Analysis and Application of Antagonism Compound Prescription Compatibility

Mengyan Li 1, Can Wang 1, Ming Bai 1, Mingsan Miao 1, a*

1 Henan University of Chinese Medicine Zhengzhou 450046
E-mail: miaomingsan @163.com.

Abstract. Deer horn glue is deer family animals deer or red deer horn made of solid plastic animal medicine, according to Chinese medicine "seven emotions together" theory, the antler and other Chinese herbal medicines compatibility can be better play its Medicinal value. In this paper, the chemical composition, pharmacological effects, compatibility analysis, clinical application and classic ancient prescriptions of antler are reviewed in recent years.

1. Introduction
Antlers for the first time appeared in the "Shennong Bencao Jing", is the deer Branch of the sika deer or red deer sawing section, washed, decoction and decoction made of plastic pieces, the product is flat square or Ding, Its color is translucent yellow-brown or red-brown, the upper part of the yellowish-white foam layer. [1] Crisp, crisp section, slightly sweet smell. Antlers sweet, salty, warm, go by the kidney. There are mainly warming liver and kidney, the effect of nourishing the blood, clinically used for liver and kidney deficiency caused by Yaoxisuanruan, impotence nocturnal emission, Consumptive thin, bleeding under the bleeding, hematochezia, hematochezia, swelling and pain. [2] As a traditional valuable animal medicine, has a long history and is widely used in modern clinical also has great medicinal value.

2. Antler chemical composition
Antlers mainly contain rich amino acids, such as: L-hydroxyproline, glycine, alanine and L-proline more than 10 kinds of amino acids, of which collagen is the main component hydroxyproline. [3-4]. Antlers also contain beta-3 subtype hemoglobin, antimicrobial peptide 1, peptidoglycan recognition protein [2] and other animal proteins containing Zn, Cu, Fe, Mn, calcium phosphate, calcium carbonate, magnesium phosphate, amino acids And nitrides and other trace elements, Zn, Cu, Fe, Mn these four kinds of trace elements and the antler effect of the drug there is a link [5]. Antlers also contain heavy metals, such as lead, cadmium, arsenic, mercury, etc., but the content of heavy metals in qualified antler products is in accordance with the standards of medicine. [6]

3. Antlers pharmacological effects

3.1. Anti-inflammatory, blood circulation
Antlers on the xylene-induced ear swelling in mice, horn fork Ligand induced swelling of rat tissue has an inhibitory effect, antlers can also extend the hot plate caused by mouse pain caused by mouse licking time, Increased mouse writhing due to acetic acid, indicating that antlers have anti-inflammatory analgesic effect. [7] Antlers gum can significantly increase the cyclophosphamide-induced blood deficiency in whole blood red blood cells, platelets, leukocytes,
Tlymphocytes in the number of plasma prothrombin time and activated partial thromboplastin time values were significantly increased, Show that it has anti-inflammatory, blood function. 

3.2. Protect the breast
Antlers can significantly reduce the mammary gland hyperplasia rat serum E2 and LH content, and the serum P content was significantly increased, FSH content also increased role, can significantly improve the mammary gland hyperplasia rat model of blood theology, decreased Nipple diameter and height, indicating antlers have a preventive effect on breast hyperplasia. 

3.3. Protect brain tissue
Antlers can reduce cerebral infarct size, decrease the content of LDH and MDA, increase the activity of CAT, T-SOD and GSH-PX in rats with cerebral ischemia, and protect the morphology of rat brain.

3.4. Anti-osteoporosis
Antlers can increase the bone mineral density in ovariectomized rats and increase the content of calcium and phosphorus in bone mineral, so that BGP in serum of ovariectomized rats increases significantly, ALP decreases significantly, NO and NOS increase significantly, organizational form.

3.5. Impotence
Antlers can enhance the reproductive capacity of male rats, can significantly shorten the potential limit of electrical stimulation-induced penile erection, can increase the weight of male rats seminal vesicles and prostate gland, males have to enhance the mating ability.

In addition Antlers also protect gastric mucosa, blood and lipid-lowering effect of blood pressure can promote the expression of BMP-2 protein in osteoblasts, can improve phagocytic function of macrophages in patients with breast cancer.
4. Antlers plastic compound compatibility[13]

