Hubei Province Integrated Chinese\Western Medicine Hospital

Critical Viral Respiratory Disease Formulas

This new coronavirus pneumonia roughly approximates Chinese medicine's "warm disease" or "epidemic disease" category. In clinical practice, the patient may present with or without fever, fatigue, soreness of the muscles, feeling of heaviness in the body, poor appetite, greasy tongue coating showing the pathogen is in the exterior, most patients have cough, chest oppression, panting and or urgent breathing. The fundamental pathogenic factors are dampness and heat. Clinically we need to consider the upper and middle burner for our primary treatment strategy, paying attention to latent heat, and damage to qi and yin. Specific patterns and treatments are as follows:

Pathogenic Toxin Entering the Lung\Upper Burner

External pathogens attacking the exterior, heat formation and constraint pattern

Symptoms: fever with a temperature of 38°C or above, fatigue, headache without sweating, body aches, heart vexation, tongue coating thin and yellow, frequent but scant urination.

Pattern: External pathogen attacking the exterior, pathogen constrained with heat formation.

Formula: Modified Chai Ge Jie Ji Tang

chaihu 15g	gegen 20g	huangqin 12g	sheng gancao 10g
Bupleurum sp.	Pueraria montana	Scutellaria baicalensis	Glycyrrhiza sp. raw
(柴胡)	var. lobata	(黄芩)	(生甘草)
	(葛根)		
qianghuo 10g	baizhi 12g	chanyi 10g	jiangcan 12g
Notopterygium incisum	Angelica dehurica	Cicada	Silkworm
(羌活)	(白芷)	(蟬翼)	(価章)
sheng shigao 30g	baishao 20g	lianqiao 15g	banlangen 20g
Gypsum, unprocessed	Paeonia lactiflora	Forsythia suspensa	Isatis tinctoria
(生石膏)	(白芍)	(連翹)	(板藍根)

xuanshen 20g Scrophularia ningpoensis

(玄參)

Pathogenic heat obstructing the lung pattern

Symptoms: fever with body temperature above 38°C, sweating or lack of sweating, cough, chest oppression with panting, poor appetite, fatigue, thirst, tongue coating thin white or thin yellow, pulse slippery or rapid.

Pattern: pathogenic heat obstructing the lung Formula: Modified Ma Xing Shi Gan Tang

sheng mahuang 12g	kuxingren 12g	sheng shigao 40g	sheng gancao 10g
Ephedra sp.	Armeniaca amarum	Gypsum, unprocessed	Glycyrrhiza sp., raw
(生麻黄)	(苦杏仁)	(生石膏)	(生甘草)
huoxiang 15g	peilan 15g	cangzhu 15g	sharen 10g
Agastache rugosa	Eupatorium fortunei	Atractylodes lancea	Amomum villosum
(藿香)	(佩蘭)	(蒼朮)	(砂仁)
banlangen 20g	shenqu 30g	sangbaipi 15g	pipaye 15g
Isatis tinctoria	Massa fermentata	Morus alba	Eriobotrya japonica
(板藍根)	(神曲)	(桑白皮)	(枇杷叶)

Pathogen in the Lung and Middle Burner

Equally severe damp-heat pattern

Symptoms: fever with temperature above 37.5°C, tiredness (exhausted?), fatigue, poor appetite, thirst, watery stool, tongue [coating] white or thick and greasy, pulse floating or slippery and rapid.

Pattern: equally severe damp-heat

Formula: Modified Gan Lu Xiao Du Dan

baikouren 12g	huoxiang 15g	yinchenhao 20g	huashi 12g
Alpinia katsumadai	Agastache rugosa	Artemisia capillaris	Talcum
(白蔻仁)	(藿香)	(茵陳蒿)	(滑石)
tongcao 10g	shichangpu 15g	huangqin 12g	sheggan 15g
Tetrapanax papyriferus	Acorus tatarinowii	Scutellaria baicalensis	Iris domestica
(通草)	(石菖蒲)	(黄芩)	(射乾)
bohe 15g	sheng yiyiren 20g	lianqiao 15g	zhebeime 15g
Mentha canadensis	Coix lacryma-jobi	Forsythia suspensa	Fritillaria thunbergii
(薄荷)	(生薏苡仁)	(連翹)	(新貝母)
shenqu 30g	sheng shanzha 30g	chanyi 10g	jiangcan 12g
Massa fermentata	Crataegus pinnatifida	Cicada	Silkworm
(神曲)	(生山楂)	(蟬翼)	(僵蠶)

