

Utilization of Traditional Chinese Medicine in a Men's Health Polyclinic—Clinical Characteristics and Literatures Review for Treatment Options

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Traditional medicine has become an increasingly common treatment option for many patients. Traditional Chinese medicine is one of the more popular modalities. The aim of this study was to investigate the clinical characteristics of the needs of male subjects who visited a traditional Chinese medicine expert in a men's health polyclinic.

A total of 231 male patients visited a men's health polyclinic comprised of psychiatry, andrology and traditional Chinese medicine. Participants completed a set of general data and screening assessments, including the Androgen Deficiency in Aging Males Questionnaire, the Aging Males' Symptoms Rating Scale, Insomnia Severity Index, Chinese version of the Beck Depression Inventory-II, Chinese version of the Beck Anxiety Inventory, Gotland Male Depression Scale, the abridged 5-item version of the International Index of Erectile Function, and the Situational Fatigue Scale. Blood testing, including a profile of sex hormone levels, was selectively performed according to clinical needs.

Eighty-six males (37.2%) sought traditional Chinese medicine. The subjects who had been to traditional Chinese medicine before had a higher rate of erectile dysfunction and infertility complaints, and lower scores on the Gotland Male Depression Scale as compared to those who had never been to traditional Chinese medicine.

Infertile male patients seek help from traditional Chinese medicine due to oligo-asthenotetrazoo-spermia syndrome or failure to achieve pregnancy after treatment for correctable causes such as varicocele. Specific symptoms of male depression might be related to overall sexual complaints rather than to erectile dysfunction specifically. Herbal medicine may be an alternative and complementary treatment for male infertility, erectile dysfunction and mood disturbances, but further

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research is necessary to determine its efficacy in the male population.

Key words: Men's health polyclinic, traditional Chinese medicine, infertility, erectile dysfunction, male depression

Introduction

A men's health polyclinic at Chang Gung Memorial Hospital (CGMH) including the departments of andrology, psychiatry and traditional Chinese medicine (TCM) was established to provide medical service for partial androgen deficiency in aging males (PADAM), sexual dysfunction, lower urinary tract symptoms, infertility, and mental problems, among others. Previous studies have demonstrated the prevalence of erectile dysfunction (ED), premature ejaculation and PADAM to be 17.7%¹, 13%² and 16.6-24.1%³ respectively, in Taiwan.

There are different health seeking behaviors in Asian cultures because of strong beliefs in the holistic approach to medicine and health. Prevention of illnesses, development of natural resistance to disease and promotion of general well-being are emphasized in traditional Asian medicine. In the Asian countries, traditional medicine is widely used for the treatment of various physical and mental illnesses, including ED, PADAM, premature ejaculation and infertility. Although Western medicine is advanced in the management of the men's health problems noted above, some male patients visiting andrology or psychiatry outpatient clinic for their health problems also taking Chinese medicinal at the same time, but they may hesitate to talk to their urologist or psychiatrist. Men's health issues have greatly attracted attention in recent decades. The aging males' symptoms might be

influenced by biological, psychological or even social factors. For the actual clinical status and needs above, CGMH included andrology, psychiatry and TCM to establish men's health polyclinic. As far as we know, this medical setting should be the pioneer to provide multifaceted interventions for aging male population. The TCM clinic in the men's health polyclinic in CGMH is the first TCM clinic explicitly focusing on men's health problems based on specialist orientation in medical center hospital. The primary services in general TCM clinics are very extensive without specialist orientation. CGMH promoted a series implementation plan for exclusive men's health at the beginning when the polyclinic established. The men's health polyclinic is located in three rooms connected in the same waiting area in CGMH to provide the best convenience and accessibility to the male patients. According to patients' autonomy, the male subjects visiting men's health polyclinic determined their medical visit(s) themselves mostly or by the physicians' suggestion. The psychiatrist and urologist are able to transfer the patients to TCM clinic when they think that the patients may need TCM treatment or counseling, which may help more patients and promote communication between Western medicine and TCM. The medical services provided at the men's health polyclinic are actually based upon the patients' needs but not consistency under design. The results of the observational study might offer clinical experiences and references for further investigation in the field of

men's health.

Some results reported from our polyclinic have demonstrated insomnia as a predictor for symptoms of aging ⁴, sexual dysfunction as a way to distinguish anxiety/depression from PADAM ⁵ and the "Aging Males' Symptoms (AMS) Scale" as a way to assess depression and anxiety ⁶. There is no reference to identify the reason(s) pertaining to differences between the patients who had never been to the TCM department and those who had. Hereby, the study aimed to investigate "which kind of male patients visited TCM?" and "why they visited TCM?" at the men's health polyclinic.

