

## **CHANG AI KANG FU TANG (COLORECTAL CANCER ANTI-RELAPSE DECOCTION)**

**Li et al.** reported on the effects of *Chang Ai Kang Fu Tang* (Colorectal Cancer Anti-Relapse Decoction) on postoperative immunity of patients with colorectal cancer. This decoction was formulated by Professor Wang Pei of Beijing TCM University.<sup>5</sup> **Groups:** The authors observed 48 patients from May 1997 to December 1998 after surgery for colorectal cancer. They divided them into three groups randomly according to date of admission to hospital:

- Group A of 16 patients, aged from 31 to 70 (mean age: 54.65), was treated with *Chang Ai Kang Fu Tang* (Colorectal Cancer Anti-Relapse Decoction).
- Group B of 17 patients, aged from 26 to 65 (mean age: 51.23), was treated with chemotherapy.
- Group C of 15 patients, aged from 32 to 68 (mean age: 56.31), was treated with both *Chang Ai Kang Fu Tang* (Colorectal Cancer Anti-Relapse Decoction) and chemotherapy.

**Symptoms and signs:** Patients' general symptoms and signs postoperatively reflected a condition of Spleen and Kidney Deficiency and included loss of weight, aversion to cold, cold limbs, poor appetite, abdominal distension, abdominal pain with a liking for warmth, a lusterless facial complexion, mental fatigue and no desire to speak, loose stools, a pale and enlarged tongue with a white coating, and a deep and thready pulse.

### **Method**

- Group A started taking the *Chang Ai Kang Fu Tang* (Colorectal Cancer Anti-Relapse Decoction) in the first week after the operation (one bag decocted for use twice a day, morning and evening); a regime of six days of the decoction followed by one day rest continued for three months.

### **Treatment principle**

Supplement and nourish Qi and Blood, inhibit cancer and disperse tumors.

### **Decoction ingredients**

*Zhi Huang Qi* (Radix Astragali seu Hedysari, mix-fried with honey) 20g

*Chao Bai Zhu* (Rhizoma Atractylodis Macrocephalae, stir-fried) 10g

*Tai Zi Shen* (Radix Pseudostellariae Heterophyllae) 15g

*Dang Gui* (Radix Angelicae Sinensis) 10g

*Zhu Ling* (Sclerotium Polypori Umbellati) 10g

*Fu Ling* (Sclerotium Poriae Cocos) 10g

*Bu Gu Zhi* (Fructus Psoraleae Corylifoliae) 10g

*Zhi Bie Jia* (Carapax Amydae Sinensis, mix-fried with honey) 10g

*Chuan Shan fiao* (Squama Manitis Pentadactylae) 20g

*E Zhu* (Rhizoma Curcumae) 6g

*Ban Zhi Lian* (Herba Scutellariae Barbatae) 30g

*Ban Bian Lian* (Herba Lobeliae Chinen sis cum Radice) 30g

*Qing Hao* (Herba Artemisiae Chinghao) 10g

*Chai Hu* (Radix Bupleuri) 10g

*Gan Cao* (Radix Glycyrrhizae) 6g

- Group B was given an intravenous infusion of 500mg/ m<sup>2</sup> of 5-fluorouracil dissolved in 500ml of 0.9% saline one day before the operation; during the operation, 1000mg of 5-fluorouracil was instilled in the intestinal cavity; an intravenous infusion of 500mg/m<sup>2</sup> of 5-fluorouracil was given over 2-8 hours on the first day after the operation. Chemotherapy started in the second week postoperation consisting of an intravenous infusion over 2-8 hours of 500mg/m<sup>2</sup> of 5-fluorouracil dissolved in 500ml of 5% glucose and 2mg/m<sup>2</sup> of mitomycin dissolved in 500ml of 5% glucose, administered once or twice a week depending on the patient's condition; the course lasted for three weeks. After the first course, patients rested for one month. A second course with the same drugs was then administered.

- Group C combined the treatment given to groups A and B.

## Results

The values of T lymphocyte subsets and NK cells were recorded before surgery, in the first postoperative week, and in the first, second and third postoperative months (see Table 3-4).

CD3+ and CD4+ :

In the first postoperative week, the average values for CD3+ and CD<sub>4</sub>+ in all three groups decreased in comparison with the measurements taken before surgery. One month postoperatively, CD3+ and CD<sub>4</sub>+ in group A patients had returned above the pre-surgery levels, but were still below these levels in groups Band C. CD3+ returned to the pre-surgery level in Group C patients after the second postoperative month, but did not do so in group B patients until the third month. CD3+ and CD<sub>4</sub>+ values in group B patients were still below normal values after three months.