Dampness encumbering the spleen\stomach, pathogen constrained in the liver\gallbladder pattern

Symptoms: with or without fever, fatigue, dizziness, heaviness of the four limbs, chest oppression, poor appetite, dry mouth with a bitter taste, tongue coating white or greasy, pulse slippery.

Pattern: Dampness encumbering the spleen\stomach, constrained pathogen in the liver\gallbladder

Formula: Modified Chai Ping San, San Ren Tang or Modified Sheng Yang Pi Wei Tang

chaihu 20g Bupleurum sp. (柴胡)	huangqin 12g Scutellaria baicalensis (黄芩)	fa banxia 10g Pinellia ternata, processed w\ licorice & lime	shengjiang 12g Zingiberis officinalis, fresh
		(法半夏)	(生姜)
cangzhu 15g	sheng gancao 10g	houpo 15g	chanyi 10g
Atractylodes lancea	Glycyrrhiza sp., raw	Magnolia officinalis	Cicada
(蒼朮)	(生甘草)	(厚朴)	(蟬翼)
jiangcan 12g	shenqu 30g	sheng shanzha 20g	danzhuye 15g
Silkworm (僵蠶)	Massa fermentata (神曲)	Crataegus pinnatifida (生山楂)	Lophatherum gracile (淡竹葉)

Lung Toxin Convalescence

Latent heat not cleared, dual qi\yin damage pattern

Symptoms: body heat, heart vexation and sleeplessness, sweating, shortness of breath and lassitude of spirit, dry mouth with desire to drink, lack of appetite, tongue red with little coating, pulse vacuous and rapid

Pattern: Latent heat not cleared, dual qi\yin damage pattern

Formula: Modified Zhuye Shigao Tang or Wangshi Qing Shu Yi Qi Tang

danzhuye 15g	sheng shigao 25g	renshen 15g	maidong 15g
Lophatherum gracile	Gypsum, unprocessed	Panax ginseng	Ophiopogon japonicus
(淡竹葉)	(生石膏)	(人參)	(麥冬)
fa banxia 10g	sheng gancao 10g	shanyao 30g	shenqu 30g
Pinellia ternata,	Glycyrrhiza sp., raw	Dioscorea opposita	Massa fermentata
processed w\ licorice & lime	(生甘草)	(山藥)	(神曲)
(法半夏)			
ah awa ah awah a 200	ahami 10a	#awaaan 12a	
sheng shanzha 20g	chanyi 10g	jiangcan 12g	
Crataegus pinnatifida	Cicada	Silkworm	
(生山楂)	(蟬翼)	(僵蠶)	

Lung\Spleen Qi\Yin Dual Vacuity Pattern

Symptoms: fatigue, flusterdness, dry mouth, sweating, lack of appetite, abdominal fullness, stool not moving properly. tongue dull, coating white, pulse vacuous and rapid.

Pattern: Lung\Spleen qi\yin dual vacuity

Formula: Liu Junzi Tang w\ Modified Sheng Mai San or Dong-yuan's Modified Qing

Shu Yi Qi Tang

renshen 12g	baizhu 15g	sheng gancao 6g	fa banxia 10g
Panax ginseng	Atractylodes macrocephala	Glycyrrhiza sp., raw	Pinellia ternata,
(人參)	(白朮)	(生甘草)	processed w\ licorice & lime

(法半夏)

chenpi 12g	maidong 20g	wuweizi 15g	shenqu 30g
Citrus reticulata	Ophiopogon japonicus	Schisandra chinensis	Massa fermentata

(陳皮) (麥冬) (五味子) (神曲)

sheng shanzha 20g Crataegus pinnatifida (生山楂)

Formula for Prevention of Lung Toxin

If you have come in contact with [potentially infected people] and you are elderly, infant, obese, etc. This formula is useful.