The definition of terms in this paper follows those of the World Health Organization (WHO) as follows: (1). "Traditional medicine is the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness." ⁷ (2). "Complementary medicine or alternative medicine are used inter-changeably with traditional medicine in some countries. They refer to a broad set of health care practices that are not part of that country's own tradition and are not integrated into the dominant health care system." ⁷ (3). TCM is "the traditional medicine that originated in China, and is characterized by holism and treatment based on pattern identification/syndrome differentiation." ⁸ (4). Chinese medicinal "usually refers to those medicinal substances recorded in Chinese materia medica." ⁹ (5). Formula is "prescription, recipe". ¹⁰ (6). "Herbal medicines include herbs, herbal materials, herbal preparations and finished herbal products that contain as active ingredients parts

of plants, or other plant materials, or combinations." ⁷

Materials and Methods

Participants and Collection of General Data

From July 2008 through March 2009, there were 231 consecutive male outpatients who visited the men's health polyclinic initially at CGMH and completed comprehensive bio-psycho-social surveys as part of their initial visits before they contacted the physicians. All the surveys were completed by the patients themselves. There was a well-trained research assistant to explain the aim of surveys to the first-visit patients, and help them to completed questionnaires. All the 231 first-visit patients completed the surveys without any missing data. All the subjects determined which kind of medical visit(s) they chose to make themselves or suggested by clinicians. The collection of basic and demographic data included age, education, employment status, marital status, physical condition, chief complaints, current pharmacotherapy, body weight/height, waistline, body mass index (BMI), reasons for seeking medical advice, consumption of alcohol and cigarette smoking.

Administered Screening Scales

All participants were asked to complete the following standard self-administered questionnaires.

Androgen Deficiency in Aging Males (ADAM) Questionnaire—This 10-question checklist is a useful but non-specific screen that is assumed to be related to androgen deficiency in aging men ¹¹. A positive result on the scale is defined as answering "yes" to item 1 or 7 or any other three questions.

The Aging Males' Symptoms (AMS) Rating Scale—This 17-question self-administered scale ¹² by men over the age of 40 can also help assess the severity of the symptoms of aging. It contains three domains of psychological factors (five items), somatovegetative symptoms (seven items) and sexual complaints (five items). The intensity of each item is rated from 0 to 5 points. A higher total score indicates a more severe presentation. The AMS questionnaire was translated into a Chinese version and validated in 2007 ¹³.

Insomnia Severity Index (ISI)—This is a valid and brief self-reported questionnaire. It is a reliable tool for quantifying perceived insomnia over the previous two weeks and is a clinically useful device as an outcome measure in insomnia treatment. The ISI is composed of seven items ¹⁴ which evaluate the difficulty of sleep-onset, the difficulty of sleep maintenance, problems related to early-morning awakening, satisfaction with the current sleep pattern, interference with daily functioning, noticeability of impairment attributed to sleep problems and level of distress caused by sleep problems. Each item is rated from 0 (not at all) to 4 (extremely), except for satisfaction with the current sleep pattern, which is scored from 0 (satisfied) to 4 (extremely dissatisfied). The total score ranges from 0 to 28 to indicate the severity of insomnia.

The Chinese version of the Beck Depression Inventory-II (BDI-II)—The BDI-II published in 1996 ¹⁵ is a 21-item self-reported questionnaire to measure the severity of depression, and is comprised of measurements of symptoms relating to depression and physical symptoms. It has a maximum score of 63, with each question scored on a scale of 0 to 3. In the Chinese version ¹⁶, the cut-offs differ from those in the original (American), with 0 to 13 indicating minimal depression, 14 to 19 indicating mild depression, 20 to

28 indicating moderate depression and 29 to 63 severe depression. For Taiwanese, the assessment of whether a person presents with depression uses a cut-off point equal to or greater than 17.

The Chinese version of the Beck Anxiety Inventory (BAI) —The 21-question self-reported inventory has discriminative validity and can differentiate anxiety from depression ¹⁷. The BAI has a maximum score of 63, with each question scored on a scale of 0 to 3. The cut-offs are the same as those in the American version; however, the best cut-off point for Taiwanese is higher than or equal to 14 ¹⁸, which indicates a person with prominent symptoms that may possibly have clinical significance.