CDs+:

In all three groups, CDs+ increased in the first postoperative week, before returning to normal in the first month postoperatively, with no changes thereafter. This indicates that the cellular immunity of patients with colorectal cancer was immunosuppressive.

CD<sub>4</sub>+ /CDs+ ratio:

Before surgery, the CD<sub>4</sub>+ /CDs+ ratio in all groups was lower than normal and dropped further in the first postoperative week. It returned to normal in the first postoperative month in group A patients, but not until the second month for the other two groups ( $P<0.05$ ).

NK cells:

Before surgery, the number of NK cells in all groups was lower than normal and fell further in the first postoperative week. It returned to normal in the first postoperative month in group A patients, but not until the second month for the other two groups ( $P<0.01$  in comparison between group A and group B).

Group A (16)

B (17)

### Explanation of *Chang Ai Kang Fu Tang* (Colorectal Cancer Anti-Relapse Decoction)

*Zhi Huang Qi* (Radix Astragali seu Hedysari, mix-fried with honey), *Chao Bai Zhu* (Rhizoma Atractylodis Macrocephalae, stir-fried), *Tai Zi Shen* (Radix Pseudostellariae Heterophyllae), *Fu Ling* (Sclerotium Poriae Cocos), *Zhu Ling* (Sclerotium Polypori Umbellati) and *Gan Cao* (Radix Glycyrrhizae) fortify the Spleen and augment Qi.

*Dang Gui* (Radix Angelicae Sinensis) and *E Zhu* (Rhizoma Curcumae) invigorate the Blood and transform Blood stasis.

*Zhi Bie Jia* (Carapax Amydae Sinensis, mix-fried with honey) and *Chuan Shan Jia* (Squama Manitis Pentadactylae) soften hardness and dissipate lumps.

*Bu Gu Zhi* (Fructus Psoraleae Corylifoliae) warms the Spleen and Kidneys.

*Ban Zhi Lian* (Herba Scutellariae Barbatae), *Ban Bian Lian* (Herba Lobeliae Chinensis cum Radice), *Qing Hao* (Herba Artemisiae Chinghao) and *Chai Hu* (Radix Bupleuri) clear Heat and relieve Toxicity, and have anti-cancer properties.

**Conclusion:** The authors suggest that *Chang Ai Kang Fu Tang* (Colorectal Cancer Anti-Relapse Decoction) may increase the postoperative immunity of patients with colorectal cancer.

C (15)

Group	Stage	CD3+ (%)	CD <sub>4</sub> + (%)	CD <sub>4</sub> + (%)	CD <sub>4</sub> + /CD8+	NK (%)
A (16)	Before surgery	56.7±9.8	35.5±7.0	39.9±7.2	1.09±0.44	29.2±5.6
	First week post-operation	52.7±9.1	33.4±8.8	44.3±9.3	1.06±0.43	26.7±4.6
	First month postoperation	59.3±8.7	38.3±9.7	30.5±9.0	1.50±0.64	33.7±5.5
	Second month	63.3±7.2	39.0±5.7	27.5±9.0	1.70±0.58	34.4±3.8

	postoperation					
	Third month	66.5±6.5	39.3±6.7	32.2±6.4	1.45±0.34	33.4±5.3
	postoperation					
B (17)	Before surgery	57.8±7.4	36.3±7.6	38.5±6.3	1.12±0.37	28.5±4.6
	First week post-	53.8±8.3	34.3±6.6	45.7±9.7	0.89±0.70	27.4±5.5
	operation					
	First month	51.1±4.2§	29.6±8.7§	33.4±7.7	1.09±0.35§	28.5±4.6§
	postoperation					
	Second month	55.7±8.4	35.6±4.8	31.3±8.8	1.46±0.60	32.8±4.8
	postoperation					
	Third month	57.2±9.8	37.8±7.4	30.5±7.6	1.40±0.74	34.7±5.7
	postoperation					
C (15)	Before surgery	55.9±8.7	36.8±6.5	37.9±6.2	1.29±0.35	28.9±5.2
	First week post-	51.9±8.7	34.7±5.7	47.7±8.5	0.98±0.44	27.2±5.1
	operation					
	First month	§ 52.1±4.9	35.6±4.8	32.4±6.9	1.12±0.52§	28.8±5.7§
	postoperation					
	Second month	58.9±7.9	35.3±5.5	29.6±7.6	1.60±0.63	33.6±5.0
	postoperation					
	Third month	65.9±7.9	38.8±8.3	33.4±9.0	1.56±0.45	35.5±5.2
	postoperation					