Function: To boost qi and secure the exterior, transform dampness and resolve toxin,

Formula: Modified Yu Ping Feng San

huangqi 12g	chanyi 10g	fangfang 15g
Astragalus mongolicus	Cicada	Saposhnikovia divaricata
(黄芪)	(蟬翼)	(防風)

lianqiao 15g	cangzhu 12g	huoxiang 15g
Forsythia suspensa	Atractylodes lancea	Agastache rugosa

(連翹) (蒼朮) (藿香)

Guangdong Province: Chinese Medicine Protocol for Pneumonia Due to

Novel Coronavirus

(Provisional First Edition Jan. 24, 2020)

Based on the particular epidemiological features of pneumonia caused by novel coronovirus in Guangdong Province, along with the clinical presentation and clinical features of its progression, it fits the characteristics of "pestilent disease" or "warm disease" in Chinese medicine. When there is externally-contracted pestilent qi, the disease moves from the exterior to the interior, and generally follows the patterns of moving from upper to middle to lower burners and through the wei-qi-ying-xue levels. The climate in this area is damp and humid, and pestilent qi easily mixes with this dampness, first attacking the lung wei-defense level, particularly in patients with a weak spleen and stomach. If the upright, healthy (*zheng*) Qi cannot defeat the deviated, unhealthy (*xie*) [qi], then the deviated toxin (evil/pathogenic toxin) will move to the interior and transform into heat, harming the fluids (*jin*) and using-up the humors (*ye*), sometimes to the point of scorching the *ying qi* and agitating the blood. When the latter happens, this can be directly transmitted to the pericardium and create a critical situation. The main disease factor is (cause) is damp-heat with pestilent toxin, and the pathological features are "dampness, heat, stasis, toxin, and vacuity."

Early Stages

Damp-evil is stuck in the lung, making qi movement through this pivot difficult (interferes with the Qi dynamic of the lung)

Symptoms: low-grade fever or no fever, slight aversion to cold, sensation of heaviness and stuffiness in the head and body, muscle pain and soreness, fatigue, cough with scant phlegm, dry mouth with little intake of fluids, in some cases oppression in the chest and blockage/congestion in the middle of the torso (epigastrium), no sweating or difficulty sweating (feels like sweat cannot come out), in some cases nausea and poor appetite, diarrhea and loose stool, pale read tongue with a white, greasy coating; floating, slightly rapid pulse

Treatment: transform dampness and release toxins; diffuse the lung to vent the toxin;

Formula: Modified Huo Po Xia Ling Tang and Xiao Chai Hu Tang

huoxiang 10g	houpo 10g	fa banxia 10g	fuling 15g
Agastache rugosa (藿香)	Magnolia officinalis (厚朴)	Pinellia ternata, processed w\ licorice & lime (法半夏)	Poria cocos (茯苓)
chaihu 15g	huangqin 10g	dangshen 10g	xingren 12g
Bupleurum sp.	Scutellaria baicalensis	Codonops is pilosula	Armeniaca amarum
(柴胡)	(黄芩)	(黨參)	(杏仁)

fa banxia 10g juhong 10g chenpi 12g chao maiya 30g
Pinellia ternata, Citrus reticulata Citrus reticulata Hordeurn vulgare
processed w\licorice & lime (橘紅) (陳皮) (炒麥芽)

Modifications:

For pronounced cough: beixingren and qianhu

For pronounced dampness-turbidity: sharen, cangzhu, houpo

Fever with yin vacuity: qinghao, digupi, shidagonglaoye (十大功劳叶)
For dry mouth with pronounced thirst, add xuanshen and tiandong
For phlegm with blood in it, add danpi, shanzhizi, and oujietan

Dual vacuity of lung and spleen

Symptoms: pronounced sleepiness and fatigue; flustered with heart palpitations; dry mouth; spontaneous sweating; poor appetite; abdominal distention; loose stools; pale and enlarged tongue with a white coat; deep, slow pulse with no force;