Gotland Male Depression Scale (GMDS) — This is a self-reported questionnaire to identify male depressive syndrome ¹⁹. It is composed of 13 items which evaluate stress tolerance, impulse control, acting-out behavior, substance abuse and alcoholism, a hereditary loading of depressive illness and suicide. Each item is rated from 0 (not at all) to 3 (extremely). The cut-offs are 0 to 12 indicating no evidence of depression, 13 to 25 indicating possible depression and 26 to 39 indicating evident depression.

The abridged 5-item version of the International Index of Erectile Function (IIEF-5) — This simplified 5-item questionnaire is a valuable diagnostic tool for ED ²⁰ and evaluates erectile function and overall satisfaction. Each item is rated from 0 (no sexual behavior or no certainty) to 5 (almost normal). The cut-offs are 22 to 25 indicating no ED, 17 to 21 indicating mild ED, 12 to 16 indicating mild to moderate ED, 8-11 indicating moderate dysfunction and 5 to 7 indicating severe ED.

Situational Fatigue Scale (SFS) — This 13-question self-reported scale evaluates the level of fatigue in daily

life²¹. It contains two components: physical fatigue and mental fatigue. Each item is rated from 0 (lowest) to 5 (highest). Physical fatigue (4 items) is defined as a score above 7. Mental fatigue (9 items) is defined as a score above 16. A total score above 23 is considered a positive response.

Laboratory Assays

Blood testing, including a profile of sex hormone levels, was selectively performed based on the overall assessments and clinical presentation.

Statistical Analysis

Continuous data were expressed as mean \pm standard deviation (SD), and categorical data including nominal data and ordinal data were shown as n with percentage (%). Subjects were divided into two groups, one of subjects who had been to the TCM department

of the men's health polyclinic in CGMH before, and the other of subjects who had never been to it. Data were compared between groups using two-sample t-tests for continuous variables, or Mann-Whitney U tests if data were in a non-normal distribution. For categorical variables, data were compared using Pearson's Chi-square test, or Fisher's exact test if any cell number was less than 5. The Mann-Whitney U test was also performed to compare the ordinal data between groups. All statistical assessments were considered significant if $P < 0.05$. Statistical analyses were performed using SPSS17.0 statistics software.

Results

Table 1 illustrates the demographic characteristics of all 231 participants. According to their experience with the TCM department of the men's health

Table 1. Demographics of 231 males by their experiences had been to traditional Chinese medicine. (N=231)

Demographics	All (n=231)	Never been to traditional Chinese medicine (n=145)	Been to traditional Chinese medicine (n=86)	P-value
Age ^a , yrs	48.06 \pm 11.00	48.30 \pm 11.41	47.67 \pm 10.32	0.679
Height ^b , cm	169.16 \pm 6.19	168.73 \pm 5.91	169.90 \pm 6.61	0.167
Weight ^a , Kg	70.68 \pm 11.58	69.92 \pm 11.16	71.97 \pm 12.21	0.194
BMI ^b , kg/m ²	24.66 \pm 3.47	24.53 \pm 3.45	24.87 \pm 3.53	0.466
Waist ^a , cm	86.14 \pm 10.32	85.35 \pm 10.70	87.49 \pm 9.55	0.130
Education ^c				0.772
Illiterate	1 (0.4)	1 (0.7)	0 (0)	
Elementary	15 (6.5)	12 (8.3)	3 (3.5)	
Jounior	35 (15.2)	22 (15.2)	13 (15.1)	
Senior	73 (31.6)	45 (31.0)	28 (32.6)	

Table 1. Demographics of 231 males by their experiences had been to traditional Chinese medicine. (N=231)
(Continued)

