

Lectures

A Review of Autism Spectrum Disorders (ASD) from A Perspective of Classical Chinese Medicine (CCM)

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Introduction

Autism is a complex developmental disability that typically appears during the first two years of man's life and is the result of a neurological disorder that affects the functioning of the brain, and the development in social interaction and communication skills. Both children and adults along the autistic spectrum typically show difficulties in verbal and non-verbal communication, social interactions, and leisure or play activities.

Autism is the most common of the Pervasive Developmental Disorders, affecting about 1 in 150 births (Centers for Disease Control Prevention, 2007, USA). Roughly translated, this means as many as 1.5 million Americans today are believed to have some form of autism. It is the fastest-growing developmental disability, with 10–17% annual growth and \$90 billion in annual costs.¹ It is estimated that the annual cost will grow to \$200–400 billion in 10 years.

People with autism may also exhibit some of the following traits: obsessive attachment to object, repeating words or phrases in place of normal, responsive language, a preference for being alone, an aloof manner, sustained odd play/spinning of objects, apparent over-sensitivity or under-sensitivity to pain, noticeable physical over-activity or extreme under-activity, and uneven gross/fine motor skills.

The main western medical treatments are special education, and behavior therapy. Certain drugs, such as Risperidone and Olanzapine, are commonly used,

but are not encouraged for use in autistic children due to their potential harmful effects outweighing their potential benefits.²

How autism occurs is not well understood by western medicine, even though intensive investigations have been done. It is the assumption from this medical paradigm that there is no cure for autism.

Classical Chinese Medicine (CCM) offers six types of treatments, including massage, acupuncture, moxa, herbs, exercises (*Daoyin*) and scraping or cupping, which may greatly improve autistic cases. An excellent CCM doctor should deeply investigate a human being's life, which manifests as physiological and pathological situations, including autism in children or adults, from their unique perspectives already honored in several thousand years of Chinese history.

In Chinese medicine, there have been professional terms such as 'Wu Chi' (五迟, five retardations), which is symptomatically similar to the Autism Spectrum Disorders (ASD). The term was initially recorded in the book *Xiaoer Yaozheng Zhijue* (小儿药证直诀 *Straightforward Instructions on Herbal Patterns for Children*) written by QIAN Yi (钱乙) in the Song Dynasty (960–1127 A.D). *Wu Chi* manifests as physical and mental developmental retardations in infancy and/or childhood, including *Li Chi* (立迟 standing-up retardations), *Xing Chi* (行迟 toddling retardation), *Fa Chi* (发迟 hair-growth retardation), *Chi Chi* (齿迟 tooth-growth retardation), and *Yu Chi* (语迟 echolalia retardation). It has been well accepted that *Wu Chi* is caused by a severe deletion of prenatal essence, i.e. deletion of the kidney-qi and essence.

The Etiological and Pathological Factors of ASD from a CCM Perspective

A child with ASD may be diagnosed by CCM doctors as *Wu Chi* (five retardations). There are two subtypes of ASD from a CCM perspective.

Type I is a compound of an *Yu Chi* (语迟 echolalia retardation) and other physical and/or mental retardations. Besides the chief concern—abnormal communication ability and/or stereotypical, repetitive behaviors, the child with type I ASD may simultaneously have physical or mental problems which manifest as significant head lag, inability to roll over at 6 months of age, failure to sit up straight without support, persistent squinting, no pincer grasp at 9–12 months, inability to stand, no spontaneous vocalizations at 15–18 months, abnormal hand positions at 15–18 months, absence of recognizable words, ataxia at 2 years, or incomprehensible speech 75% of the time at 3 years of age.

The child with Type II ASD has only echolalia retardation, manifesting as poor communication ability or stereotypical, repetitive behaviors.

From a CCM perspective, Type I is chiefly caused by congenital disorders of multiple organs with a dominant insufficiency of kidney-*jing*. Type II is chiefly caused by either heart channel blockage or heart-*qi* deficiency.