Treatment: build the spleen and benefit qi to dispel phlegm

Formula: Modified Shen Ling Bai Zhu San

shengshaishen 10g	chao baizhu 15g	fuling 15g	baibiandou 30g
Panax ginseng, raw	Atractylodes macrocephala	Poria cocos	Dolichos lablab
(simmered separately)	(炒白朮)	(茯苓)	(白扁豆)
(人參)			
	P 120-	11	
sharen 6g	lianzi 30g	zhi gancao 6g	jiegeng 10g
Amomum villosum	Nelumbo nucifera	Glycyrrhiza sp.,	Platycodon grandiflora
(砂仁)	(蓮子)	honey mix-fried	(桔梗)
		(炙甘草)	
shanyao 15g	yiyiren 20g	chao maiya 30g	shenqu 30g
Dioscorea opposita	Coix lacryma-jobi	Hordeurn vulgare	Massa fermentata
(山藥)	(薏苡仁)	(炒麥芽)	(神曲)

Modifications:

For pronounced lack of appetite add chaogumaiya, jiaoshanzha

For damp-turbidity that binds and fetters, one can choose *cangzhu*, *shichangpu*, *baidoukou* For pronounced sweating, add *mahuanggen*, *baishao*

For dry mouth with severe thirst, add xuanshen and tiandon

For those who also have blood separation (xue tuo), add shengshaishen and ejiao

For those who are flustered and have heart palpitations to a severe degree, add *danshen* and *yuanzhi*

Middle Stage

Damp-heat closes-down the lung; Fu-organ Qi [large intestine] is blocked

Symptoms: fever; cough; copious, thick, yellow phlegm; chest oppression; wheezing; thirst; foul breath; constipation and distention in the abdomen; dar, red tongue with thick, yellow, turbid coating; slippery, rapid pulse or deep and tight pulse

Treatment: clear heat and diffuse lung; open the fu [large intestine] and drain heat

Formula: Modified Xuan Bai Chengqi Tang and Huanglian Jie Du Tang

sheng mahuang 8g Ephedra sp., honey mix- fried (炙麻黄)	xingren 12g Armeniaca amarum (杏仁)	sheng shigao 30g Gypsum, unprocessed (生 石膏)	sheng dahuang 10g Rhei sp., raw (生大黄)
gualouren 30g	taoren 10g	chishao 15g	tinglizi 20g
Trichosanthes kirilowii	Prunus persica	Paeonia ovata	Eruca sativa
(瓜蔞仁)	(桃仁)	(草果)	(葶苈子)
huanglian 3g	huangqin 10g	sangbaipi 10g	chonglou 10g
Coptis sp.	Scutellaria baicalensis	Morus alba	Paris sp.
(黄連)	(黄芩)	(桑白皮)	(重樓)
danpi 15g	yujin 15g	shichangpu 15g	shengdihuang 15g
Paeonia suffruticosa	Curcuma phaeocaulis	Acorus tatarinowii	Rehmannia glutinosa
(丹皮)	(郁金)	(石菖蒲)	(生地黄)
xuanshen 15g Scrophularia ningpoensis (玄參)			

Modifications:

For more pronounced or severe constipation add *shengmangxiao*, *huzhang*For expectorating yellow, dense, thick phlegm add *gualoupi* and *yuxingcao*For heat-evils harming the fluids add *nanshashen*, *shihu*, *zhimu*, or *xiyangshen* (*Panax quiquifolius* 西洋參) simmered and administered separately

Damp-heat harboring toxin; blocked and congested lung qi

Symptoms: fever or sensation of heat in the body that does not dissipate; sweating that is not smooth [is not regular and feels blocked]; wheezing with rough breathing; dry cough or a choking cough, perhaps with pain in the throat; oppression in the chest and blockage/congestion in the middle of the torso (epigastrium); dry mouth with reduced fluid intake; bitter taste or feeling of stickiness in the mouth, sticky and stuck stool; dark-red tongue with a yellow-greasy coating; rapid and slippery pulse