Demographics	All (n=231)	Never been to traditional Chinese medicine (n=145)	Been to traditional Chinese medicine (n=86)	<i>P</i> -value
Jounior college	48 (20.8)	29 (20.0)	19 (22.1)	
University	40 (17.3)	26 (17.9)	14 (16.3)	
Graduate	19 (8.2)	10 (6.9)	9 (10.5)	
Marital status ^c				0.728
Not married	33 (14.3)	22 (15.2)	11 (12.8)	
Married	182 (78.8)	111 (76.6)	71 (82.6)	
Divorced	13 (5.6)	10 (6.9)	3 (3.5)	
Widowed	2 (0.9)	1 (0.7)	1 (1.2)	
Cohabitted	1 (0.4)	1 (0.7)	0 (0)	
Working status ^c				0.118
Full time	155 (68.3)	90 (62.9)	65 (77.4)	
Part time	20 (8.8)	16 (11.2)	4 (4.8)	
Retired	28 (12.3)	19 (13.3)	9 (10.7)	
Wait for job	24 (10.6)	18 (12.6)	6 (7.1)	
Accompany ^c				0.749
No accompany	158 (68.7)	100 (69.0)	58 (68.2)	
Mate	62 (27.0)	37 (25.5)	25 (29.4)	
Family	9 (3.9)	7 (4.8)	2 (2.4)	
Friend	1 (0.4)	1 (0.7)	0 (0)	
Health status ^c				
Without any specific disease	105 (45.7)	61 (42.1)	44 (51.8)	0.154
With specific disease	125 (54.3)	84 (57.9)	41 (48.2)	
Drink ^c				0.764
Never	139 (60.2)	87 (60.0)	52 (60.5)	

Table 1. Demographics of 231 males by their experiences had been to traditional Chinese medicine. (N=231) (Continued)

Demographics	All (n=231)	Never been to traditional Chinese medicine (n=145)	Been to traditional Chinese medicine (n=86)	<i>P</i> -value
Usually	70 (30.3)	46 (31.7)	24 (27.9)	
Often	18 (7.8)	10 (6.9)	8 (9.3)	
Alcoholic	4 (1.7)	2 (1.4)	2 (2.3)	
Smoke ^c				
No	150 (64.9)	90 (62.1)	60 (69.8)	0.236
Yes	81 (35.1)	55 (37.9)	26 (30.2)	
Reason to medical advice ^c				
Hypotestosterone	72 (31.2)	47 (32.4)	25 (29.1)	0.596
Impotence	134 (58.0)	68 (46.9)	66 (76.7)	<.001*
Enlarged Prostate/prostatitis	43 (18.6)	29 (20.0)	14 (16.3)	0.482
Infertility	14 (6.1)	3 (2.1)	11 (12.8)	0.003*
Other	65 (28.1)	47 (32.4)	18 (20.9)	0.061
Previous seeking medical advice ^c				
Never	87 (37.7)	59 (40.7)	28 (32.6)	0.218
Urological department	79 (34.2)	43 (29.7)	36 (41.9)	0.059
Traditional Chinese medicine department from other hospitals	46 (19.9)	21 (14.5)	25 (29.1)	0.007*
Neurology department	54 (23.4)	39 (26.9)	15 (17.4)	0.101
Psychological counseling	3 (1.3)	2 (1.4)	1 (1.2)	0.888
Internal medicine department	12 (5.2)	7 (4.8)	5 (5.8)	0.744
Family medical department.	15 (6.5)	9 (6.2)	6 (7.0)	0.818
Medicines introduced from others	3 (1.3)	0 (0)	3 (3.5)	—

^{a, b} Continuous data were expressed as mean \pm SD, and compared using ^a two-sample t-test, and ^b Mann-Whitney U test.

^c Categorical data were expressed as n(%), and compared using Chi-square test, or Fisher's exact test if number of cell less than 5.

* $P < 0.05$, indicated the significantly different between groups.

polyclinic in CGMH, 86 males (37.2%) had been to the TCM department, and 145 (62.8%) had not. Overall, the average age was 48.06 years (SD=11.00), BMI was 24.66 kg/m² (SD=3.47), and the waist circumference was 86.14 cm (SD=10.32). Among the 231 males, there were 125 (54.3%) with specific diseases, 92 (39.8%) with experience in alcohol usage, and 81 (35.1%) with experience in tobacco usage. Among the reasons for seeking medical advice, the subjects who had been to the TCM department before had higher rates of impotence and infertility when compared with those who had never been to the TCM department.

Table 2 shows the comparison of results (score, status or severity) on questionnaires for subjects who had never been to the TCM department and those who had. The questionnaires included ADAM, AMS,

GMDS, BAI, IIEF-5, SFS, ISI, and BDI-II. Eight out of the 231 subjects had a positive result on ADAM. Overall, total scores averaged 11.88 (SD=4.17) on AMS, 11.26 (SD=8.68) on GMDS, 15.56 (SD=11.57) in BAI, 13.06 (SD=7.27) on IIEF-5, 22.18 (SD=12.93) on SFS, 11.92 (SD=7.38) on ISI, and 14.78 (SD=1.78) on BDI-II. There were no significant differences in severity or scores on these questionnaires between the two groups, except for the score on GMDS which was 12.01 ± 8.66 for the subjects who had never been to the TCM department and 9.99 ± 8.61 for those who had.