A child with Type I ASD may have: 1) an extraordinary large front fontanel; 2) late development of teeth; 3) poor quality and growth of the head hair; 4) poor quality and hours of sleep; 5) poor appetite and frequent loose stools; 6) catch colds easily and frequently (more than 3 times per year); 7) pale tongue body with thin white coating; 8) pulses are deeper, weaker, and shorter than what they should have.

A child with Type II ASD may have few or no disorders involving other organs except the heart, manifesting as poor communication ability or stereotypical, repetitive behaviors.

The main goals of CCM treatments are to reduce the associated deficits and family distress, and to help the autistic babies and children increase functional independence for a better quality of life.

Long-term acupuncture treatment is not easily accepted by children under 12 years old (according to some ancient Chinese books, acupuncture is not encouraged to be used in children under this age). CCM massage treatments are typically tailored to each child's needs. Intensive, sustained special CCM massage programs, combined with moderate moxibustion (replaced by J-T warm-finger moxa for a baby), appropriate herbal prescriptions and special musical therapy can help the autistic children acquire better self-care, socialization, and job skills.

Detailed Information about CCM Treatments

1. For children with type I ASD

Symptoms and syndromes: Besides the chief concern of the stereotypical, repetitive behaviors, the baby (when under 18 months) may have an extraordinarily large frontal fontanel and late closure of the frontal fontanel, delayed development in sitting, walking and tooth growth, poor development of head hair, late growing of the eyebrows, thin flesh, excessive sweating, coarse and sallow skin. Usually the child has a weaker voice or crying sound and with a smaller umbilicus than the normal children.

Assessment: Deficient kidney essence and insufficient heart *qi* with a blocked heart channel.

Treatment method: Cultivate kidney essence, tonify the heart-*qi* and unblock the heart channel.

Treatments: It is well known that the kidney is prenatal while the spleen is postnatal. The kidney-*jing* (essence) is chiefly derived from the individual inheritance of family lineage and the cosmological characteristics of the date and place of birth. It is more difficult to improve prenatal disorders than postnatal disorders. For the purpose of improving prenatal insufficiency, the baby or child should be well cared for with a healthy lifestyle. There are two

significant things involved in good development of the physical and mental body: the best quality and longest hours of sleep and good diet; take care not to feed the baby/child cold food or juice. It is important to create treatments fully compliant with the circadian rhythms in a one-year period.

1) In winter (from November 7 to February 4, from the beginning of winter to spring begins in the Chinese lunar calendar)

Herbal treatments: Assume that the herbal formulas below are for a child with Type II autism, aged 3 years old. a) Yearly formula: *Wu Wei Yi Gong San* (五味异功散): Renshen (人参 Radix Ginseng) 10g, Chaobaizhu (炒白术 Fried Rhizoma Atractylodis Macrocephalae) 10g, Fuling (茯苓) 10g, Zhigancao (炙甘草 Radix Glycyrrhizae) 10g and Chenpi (陈皮 Pericarpium Citri Reticulatae) 4g. Administration: In granule form, take 0.5 g with warm milk or water, 3 times per day, before or after meals. b) Modified *She Rong Dan* (麝茸丹) from the book *Xiaoer Weisheng Zongwei Lun Fang* (小儿卫生总微论方 *General and Detailed Discourses and Formulas for Safeguarding Childrens' Life*): Lurong (鹿茸 Cornu Cervi Pantotrichum) 15g, Zhongrufen (钟乳粉 Power of Stalactitum) 15g, Ziheche (紫河车 Placenta Hominis) 15g, Renshen (人参 Radix Ginseng) 5g, Shudihuang (熟地黄 Radix Rehmanniae Praeparata) 5g, Buguzhi (补骨脂 Fructus Psoraleae) 5g and Shexiang (麝香 Moschus) 1g. Administration: Grind Ziheche, Lurong, Zhongrufen and Shexiang into a fine powder, mix them with granule forms of Renshen, Shudihuang and Buguzhi; take 0.5 g with warm water, twice per day, before dinner and bedtime.