| Antlers plastic compatibility of traditional Chinese medicine | Compatibility efficacy and clinical application |
|---------------------------------------------------------------|--------------------------------------------------|
| Rehmanniae radix praeparata                                   | Cape glue and Rehmannia match, yin and yang double fill, kidney yin yang rib. Can be used for the treatment of refractory immune thrombocytopenia recipe. |
| Angelicae sinensis radix                                      | Antlers and Angelica combined with the treatment of virtual hypertension[14], the treatment of lumbar spinal stenosis blood deficiency anemia / hypoproteinemia[15]. |
| Astragali radix                                               | And antlers gel with a yin and yang, the purpose of reaching yang and yin and yang, clinically applicable to the lack of qi and blood deficiency syndrome. |
| Atractyloidis macrocephalae rhizoma                           | Bitter, sweet, bitter to spit, antler glue replenishing qi and blood, the combination of these two drugs commonly used in gynecological diseases. |
| Codonopsis radix                                              | Codonopsis spleen benefits the lungs, nourishing fluid. Can regulate the body's immune function, antler glue Wenshen fill tonic, the two drug compatibility clinically available aplastic anemia. [16] |
| Ginseng radix et rhizome, Amomi fructose                      | Ginseng Dafu strength, Fumai solid off, strong heart Bushen, Antlers Jiao Yang help Yang, Amomum enteritis and kidney, kidney drugs into the spleen. Clinically available for blood deficiency hypertension. [17] |
| Testudinis carapacis et plasti colla, Asini corii colla        | Gull deer cents glue, Yin fill, Jing yang. Clinical commonly used in the treatment of endocrine disorders caused by dysplasia, severe anemia, neurasthenia, osteoarthritsis and sexual dysfunction and other diseases. Ejiao and then used, yin and yang, Bunao, priority, anti-epilepsy increased ability. |
| Drynariae rhizome, Eucommiae cortex                           | An antler glue, dried nausea for the king of medicine, dry nourishing the abdomen kidney impotence solid refinement of urine, the two king of medicine combined, there Jun Jun kidney yang, essence and narrow of the essence of fine, Jun minister phase Zuo. Warming liver and kidney, nourishing blood. Clinically used for Yaoxisuanru, consumptive weight loss, osteoporosis. [18] |
| Testudinis carapacis et plasti colla, Ginseng radix et rhizome, Lycii fructose | And antler glue all kinds of medicine, Buganyishenjian, Yang Tian Gui, yin and yang and make up, longevity, can promote type II collagen or proteoglycan synthesis[19], the treatment of many diseases before and after menopause, [20] the elderly Dementia, [21] Aplastic anemia. [22] |
| Lycii fructose, Discourage rhizome, Cucuta semen              | Yam spleen and kidney, meddler, dodder kidney essence. Adjudication of the monarch has a "Treating Yin for Yang," the meaning of the various drugs can be used to warm kidney yang, fill the best. For sexual dysfunction, chronic nephritis and diabetes are kidney deficiency, life-fiery who. [23] |
| Rehmanniae radix praeparata, Ginseng radix et rhizome, Cuscutae semen, Cyathulae radix | With antlers glue medicine, nourishing yin and reinforcing kidney. Clinically used for male and female reproductive system diseases, chronic nephritis, plastic anemia, neurasthenia and lumbar muscle strain such as kidney yin deficiency, yin deficiency or heat syndrome. [24] |
| Rehmanniae radix praeparata, Cinnamomi cortex, Ephedrae herbed, Baijjezi, Glycyrrhizae radix et rhizome | Antagonizing drugs and antlers, warming yang and nourishing kidney, cold pass stagnation. In clinical application of bone metastases, orthopedic inflammation, peritoneal tuberculosis, lobular hyperplasia of women, dysmenorrheal and other evidence of Yang deficiency and cold coagulation. [25] |
5. Outlook

Compatibility of traditional Chinese medicine is based on the drug's drug with other drugs according to the seven emotions and together, according to the principle of monarchy with purposefully according to the needs of the disease selectively two flavor and more than two drugs used in conjunction. Rational drug compatibility can get unattainable attenuated, synergies and increase the effect of indications.

Antler as a traditional precious Chinese herbal medicine has a long history of application, as flesh and blood products, warming the liver and kidney, blood and blood effects, and no toxicity reported. Deer heaven and earth to get the most complete yang, Shangyang the top grade, used for yang weak patients. Good Yang, who must seek yin in the yin, Yang yin help and biochemical infinite. Antler Jiaogang Yuanyang often associated with Yin Yin, in order to achieve the effect of yin and yang. Tortoise the world's thickest, compatibility with turtle shell glue, in order to reconcile the yin and yang and Ren Du two veins, and Rehmannia compatibility combined with yin and yang double supplement, kidney and liver Rongrong. And then Ejiao use, yin and yang, nourishing the essence of spermatogenesis, Changbu, Bunao, anti-epilepsy increased ability to increase indications. Antler glue and angelica, Angelica blood and blood, antler blood and blood, Wenshen help Yang, blood can increase the effectiveness of two drugs Qi. Yam spleen and stomach, Sheng Jin lung, Bushen astringent, medlar qi and blood, nourishing yin yang, often as an adjuvant and antler glue and tortoiseshell glue compatibility can be used to kidney Essence yin essence, help yang yang. Longevity fluid antlers, tortoises shell glue and other combinations can reduce the inhibitory effect of tripterygium on the male reproductive system.

With the ongoing scientific research, many of the antler glue medicinal functions are also being gradually found and applied to clinical, antlers plastic kidney yang, the effect of qi and blood prompted us, whether can antlers and Ganoderma lucidum, red bean shirt, toad Such anti-cancer drugs combined to assist the recovery of cancer patients. Hoping to make reasonable additions and subtractions on the basis of the ancient prescription, so that the antler can maximize the medicinal value in prescription compatibility, bringing greater social and economic benefits.