The laboratory examination was selectively performed based on clinical situations and not everyone was tested. They could not provide further useful information, so we did not show them.

Table 2. Comparison of results (Score, status, or severity) in questionnaires between subjects never been to traditional Chinese medicine and those been to traditional Chinese medicine. (N=231)

Questionnaires	All(n=231)	Never been to traditional Chinese medicine (n=145)	Been to traditional Chinese medicine (n=86)	P-value
ADAM, yes (%) ^a	8 (3.5)	6 (4.1)	2 (2.3)	0.713
AMS				
Psychological factor, score ^b	10.87 ± 4.83	11.17 ± 4.78	10.37 ± 4.91	0.122
Severity ^c				0.303
No	34 (140.7)	20 (13.8)	14 (16.3)	
Mild	51 (22.1)	27 (18.6)	24 (27.9)	
Moderate	57 (24.7)	41 (28.3)	16 (18.6)	
Severe	89 (38.5)	57 (39.3)	32 (37.2)	
Somatovegetative factor, score ^b	16.77 ± 5.49	16.93 ± 5.37	16.51 ± 5.71	0.448
Severity ^c				0.381
No	6 (2.6)	3 (2.1)	3 (3.5)	

Table 2. Comparison of results (Score, status, or severity) in questionnaires between subjects never been to traditional Chinese medicine and those been to traditional Chinese medicine. (N=231) (Continued)

Questionnaires	All(n=231)	Never been to traditional Chinese medicine (n=145)	Been to traditional Chinese medicine (n=86)	P-value
Mild	45 (19.5)	25 (17.2)	20 (23.3)	
Moderate	108 (46.8)	71 (49.0)	37 (43.0)	
Severe	72 (31.2)	46 (31.7)	26 (30.2)	
Sexual factor, score ^b	11.88 ± 4.17	11.76 ± 3.97	12.09 ± 4.50	0.748
Severity ^c				0.766
No	11 (4.8)	6 (4.1)	5 (5.8)	
Mild	19 (8.2)	14 (9.7)	5 (5.8)	
Moderate	65 (28.1)	38 (26.2)	27 (31.4)	
Severe	136 (58.9)	87 (60.0)	49 (57.0)	
Total score , score ^b	47.65 ± 15.03	39.86 ± 11.79	38.98 ± 13.21	0.294
Severity ^c				0.264
No	27 (11.7)	13 (9.0)	14 (16.3)	
Mild	78 (33.8)	49 (33.8)	29 (33.7)	
Moderate	86 (37.2)	58 (40.0)	28 (32.6)	
Severe	40 (17.3)	25 (17.2)	15 (17.4)	
GMDS, score ^b	11.26 ± 8.68	12.01 ± 8.66	9.99 ± 8.61	0.036
Severity ^c				0.176
No evidence of depression	153 (66.2)	91 (62.8)	62 (72.1)	
Possible depression	61 (26.4)	43 (29.7)	18 (20.9)	
Evident depression	17 (7.4)	11 (7.6)	6 (7.0)	
BAI, score ^b	15.56 ± 11.57	13.00 ± 11.01	11.83 ± 12.48	0.226
Severity ^c				0.260
Normal	98 (42.6)	56 (38.9)	42 (48.8)	
Mild	62 (27.0)	43 (29.9)	19 (22.1)	
Moderate	38 (16.5)	24 (16.7)	14 (16.3)	

Table 2. Comparison of results (Score, status, or severity) in questionnaires between subjects never been to traditional Chinese medicine and those been to traditional Chinese medicine. (N=231) (Continued)