CCM massage: a) Moderately press on the acupoints Zhongwan (CV 12), Zusanli (ST 36), Taibai (SP 3) with tonifying manipulations 5 times (one time takes 1 minute) for each. In total, it takes about 25 minutes. Do once or twice per day. Note: Tonifying manipulation is pressing gently and slowly, and then lifting up quickly; while reducing manipulation is pressing hard and quickly and lifting up slowly. b)

Moderately press Taixi (KI 3), Fulu (KI 7) and Yingu (KI 10) about 6 times (6 minutes), with tonifying manipulations on each one of the acupoints; it takes about 36 minutes, once per day.

CCM moxibustion: for children, usually older than 7 to 8 years old, who can accept it. a) Moderately moxa at Taixi (KI 3), Dazhong (KI 4) and Zhongfeng (LR 4), 3 cones at each of the acupoints. b) For extra safety, using J-T Warm finger moxibustion created by the author can be used to replace the common moxibustion for a child under 5 years old.

CCM musical therapy: Let the autistic baby or child listen to the Yu (羽) tone of music in the winter season, especially during the time period 5–7 pm. The ancient Chinese music in the tone of Yu is like the well-known music entitled *Han Gong Qiu Yue* (汉宫秋月 The Han Palace with the Autumn Moon), *Wu Ye Di* (乌夜啼 A Crow Sings at Night), *Yu Shu Lin Feng* (玉树临风 A Jade Tree Standing in Wind), etc.

2) In spring (from February 4 to May 5, from the beginning of spring to summer begins in the Chinese lunar calendar)

Herbal treatments: a) *Wu Wei Yi Gong San* (五味异功散). Administration: Same as above. b) *Ling Yang Jiao Wan* (羚羊角丸) from the book *Xiaoer Weisheng Zongwei Lun Fang*: Lingyangjiao (羚羊角 Cornu Saigae Tataricae) 9g, Shudihuang (熟地黄 Radix Rehmanniae Praeparata) 27g, Suanzaoren (酸枣仁 Semen Ziziphi Spinosa) 15g, Fuling (茯苓 Poria) 18g, Guizhi (桂枝 Ramulus Cinnamomi) 15g, Fangfeng (防风 Radix Saposhnikoviae) 15g, Danggui (当归 Radix Angelicae Sinensis) 15g, Huangqi (黄芪 Radix Astragali Mongolici) 54g. Administration: Grind into fine powder, take 0.6g with warm water, 3 times per day before meals.

CCM massage: a) Moderately press on the acupoints Zhongwan (CV 12), Zusanli (ST 36), Taibai (SP 3) with tonifying manipulations 5 times (one time takes 1 minute) for each. b) Moderately press on Zhongfeng (LR 4), Xiguan (LR 7) and Zuwuli (LR

10) with tonifying manipulations 3 times (about 3 minutes) for each.

CCM moxibustion (for children over 5 years old): Moderately moxa at Zhongfeng (LR 4) and Xiyan (EX-LE5), 3 cones at each of the acupoints. Note: for extra safety, J-T Warm finger moxibustion can be applied for a child under 5 years old at the same acupoints.

CCM musical therapy: Let the autistic baby or child listen to the *Jiao* (角) tone of music, especially during the period between 7–9 am. The ancient Chinese music in the *Jiao* tone is like the music entitled *Lie Zi Yu Feng* (列子御风 Master Rides on Wind), *Shan Ju Yin* (山居吟 A Song by a Person Who Lived in a Mountain), *Yan Guo Heng Yang* (雁过衡阳 A Wild Goose Passes through Hengyang), etc.