Treatment: Clear heat and transform dampness, diffuse the lung and release toxins **Formula:** Modified *Ma Xing Shi Gan Tang* and *Gan Lou Xiao Du Dan* with *Sheng Jiang San*

sheng mahuang 8g Ephedra sp., honey mix-fried (炙麻黄)	xingren 12g Armeniaca amarum (杏仁)	sheng shigao 30g Gypsum, unprocessed (生石膏)	sheng gancao 10g Glycyrrhiza sp. raw (生甘草)
huashi 12g	yinchenhao 20g	huangqin 15g	baikouren 10g
Talcum	Artemisia capillaris	Scutellaria baicalensis	Alpinia katsumadai
(滑石)	(茵陳蒿)	(黄芩)	(白蔻仁)
huoxiang 15g	fa banxia 15g Pinellia ternata, processed w\ licorice & lime (法半夏)	cangzhu 15g	tinglizi 20g
Agastache rugosa		Atractylodes lancea	Eruca sativa
(藿香)		(蒼朮)	(葶苈子)
lianqiao 15g	jiangcan 5g	chantui 5g	jianghuang 10g
Forsythia suspensa (連	Silkworm	Cicada	Curcuma longa
翹)	(僵蠶)	(蟬翼)	(薑黃)
sheng dahuang 5g	chonglou 10g	danpi 15g	chishao 15g
Rhei sp., raw	Paris sp.	Paeonia suffruticosa	Paeonia ovata
(生大黄)	(重樓)	(丹皮)	(草果)
yujin 15g	shichangpu 15g	shengdihuang 15g	xuanshen 15g
Curcuma phaeocaulis	Acorus tatarinowii	Rehmannia glutinosa	Scrophularia ningpoensis
(郁金)	(石菖蒲)	(生地黄)	(玄參)

Modifications:

If heat is the most pronounced [evil], one can add huanglian and yuxingcao If dampness is the most severe, ad fuling and peilan If dampness and heat are equally severe, add huanglian, buzhaye (布渣叶), and yiyiren For liver and gallbladder damp-heat one can choose a modified version of Long Dan Xie Gan Tang

Severe Stage

Symptoms: There is internal blockage and external separation [detachment] with high fever and agitation and vexation; cough with rough breathing that causes the nostrils to flare; sound of phlegm rattling in the throat; felling of suffocation and desperation; voice breaks when speaking; skin rashes with papules and spots appear; patient may lose consciousness or be delirious; sweating with cold limbs; dark-purple lips; dark-red tongue with a yellow-greasy coat; deep, fine pulse that seems about to give out

Treatment: benefit qi and return yang to secure what is separating

Formula: Modified Shen Fu Tang

hongshen 10g pao fuzi 10g shanzhuyu 30g maidong 20g Glycyrrhiza sp., raw Panax ginseng, Aconitum carmichaeli, Ophiopogon japonicus steamed blast-roasted (生甘草) (麥冬) (紅參) (炮附子) sanqi 10g Panax notoginseng

Modifications:

(三七)

high fever with fright and delirium with reluctance to speak add An Gong Niu Huang Wan or Zi Xue San

For phlegm obscuring the heart orifice, Su He Xiang Wan can be given as a draught [briefly infused with water]

Recovery Stage

Dual vacuity of qi and yin; latent pathogen has not been fully resolved

Symptoms: fever is already gone or only a low-grade fever remains; fatigue; flustered; dry mouth; spontaneous sweating; abdominal distention; irregular bowel movements; pale-red tongue with a white coat or scant coat; vacuous [empty/scallion] and rapid pulse

Treatment: benefit qi and nourish yin to dispel the pathogen

Formula: Modified Er Chen Tang and Wang Shi Qing Shu Yi Qi Tang

xiyangshen 20g	shihu 15g	maidong 20g	zhimu 10g
Panax quiquifolius	Dendrobium sp.	Ophiopogon japonicus	Anemarrhena asphodeloides
(西洋參)	(石斛)	(麥冬)	(知母)
danzhuye 15g	huanglian 3g	gancao 6g	fuling 15g
Lophatherum gracile	Coptis sp.	Glycyrrhiza sp.	Poria cocos
(淡竹葉)	(黄連)	(甘草)	(茯苓)

fa banxia 10g juhong 10g chenpi 12g chao maiya 30g
Pinellia ternata, Citrus reticulata Citrus reticulata Hordeurn vulgare
processed w\ licorice & lime (橘紅) (陳皮) (炒麥芽)