Questionnaires	All(n=231)	Never been to traditional Chinese medicine (n=145)	Been to traditional Chinese medicine (n=86)	P-value
Severe	32 (13.9)	21 (14.6)	11 (12.8)	
IIEF-5, score ^b	13.06 ± 7.27	13.16 ± 7.23	12.91 ± 7.39	0.813
Severity ^c				0.662
No erectile dysfunction	74 (32.0)	46 (31.7)	28 (32.6)	
Mild erectile dysfunction	51 (22.1)	31 (21.4)	20 (23.2)	
Mild to moderate ED	58 (25.1)	36 (24.8)	22 (25.6)	
Moderate erectile dysfunction	48 (20.8)	32 (22.1)	16 (18.6)	
Severe erectile dysfunction	—	—	—	
SFS ¹				
Physical fatigue, score ^b	7.97 ± 4.65	7.86 ± 4.42	8.16 ± 5.03	0.613
Positive (score >7) ^a	117 (50.6)	70 (48.3)	47 (54.7)	0.349
Mental fatigue, score ^b	14.20 ± 9.60	14.65 ± 9.38	13.45 ± 9.99	0.213
Positive (score >16) ^a	87 (37.7)	59 (40.7)	28 (32.6)	0.218
Total score, score ^b	22.18 ± 12.93	22.51 ± 12.38	21.61 ± 13.87	0.508
Positive (score >23) ^a	128 (55.7)	81 (55.9)	47 (55.3)	0.933
ISI, score ^b	11.92 ± 7.38	11.88 ± 7.26	11.99 ± 7.62	0.958
Severity ^c				0.505
Normal	76 (32.9)	45 (31.0)	31 (36.0)	
Borderline	68 (29.4)	44 (30.3)	24 (27.9)	
Moderate	61 (26.4)	39 (26.9)	22 (25.6)	
Severe	26 (11.3)	17 (11.7)	9 (10.5)	
BDI-II, score ^b	14.78 ± 11.78	15.51 ± 12.12	13.55 ± 11.15	0.178
Severity ^c				0.337
Normal	151 (65.4)	91 (62.8)	60 (69.8)	
Mild	36 (15.6)	25 (17.2)	11 (12.8)	

Table 2. Comparison of results (Score, status, or severity) in questionnaires between subjects never been to traditional Chinese medicine and those been to traditional Chinese medicine. (N=231) (Continued)

Questionnaires	All(n=231)	Never been to traditional Chinese medicine (n=145)	Been to traditional Chinese medicine (n=86)	P-value
Moderate	19 (8.2)	13 (9.0)	6 (6.9)	
Severe	25 (10.8)	16 (11.0)	9 (10.5)	

Abbreviations: ADAM, androgen decline in the aging male; AMS, Ageing Males' Symptoms ; GOTLAND, Gotland Male Depression Scale; BAI, Beck Anxiety Inventory; IIEF-5, International Index of Erectile Function; SFS, Situational Fatigue Scale; ISI, Insomnia Severity Index; BDI-II, Beck Depression Inventory-II.

¹ One subject had missing record in SFS.

Data were shown as n (%) for status or severity, and mean \pm SD for score.

^{a,b,c} Data were shown as n(%) for categorical variables (including ^a nominal and ^c ordinal data), and mean \pm SD for ^b continuous variables.

^{a,b,c} Comparison between groups were performed using ^a Chi-square test, and ^{b,c} Mann-Whitney U test.

Discussion

The men's health polyclinic at CGMH includes psychiatry, andrology and TCM, and all operate at the same time. As far as we know, there is no similar medical setting providing medical services for male subjects in any another country. Patients registered according to their needs or at their clinicians' suggestions. Among the reasons for seeking medical advice, there was a higher rate of impotence and infertility in the subjects who had been to the TCM department before.

Infertility

A male-infertility-associated factor is found together with abnormal semen parameters in 50% of infertile couples, and 30-40% of male infertility is idiopathic. These men have normal physical examinations and endocrine laboratory testing. Semen

analysis shows oligozoospermia, asthenozoospermia and teratozoospermia which usually occur together and are depicted as the oligo-astheno- teratozoospermia (OAT) syndrome ²². There are many empirical therapies for male infertility, including herbal medicine.

Chinese Medicinals for Male Infertility

The water extracts of *Astragalus membranaceus* ^{23, 24}, *Cornus officinalis* ²⁵ and *Acanthopanax senticosi* ²⁴ increased human sperm motility in vitro. Magnolol which was isolated from the Chinese medicinal herb *Magnolia officinalis* protected human sperm motility against lipid peroxidation ²⁶.