3) In summer (from May 5 to August 7, the beginning of summer to autumn begins in the Chinese lunar calendar)

Herbal treatments: a) *Wu Wei Yi Gong San* (五味异功散). Administration: Same as above. b) Modified *Chang Pu Wan* (菖蒲丸) from the book *Xiaoer Weisheng Zongwei Lun Fang*: Shichangpu (石菖蒲 Rhizoma Acori Tatarinowii) 30g, Yuanzhi (远志 Radix Palygalae) 30g, Guizhi (桂枝 Ramulus Cinnamomi) 30g, Huangqi (黄芪 Radix Astragali Mongolici) 30g, Renshen (人参 Radix Ginseng) 30g, Huanglian (黄连 Rhizoma Coptodis) 15g, Suanzaoren (酸枣仁 Semen Ziziphi Spinosae) 15g (in granule form). Administration: Take 1 g with warm water (better to take with fresh ginger tea), twice per day.

CCM massage: a) Moderately press on the acupoints Zhongwan (CV 12), Zusanli (ST 36), Taibai (SP 3) with tonifying manipulations 5 times (one time takes 1 minute) for each. b) Moderately stimulate Shaochong (HT 9) and Shaofu (HT 8) with a pen, 2 times (one time takes about 1 minute) for each, and then press on Xinshu (BL 15) 2 times with the index

fingers using the tonifying manipulations. One time takes about 1 minute, once or twice per day.

CCM moxibustion (for children over 5 years old): Moderately moxa at Taixi (KI 3), Dazhong (KI 4) Zhongfeng (LR 4), and Tianliao (TE 15), 3 cones at each of the acupoints. Note: for extra safety, J-T Warm finger moxibustion can be applied for a child under 5 years old at the same acupoints.

CCM musical therapy: Let the autistic baby or child listen to *Zhi* (征) tone of music during the period of 9 am to 3 pm. The ancient Chinese music with *Zhi* tone are like the music entitled *Feng Qiu Huang* (凤求凰 A male Phoenix falls in love with a female phoenix), *Feng Huang Tai Shang Yi Cui Xiao* (凤凰台上忆吹箫 Missing playing pan flute at the Phoenix terrace), *Guan Ju* (关雎), etc.

4) In late summer (from August 7 to November 7, the beginning of summer to winter begins in the Chinese lunar calendar)

Herbal treatments: a) *Wu Wei Yi Gong San* (五味异功散). Administration: Same as above. b) *Bu Fei Tang* (补肺汤) from the book *Xiaoer Weisheng Zongwei Lun Fang*: Wuweizi (五味子 Fructus Schisandrae Chinensis) 9g, Ganjiang (干姜 Rhizoma Zingiberis) 6g, Guizhi (桂枝 Ramulus Cinnamomi) 6g, Kuandonghua (款冬花 Flos Farfarae) 6g, Maimendong (麦门冬 Radix Ophiopogonis Japonici) 20g, Dazao (大枣 Fructus Jujubae) 20g, Sangbaipi (桑白皮 Cortex Mori Albae Radicis) 20g, and Gengmi (粳米 Rice) 5g (in granule form). Administration: Take 2 g, twice per day.

CCM massage: a) Moderately press on the acupoints Zhongwan (CV 12), Zusanli (ST 36), Taibai (SP 3) with the tonifying manipulations, 5 times (one time takes 1 minute) for each. b) Moderately press Taiyuan (LU 9), Jingqu (LU 8) and Feishu (BL 13) 4 times (about 4 minutes) for each one of the acupoints.

CCM moxibustion: (for children over 5 years old): Moderately Moxi at Zhongfu (LU 1) and Feishu (BL

13), 4 cones at each of the acupoints. Note: for extra safety, J-T Warm finger moxibustion can be applied for a child under 5 years old at the same acupoints.

CCM musical therapy: Let the autistic baby or child listen to the *Shang* (商) tone of music during the period 3–5 pm. Ancient Chinese music with the *Shang* tone are like the music entitled *Qiu Shui* (秋水 The Autumn Water), *Mozi Bei Si* (墨子悲思 Master Mo's Grief), *Yu Qiao Wen Da* (鱼樵问答 Questions and Answers from a Fisherman), etc.