6. References

[1] Li Na, Qu Xiaobo, Jiang Zongwen, etc .. Animal medicine finishing research - antler [J]. Jilin Chinese medicine, 2014, 34 (1): 74-76.
[2] State Pharmacopoeia Commission. Pharmacopoeia of the People's Republic of China, a [M]. Beijing: China Medical Science and Technology Press, 2015: 322.
[3] Shi Yan, Fan Xiaolei, XIAO Xinyue, et al. Determination of four major amino acids in antler glue [J]. Chinese Journal of Pharmaceutical Analysis, 2012 (5): 783-787.
[4] Zhou Fangyan, Li Ting, Liu Li, et al. A HPLC Fingerprint of Amino Acids in Antler Glues [J]. Acta Metallurgica Sinica, 2014, 20 (9): 47-51.
[5] Huang Bisheng. Ejiao glue and antler gel in the determination of trace elements [J]. Lizhen Guo Yi Guo Yao, 2001, 12 (6): 487.
[6] Shi Yan, Xiao Xinyue, Wei Feng, et al. Determination of harmful elements in antler glue based on microwave digestion and ICP-AES [J]. Acta Metallurgica Sinica, 2013, 19 (16): 151-153.
[7] Zhang Jiuzhuo, Lin Zhe, Guanguang Fu, et al. Anti-inflammatory and analgesic effect of antler [J]. Jilin Chinese Medicine, 2014, 34 (10): 975-977.
[8] Li Jing, Li Na, Guangguang, etc. Antlers gum cyclophosphamide-induced blood deficiency model mice [J]. Jilin Chinese medicine, 2014, 34 (10): 973-975.
[9] Lin He,Lv Guangfu, Tian Wenting, et al. Antagonizing effect of antler on breast hyperplasia [J]. Chinese Journal of Gerontology, 2016, 16 (36): 3895-3897.
[10] Li Hui, Chen Junyu, Yang Qing, et al. Antagonistic effect of antlers on ovariectomized rats with osteoporosis [J]. Chinese herbal medicine, 2009,32 (2): 179-182.
[11] Niu Xiaohui, Li Pengfei, Jia Xueting, et al. Progress of Pharmacological Actions of Deerk Animal Origin in China for Ten Years [J]. Jilin Chinese Medicine, 2012, 32 (7): 702-705.
[13] State Pharmacopoeia Commission. Pharmacopoeia of the People's Republic of China, one [M]. Beijing: China Medical Science and Technology Press, 2015: 8-322.

[14] Cao Yali. Buqi nourishing kidney method for the treatment of virtual hypertension [J]. Journal of Changchun University of Traditional Chinese Medicine, 2014, 30 (05): 879-881.

[15] Mu Guanqiao, Sun Bo. Angelica Buxuetang combined with Western medicine treatment of lumbar spinal stenosis postoperative anemia / hypoproteinemia (blood deficiency) [J] .2017, 31 (4): 2-73.

[16] Wang Faling. Integrative Medicine of the treatment of aplastic anemia efficacy [J]. Shaanxi Traditional Chinese Medicine, 2012, 33 (8): 1037-1038.

[17] Gao Feng, Niu Liwen antler glue Di Huang Wan combined with nifedipine sustained-release tablets in the treatment of hypertension with hyperlipidemia in 18 cases * [J] Journal of Traditional Chinese Medicine, 2016, 29 (1): 17-19.

[18] Wang Zhenjie, Zhang Jinduo, Li Yuehua, Li Yuehua experience of treatment of osteoporosis [J]. Jilin Chinese medicine, 2012, 32 (4): 341-343.

[19] Li Nan, Yin Yubiao, Ji Huan Health, et al. Guilu Erxian and its decomposed formulas of guinea pig chondrocytes collagen type II and proteoglycan synthesis [J] Journal of Traditional Chinese Medicine, 2011,26 (11): 2524-2528.

[20] Zhao Qingchun. The use of Guilu Erxian decoction before and after treatment of Zhu Zheng experience [J]. Chinese folk medicine, 2009, 18 (3): 163.

[21] Kong Derong. Guilu Erxian glue for the treatment of 60 cases of senile dementia [J] Journal of Traditional Chinese Medicine, 2007, 20 (10): 33-34.

[22] Xiangyang, Chang Xiaohui, Sun Feng, ET al.Traditional Chinese medicine treatment of aplastic anemia drug law [J]. Liaoning Journal of Traditional Chinese Medicine, 2015, 42 (10): 1828-1831.

[23] Hu Weidong, Chen Dening, Zou Damin, et al.Development of traditional Chinese medicine for diabetic erectile dysfunction [J]. Journal of Liaoning University of Traditional Chinese Medicine, 2013, 15 (2): 14-16.

[24] Xu Haiping.Zuogui pill combined with western medicine in the treatment of aplastic anemia randomized parallel controlled study [J] Journal of Practical Traditional Chinese Internal Medicine, 2013,27 (7): 117-118.

[25] Luo Yan, Lou Lihua, Wo Xingde, etc. Yang and Tang on the efficacy of patients with acute mastitis and T lymphocyte subsets [J] Journal of Traditional Chinese Medicine, 2013, 31 (5): 1069 -1070.