Traditional Chinese Herbal Formulas for Male Infertility

Hochuekkito (Bu Zhong Yi Qi Tang) increased human sperm density and motility and decreased serum prolactin and estradiol levels in 63 infertile men

after 3 months of treatment²⁷, and improved human sperm motility in vitro²⁸ mediated by improvement of the circumstances of semen²⁹. Shao Fu Zhu Yu Tang increased human sperm motility, count, morphology and acrosin activity in 36 patients with chronic prostatitis after 60 days of treatment³⁰. Sairei To (Chai Ling Tang) increased human sperm concentration and motility and decreased the pulsatility index of the testicular artery in 47 patients with oligozoospermia and asthenozoospermia after 3 months of treatment, without changes in serum hormone levels or superoxide dismutase (SOD) activity³¹. Administration of Bu Zhong Yi Qi Tang for 3 months significantly increased the concentration and motility of human sperm and the seminal plasma soluble Fas (sFas) level which inhibited Fas-Fas ligand pathway- induced cell apoptosis³². The combination therapy of Liuwei Dihuang Wan and acupuncture decreased antisperm antibody (AsAb) levels in 50 infertile men with positive AsAb after 2-4 months of treatment³³. A TCM formula, Yikang Tang, decreased the sperm agglutination rate and AsAb levels in serum and seminal plasma, and increased sperm density and motility and the pregnancy rate in 100 male patients with immune infertility after 3 months of treatment³⁴. The Chinese herbal medicine formulas, Wu Zi Yan Zong Wan (Pills for Reproduction) and Sheng Jing Zhong Zi Tang (Decoction for Generating Sperms), showed therapeutic effects on patients with asthenospermia and oligozoospermia after 3 months of treatment³⁵, with improvement in sperm density, motility and morphology. The pregnancy rates were 5.7% for Wu Zi Yan Zong Wan and 8.6% for Sheng Jing Zhong Zi Tang. An herbal formulation, Y-virilin, increased human sperm counts after 2-3months of treatment and produced a conception rate of 20% after 6 months of treatment in a prospective placebo

controlled double blind study with 12 patients³⁶.

Erectile Dysfunction

Although phosphodiesterase type 5 inhibitors (PDE5i) have been proven to be effective for ED and are widely used, some ED patients still resort to natural alternative or herbal medicines for solutions, and there are increasing more studies of natural alternative or herbal medicines for ED.

Chinese Medicinals for Erectile Dysfunction

Korean red ginseng improved early detumescence and erectile parameters such as penile rigidity and girth, libido, and patient satisfaction when compared to placebo or trazodone in a 90-patient clinical trial³⁷. It also improved IIEF scores especially for penetration and erection maintenance and penile tip rigidity on RigiScan in a double-blind, placebo controlled, crossover study (8 weeks of treatment, 2 weeks of washout and 8 weeks of treatment) with a ginseng dose of 900 mg daily³⁸. Korean red ginseng improved mild or mild to moderate ED in a 12-week, double-blind, placebo-controlled study with an enrollment of 60 patients³⁹. A systematic review of seven randomized clinical trials (RCTs) about the effectiveness of red ginseng for ED suggested that there was evidence for the effectiveness of red ginseng in the treatment of ED although the total number of RCTs included in this review, the total sample size and the methodological quality of these trials were not sufficient to make definitive conclusions⁴⁰. The most common side effects of red ginseng were insomnia, gastric upset, headache and rash, with less common side effects including hypertension and palpitations^{40, 41}. Tissue-cultured mountain ginseng extract at a dose of 1000mg

twice daily upgraded IIEF scores and improved erectile function in 86 ED patients after 8 weeks of treatment in a double-blind, placebo-controlled study ⁴².

Icariin is derived from several species of plants in the genus *Epimedium*, and is commonly known as Yin Yang Huo when used as a Chinese medicinal, showed dose-dependent inhibitory effects on PDE5 and PDE4 activities ⁴³.

Herbal Formulas for Erectile Dysfunction

Yidiyin, a Chinese herbal decoction, improved ED in 21 diabetic patients in a 41-patient clinical trial; this was probably related to enhancement of the nitric-oxide (NO)-cyclic-guanosine-monophosphate (cGMP) pathway ⁴⁴. This decoction contains *Rehmannia glutinosa*, *Cornus officinalis*, *Dioscorea opposita*, *Alisma orientalis*, *Poria cocos*, *Gallus gallus domesticus*, *Cynomorium songaricum*, *Epimedium brevicornum*, *Paeonia Suffruticosa*, *Salvia miltiorrhiza*, *Achyranthes bidentata*, *Cuscuta chinensis*, *Pseudostellaria heterophylla*, *Curcuma wenyujin*, and *Citrus medica*. These 15 herbs are commonly used as Chinese medicinals.