Modifications:

For pronounced cough: beixingren and gianhu

For pronounced dampness-turbidity: sharen, cangzhu, houpo

Fever with yin vacuity: qinghao, digupi, shidagonglaoye (十大功劳叶)

For dry mouth with pronounced thirst, add xuanshen and tiandong

For phlegm with blood in it, add danpi, shanzhizi, and oujietan

Dual vacuity of lung and spleen

Symptoms: pronounced sleepiness and fatigue; flustered with heart palpitations; dry mouth; spontaneous sweating; poor appetite; abdominal distention; loose stools; pale and enlarged tongue with a white coat; deep, slow pulse with no force;

Treatment: build the spleen and benefit qi to dispel phlegm

Formula: Modified Shen Ling Bai Zhu San

shengshaishen 10g	chao baizhu 15g	fuling 15g	baibiandou 30g
Panax ginseng, raw	Atractylodes macrocephala	Poria cocos	Dolichos lablab
(simmered separately)	(炒白朮)	(茯苓)	(白扁豆)
(人參)			
sharen 6g	lianzi 30g	zhi gancao 6g	jiegeng 10g
Amomum villosum	Nelumbo nucifera	Glycyrrhiza sp.,	Platycodon grandiflora
(砂仁)	(蓮子)	honey mix-fried	(桔梗)
		(炙甘草)	
shanyao 15g	yiyiren 20g	chao maiya 30g	shenqu 30g
Dioscorea opposita	Coix lacryma-jobi	Hordeurn vulgare	Massa fermentata
(山藥)	(薏苡仁)	(炒麥芽)	(神曲)

Modifications:

For pronounced lack of appetite add *chaogumaiya*, *jiaoshanzha*

For damp-turbidity that binds and fetters, one can choose cangzhu, shichangpu, baidoukou

For pronounced sweating, add mahuanggen, baishao

For dry mouth with severe thirst, add xuanshen and tiandon

For those who also have blood separation (xue tuo), add shengshaishen and ejiao

For those who are flustered and have heart palpitations to a severe degree, add *danshen* and *yuanzhi*

For this condition, prevention is more important than treatment. When coming into contact with patients, wear a mask. Make sure your home has good air circulation, do not smoke or drink, maintain a pleasant mood and a good diet, avoiding spicy or pungent foods and anything that agitates fire and dries the fluids in the body. Secure and guard your upright, healthy qi.

Coronavirus main cause or disease is damp toxicity, not heat toxicity with dampness. In treating heat toxicity with dampness, the strategy is usually to clear heat, resolve toxins and dispel dampness. However, when treating dampness toxicity that transforms into heat or retained dampness heat toxin, if you clear heat and resolve toxins using cold herbs to early this will inevitably exacerbate the dampness and lead to cold enveloping heat. Which then creates an adverse effect on treatment outcomes. So, in treating this disease, the focus should be on resolving turbidity with aroma out thrusting through the exterior and upbearing and down bearing the spleen and stomach. As dampness is resolved, depressed heat can disperse and toxicity will be unable to form — in this way symptoms will gradually resolve.

Transforming heat can progress into yangming brightness bowel repletion, which would exacerbate lung qi depression and block qi. Once yangming brightness bowel repletion is significant, dampness can very easily transform into damp toxicity, heat, toxicity and stagnation, eventually leading to severe qi reversal and the onset of MODS. (Multi organ dysfunction syndrome).

In some of the more severe cases where the patient is already on a respirator or ECMO (extracorporeal membrane oxygenation) the stomach and chest are always hot to the touch while the extremities are cold. This is a symptom of sepsis. So, a key aspect of treatment is resolving dampness, unblocking the bowels and draining turbidity in the early phase. In keeping with the above discussion, we selected Ma Xing Yi Gan Tang, Sheng Jiang San, D Yuan Yin, Hou pu Xia Ling Tang, Huo Xiang Zheng Qi San and Yin Qiao San as our base formulas and implemented a Chinese Medicine Protocol.