2. For cases with type II ASD

Symptoms and syndromes: Besides the chief concern, i.e. repetitive behaviors, the baby or child has no other symptoms of physical or mental developmental delays.

Assessment: Congenital blockage of the heart.

Treatment method: Resolve the heart blockage.

CCM treatments: Type II is easier to be treated as compared with type I. The child with type II does not need to be treated yearly. The best time to treat the child is in the summer season, from 9 am to 3 pm daily.

Herbal treatment: *Chang Pu Wan* (昌蒲丸): For type II autistic cases, it's better to take it in the summer season (from May 5 or 6 to August 22 or 23, summer begins to stop the heat in the Chinese lunar calendar). Shichangpu (石菖蒲 *Rhizoma Acori Tatarinowii*) 18g, Renshen (人参 *Radix Ginseng*) 45g, Tianmendong (天门冬 *Radix Asparagi*) 85g, Maimendong (麦门冬 *Radix Ophiopogonis Japonici*) 85g, Yuanzhi (远志 *Radix Palygalae*) 7g, Guizhi (桂枝 *Ramulus Cinnamomi*) 7g, Danshen (丹参 *Radix Salvia Miltiorrhizae*) 15g, Huanglian (黄连 *Rhizoma Coptodis*) 5g, and Suanzaoren (酸枣仁 *Semen Ziziphi Spinosae*) 5g. Administration: In granule form, take 1 g, 3 times per day, after meals.

CCM massage: It should be better done in summer (from May 5 to August 22, summer begins to stop the heat in the Chinese lunar calendar), once or twice per day. a) Moderately press along the GV meridian with

hard pressure on Changqiang (GV 1), Mingmen (GV 4), Zhiyang (GV 9), Lingtai (GV 10), Shendao (GV 11), Yamen (GV 15), and Baihui (GV 20); it takes about 2 minutes for each of the acupoints using the tonifying manipulations. b) Press on Xinshu (BL 15), Dushu (BL 16), Pishu (BL 20) and Shenshu (BL 23) about 2 minutes for each of the acupoints with the tonifying manipulations. c) Press on Shaofu (HT 8), Shenmen (HT 7) and Yinxi (HT 6) with the moderately reducing manipulations.

Illustrative Case

A body aged 2 years and 3 months. First visit: on January 4, 2008.

This boy had congenital heart disease and underwent surgery when he was one year old. He was diagnosed by his pediatrician as having developmental delays and a suspicion of autism 3 months before, due to the apparent abnormal history of development.

His mother reported that she became pregnant when she was 38 years old and his father was 42 years old. He is their second child. Nothing seemed abnormal to her, except she often felt tired because she couldn't have good rest due to her intense study during her last year of a master's degree program. During the pregnancy, she experienced heavy emotional stress with difficulty in falling asleep. The baby looked well except for his scanty head hair when he was born. He had been raised with mixed feeding.

The mother stated that her son couldn't raise his head until 4 months of age, couldn't sit up without support until 8 months, and didn't have his first front teeth until he was 11 months old. He seldom cried and seemed to be quieter than the other babies of similar age. He caught mild or moderate common cold three times. He frequently had loose stools twice or three times per day.

On the day of first visit, the body still couldn't stand up and toddle on the ground. He could pronounce only Mon and by under strong inducement from his mother. He had insufficient spirit from his eyes. His tongue proper was a bit pale with a slightly thick

white coating. His pulse was weaker, thinner and shorter.

CCM diagnosis: *Wu Chi* (Suspicion of Autism, Type I)

Assessment: Insufficient kidney essence with heart *qi* deficiency and heart channel blockage.

Treatment principle: Tonify the kidney essence and heart *qi* and unblock the heart channel.