A proprietary polyherbal preparation improved male sexual function as measured by IIEF and Erectile Dysfunction Inventory of Treatment Satisfaction (EDITS) in a double blind, randomized placebo-controlled, parallel group, multi-centre study with an enrollment of 78 patients ⁴⁵. This preparation contains 10 herbs including *Panax ginseng*, *Serenoa repens*, *Crategus rivularis*, *Ginkgo biloba*, *Turnera diffusa*, *Tribulus terrestris*, *Erythroxylum catuaba*, *Ptychopetalum olacoides*, *Cuscuta chinensis*, *Epimedium sagittatum*, Bioperine (extract from *Piper nigrum* fruit). In the Chinese medicinal system, *Panax ginseng*, *Epimedium sagittatum*, *Piper nigrum*, *Cuscuta*

chinensis, *Ginkgo biloba* and *Tribulus terrestris* are also commonly used. For *Ginkgo biloba* and *Tribulus terrestris*, the medicinal parts are the seeds and fruits, not the leaves or vines.

Male Depression and Sexual Complaints

The GMDS showed a significant difference between the subjects who had been to the TCM before and those who had not, although scores of both these groups showed no evidence of depression. The averages and standard deviations of the subjects who had been to the TCM and those who had not were 9.99 ± 8.61 and 12.01 ± 8.66 , respectively. There were significant correlations between the sexual factors of AMS and GMDS ($r=0.431$ (Pearson Correlation), $P<0.001$), but no significant correlation between IIEF-5 and GMDS ($r=-0.056$ (Pearson Correlation), $P=0.393$). This suggested that specific male depression might be related to various sexual complaints, and not only to ED. A systematic review and meta-analysis showed a bidirectional association between depression and sexual dysfunction ⁴⁶. A Chinese version of GMDS may need to be developed in order to clarify these results.

In this study we found that the patients who had previously visited the TCM department had higher percentages of infertility and ED. The 30-40% of male infertility cases were idiopathic and without evidence-based treatment. In our polyclinic, infertile male patients sought help from the TCM due to the OAT syndrome or failure of improvement of sperm function after correctable causes such as varicocele were treated. Several clinical studies have shown improvement in sperm function after taking herbal medicines as above. We think that herbal medicine has great potential for the management of OAT syndrome and failure to improve sperm function after correctable causes have

been treated.

Several clinical studies have shown improvement in ED after herbal medicines as above. We therefore suggest that herbal medicine might be an alternative and complementary treatment for ED; however, further research and clinical studies are needed to provide definite evidence.

We treated the patients visiting TCM in our polyclinic by "pattern identification and treatment", which is one of the many features of TCM. Clinical characteristics, pattern types and Chinese medicinals and formulas treatment of the patients visiting TCM in our polyclinic for ED and infertility are worthy of further researches.

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中老年男性病患就診男性健康聯合門診中醫科的狀況分析－臨床特徵與治療選擇的文獻回顧

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傳統醫學已經逐漸變成是許多病患的治療選擇。傳統中醫是傳統醫學中比較盛行的方式之一。本文是要探討就診男性健康聯合門診中醫門診的男性病患的臨床需求特徵。

總共有 231 位中老年男性病患就診由精神科、泌尿科與中醫科所組成的男性健康聯合門診。就診者會完成基本資料與問卷評估，包括：雄激素缺乏症中老年男性調查問卷、老年男性症狀評定量表、失眠嚴重程度指數、中文版貝克抑鬱量表－II、中文版貝克焦慮量表、哥特蘭男性抑鬱量表、勃起功能國際指數 5 項簡要版與情境疲勞量表。依據臨床需求對病患進行包括性激素在內的抽血檢驗。

就診中醫科的共計有 86 位 (37.2%)。與沒有就診中醫科的病患作比較，有就診中醫科的病患比較高的比例是因為勃起功能障礙與不孕症前來就診，並且在哥特蘭男性抑鬱量表的分數會比較低。

不孕症男性病患尋求中醫的原因是因為少弱畸精子症候群或是治療可矯正因素（如：精索靜脈曲張）後仍然無法生育。來就診中醫科的勃起功能障礙病患大多是因為無法耐受磷酸二酯酶－5 抑制劑的副作用或價格，或是使用磷酸二酯酶－5 抑制劑後仍無法達到滿意的效果。男性憂鬱症的特殊表現可能與整體的性功能問題有關聯，而不單只是與勃起功能障礙有關係。草藥對於男性不孕症、勃起功能障礙與男性情緒障礙可能可以作為一種替代和補充治療，但是需要更多的研究來證實它的有效性。

關鍵字：男性健康聯合門診、中醫、不孕症、勃起功能障礙、男性憂鬱

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