suggest that maxingshigan-yinqiaosan may be used as an alternative treatment of H1N1 influenza virus infection.[20] |
|  | Shenling Baizhu Powder (1) | Lablab Semen Album (Baibiandou), Atractylodis Macrocephalae Rhizoma (Baizhu), Poria (Fuling), Glycyrrhizae Radix et Rhizoma (Gancao), Radix Platycodonis (Jiegeng), Nelumbinis Semen(Lianzi), Ginseng Radix Et Rhizoma (Renshen), Amomi Fructus (Sharen), Dioscoreae Rhizoma (Shanyao), Coicis Semen (Yiyiren) | NA |
|  | Yinhu Qingwen decoction /granule (1) | Lonicerae Japonicae Flos (jinyinhua), Polygoni Cuspidate Rhizome et Radix (Huzhang), Schizonepetae herba (Jingjie), Epimedii Folium (Yinyanghuo), etc. (No more information available) | NA |
|  | Qing-Wen Bai-Du-Yin formula granules（1） | Rehmanniae Radix (Shengdihuang), Coptidis Rhizoma (Huanglian), Gardeniae Fructus (Zhizi), Radix Platycodonis (Jiegeng), Scutellariae Radix (Huangqin), Anemarrhenae Rhizoma (Zhimu), Paeoniae Radix Rubra (Chishao), Scrophulariae Radix (Xuanshen), Fructus Forsythiae (Lianqaio), Lophatheri Herba (Zhuye), Glycyrrhizae Radix et Rhizoma Praeparata Cum Melle (Zhigancao), Moutan Cortex (Mudanpi), and along with a traditional Chinese mineral, Gypsum Fibrosum (Shengshigao) | NA |
|  | Chaihu Qingwen decoction (Kangguan No. 1 Recipe)（1）(for suspected COVID-19 cases, ordinary patients, and the prevention for people exposed to patients) | Bupleuri Radix (Chaihu), Scutellariae Radix (Huangqin), Pinelliae Rhizoma Praeparatum (Fabanxia), Cinnamomi Ramulus (Guizhi), Magnoliae Officinalis Flos （Houpohua）, Armeniacae Semen Amarum (Xingren), Asteris Radix et Rhizoma (Ziwan), Isatidis Folium (Daqingye), Isatidis Radix (Banlangen), Taraxaci Herba (Pugongying), Lonicerae Japonicae Flos (Yinhua), Fructus Forsythiae (Lianqiao), Chrysanthemi Flos (Juhua), Lonicerae Japonicae Caulis (Rendongteng), Phragmitis Rhizoma (Lugen), Imperatae Rhizoma (Baimaogen), Viticis Fructus (Manjingzi), | NA |
|  | Qingfei Jiebiao decoction (Kangguan No. 2 Recipe)（1）(for COVID-19 patients with accumulation of pathogenic heat in the lung pattern) | Armeniacae Semen Amarum (Kuxingren), Platycodonis Radix (Jiegeng), Pheretima (Dilong), Poria (Fuling), Saposhnikoviae Radix (Fangfeng), Ephedrae Herba Praeparata Cum Melle (Mimahuang), Setariae Fructus Germinatus (Guya), Peucedani Radix (Qianhu), Trichosanthis Pericarpium (Gualoupi), Glycyrrhizae Radix et Rhizoma (Gancao), Chrysanthemi Flos (Juhua), Fructus Forsythiae (Lianqiao), Fritillariae Thunbergii Bulbus (Zhebeimu), Citri Reticulatae Pericarpium (Chenpi), Mori Folium (Sangye), Medicated Leaven (Liushenqu), Hordei Fructus Germinatus (Maiya), Cynanchi Stauntonii Rhizoma et Radix (Baiqian) | NA |
|  | Chibai Rougan decoction (Kangguan No. 3 Recipe) (1)(for COVID-19 patients with depressed liver-gallbladder heat pattern) | Poria (Fuling), Coicis Semen (Yiyiren), Corydalis Rhizoma (Yanhusuo), Paeoniae Radix Alba (Baishao), Paeoniae Radix Rubra (Chishao), Atractylodis Macrocephalae Rhizoma (Baizhu), Artemisiae Scopariae Herba (Yinchen), Platycladi Semen (Baiziren), Sepiae Endoconcha (Haipiaoxiao), Pseudostellariae Radix (Taizishen), Glycyrrhizae Radix et Rhizoma (Gancao), Amomi Fructus (Sharen), Curcumae Radix (Yujin), Angelicae Sinensis Radix (Danggui), Imperatae Rhizoma (Baimaogen), Pyrrosiae Folium (Shiwei), Galli Gigerii Endothelium Corneum (Jineijin), Puerariae Lobatae Radix (Gegen), Astragali Radix (Huangqi) | NA |
|  | Self-made decoction(1) (for ordinary COVID-19 patients) | Atractylodis Rhizoma (Cangzhu), Magnoliae Officinalis Cortex (Houpo), Pogostemonis Herba (Huoxiang), (Caoguo), Ephedrae Herba (Mahuang), Cicadae Periostracum (Chantui), Rhizoma Zingiberis Recens (Shengjiang), Armeniacae Semen Amarum (Xingren), Polygoni Cuspidate Rhizome et Radix (Huzhang) | NA |
|  | Self-made decoction(1) (for severe COVID-19 patients) | Ephedrae Herba (Mahung), Armeniacae Semen Amarum (Xingren), Eriobotryae Folium (Pipaye), Descurainae Semen Lepidii Semen (Tinglizi), Sinapis Semen (Baijiezi), Raphani Semen (Laifeuzi), Arecae Semen (Binglang), Rhei Radix et Rhizoma (Dahuang), Polygoni Cuspidate Rhizome et Radix (Huzhang), along with a traditional Chinese mineral, Gypsum Fibrosum (Shigao) | NA |
| Note: SR: systematic review and /or meta-analysis; NA: not available; CDDP: Compound Danshen dripping pill; CHD: coronary heart disease; the number is how many studies are using the intervention; RDNI: Reduning injection |