Treatment strategy: A complete treatment should be done step-by-step as described below:

1) Build up the foundation through working on the kidney, resulting in stronger kidney essence in the winter season by administering the appropriate herbal formulas, massage and J-T Warm finger moxa.

2) Improve his liver *qi*'s spreading action in the spring by using appropriate herbal formulas, massage and J-T Warm finger moxa.

3) Focus on the chief complaint of poor development of the physical and mental body, including the suspicion of autism type II, by working on the heart in summer and administering appropriate herbal formulas, massage and J-T Warm finger moxa.

4) Improve the lung *qi*'s descending function through working on the lung organ and channels with appropriate herbal formulas, massage and J-T Warm finger moxa.

On the day of the first visit, the following formulas were prescribed:

Herbal formula: Modified *Wu Wei Yi Gong San* (五味异功散). Dangshen (党参 *Radix Codonopsis*) 5g, Baizhu (白术 *Rhizoma Atractylodis Macrocephalae*) 5g, Chenpi (陈皮 *Pericarpium Citri Reticulatae*) 4g, Zhigancao (炙甘草 *Radix Glycyrrhizae*) 5g, Ganjiang (干姜 *Rhizoma Zingiberis*) 2g, and Yiyiren (薏苡仁 *Semen Coicis*) 5g. Administration: Grind into a fine powder (could be done with a household grinder), take 2.5 g with warm water or food, twice per day. The baby should finish the dosage in five days, or he may stop taking it when the slightly thick tongue coating became a normal thin-white coating and his loose stool became firm.

Massage: 1) Gently and moderately massage along the GV meridian, from Changqiang (GV 1) to Baihui (GV 20), focusing on and pressing harder at Changqiang (GV 1), Mingmen (GV 4), Zhiyang (GV 9), Shendao (GV 11), Dazhui (GV 14), Yamen (GV 15), and Baihui (GV 20). 2) Gently and moderately press on Jueyinshu (BL 14), Dushu (BL 16), Pishu (BL 20) and Shenshu (BL 23) with the tonifying manipulations. 3) Gently and moderately press on Zusanli (ST 36), Taibai (SP 3) and Sanyinjiao (SP 6). All of the massage took about one and half an hour. I invited the mother to learn my massage treatments, simply taught her how to massage Zusanli (ST 36) and Sanyinjiao (SP 6), and asked her to do so once per day at home.

J-T Warm finger moxibustion: Moxa at Taixi (KI 3), Dazhong (KI 4), Fuliu (KI 7) and Yingu (KI 10).

Music therapy: I asked the mother to give ancient Chinese music entitled *Han Gong Qiu Yue* (汉宫秋月 The Han Palace with Autumn Moon) by CD at home at least half an hour every day.

Second visit: on January 11, 2008.

His mother reported that her baby had firmer stool with better digestion for the past two days. I found that the baby's tongue coating became thinner than the last visit. I changed the herbal formula to the following *Lu Rong Wan* based on my assessment of better functioning of the SP and ST: Lurong (鹿茸 *Cornu Cervi Pantotorichum*) 15g, Zhongrufen (钟乳粉 *Power of Stalactitum*) 15g, Ziheche (紫河车 *Placenta Hominis*) 15g, Renshen (人参) 5g, Shudihuang (熟地黄 *Radix Rehmanniae Praeparata*) 5g, Buguzhi (补骨脂 *Fructus Psoraleae*) 5g, and Shexiang (麝香 *Moschus*) 1g. Administration: Grind the herbs Ziheche, Lurong, Zhongrufen and Shexiang into fine powder, mix them with granule form of Renshen, Shudihuang and Buguzhi, take 0.3 g with warm water twice per day before dinner and bedtime.

I gave the massage treatment, J-T Warm finger moxa and music therapy once a week, combined with daily home massage and music therapy.

Results: Having been treated by all the above treatments for two months, the child could stand up and started to toddle around, and he could use his voice more than before. The parents were happy to have the boy treated with CCM methods.

References

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