

Archaeology of Acupoint Number and Insertion Depth in Acupuncture Technology

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Abstract

The history of acupuncture and moxibustion can be traced back to more than two thousand years. The number of current acupoints is 361. However, 1800 years ago, 349 acupoints were listed and used. This means that in the past 1800 years, only 12 acupoints have been added to the commonly used acupoints in acupuncture technology around the whole world. Besides, the insertion depth of acupuncture needles was also formulated more than 1800 years ago. Not until this century do modern acupuncturists use hi-tech methods to fathom the safe and useful insertion depth of acupuncture needles. Since insertion depth is highly concerned with the safety of patients' health, it is of great necessity to see how insertion depth has been discussed in the past centuries. This essay concentrates on the gradual development of both acupoints and insertion depth chronologically by analyzing Chinese medical canons to have a thorough understanding of both developments.

Keywords: acupuncture, moxibustion, canon, depth of inserting needles

I: The number of Acupoints

The rise of acupoints and meridians is entangled and interwoven with basic knowledge of acupuncture and moxibustion. The unearthed data from Mawangdui only showed initial flows of 11 meridians without definite mention of titles of acupoints. Not until *Huangdi's Internal Classic* were 160 titles of acupoints discussed and analyzed according to their individual indications and their relationship with corresponding meridians and acupoints were regarded as converging and accumulated spots of qi and blood.¹ In *A-B Classic of Acupuncture and Moxibustion*, the number of acupoints skyrocketed to 349. In *Supplement to the Essential Prescriptions Worth a Thousand Gold* (千金翼方) written by Sun Simiao (孫思邈) in 682AD, Jueyinshu (BL14) and Gaohuangshu (BL43) were first mentioned.

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In *The Revised Edition of Huangdi's Internal Classic Su Wen* by Wang Bing (王冰) in 762 AD, LingTai (GV10), Yaoyangguan (GV3), Zhongshu (GV7), and Jimai (LR12) were included. Later in *Peaceful Holy Benevolent Prescriptions*(太平聖惠方) by Wang Huaiyin (王懷隱) in 992 AD, Qingling (HT2), Dushu (BL16), Qihai (BL24), and Guanyuanshu (BL26) were added. Thus, in *Illustrated Manual of Acupuncture Points of the Bronze Figure* by Wang Weiyi (王惟一) in 1026 AD, 349 acupoints listed in *A-B Classic of Acupuncture and Moxibustion* were inherited and LingTai (GV10), Yaoyangguan (GV 3), Jueyinshu (BL14), Gaohuangshu (BL43), and Qingling (HT2) were also included. About 200 years later, *Elucidation of the Fourteen Meridians* (十四經發揮) by Hua Boren (滑伯仁) in 1341 AD consisted of the same 354 acupoints. Based on these 354 acupoints, *Complete Compendium of Acupuncture and Moxibustion* (針灸大成) by Yang Jizhou (楊繼洲) in 1601 AD added three acupoints submitted by Wang Huaiyin: Dushu (BL16), Qihai (BL24), and Guanyuanshu (BL26). Meichong (BL3), found in *Pulse Classic* (脈經) by Wang Shuhe (王叔和) in the third century, and Fengshi (GB31), submitted in *Handbook of Prescriptions for Emergencies* (肘後備急方) by Ge Hong(葛洪) in the fourth century, were also included in *Complete Compendium of Acupuncture and Moxibustion*, amounting to 359 acupoints.

Inherited from *Complete Compendium of Acupuncture and Moxibustion*, *Golden Mirror of Medicine* (醫宗金鑑), compiled by Wu Qian in 1742, added the other two acupoints submitted by Wang Bing: Zhongshu (GV7) and Jimai (LR12). Thus, the total number of 14 meridians amounted to 361. Later, in both *Acupuncture Success and Advantage* (針灸逢源) by Li Xuechuan (李學川) in 1817 AD and *Chinese Acupuncture* (中國鍼灸學) by Cheng Danan (承淡安) in 1931, these 361 acupoints remained fixed and have become standardized acupoints since. This

process of standardization of acupoints clearly shows how acupoints have been built and developed for more than the past 2,000 years. The accumulation of acupoints undergoes gradual addition, amendment, and systemization. This gradual change of acupoint number can be summarized on Table 1.²

Table 1. Total number of Acupoints found in medical canons in chronological order

author	Title	Single acupoint	Double acupoint	total
Unknown	<i>Foot and Arm Eleven Meridian Moxibustion</i>	Without mentioning names of acupoints.		
unknown	<i>Ying Yang Eleven Meridian Moxibustion Classic</i>			
unknown	<i>Huangdi's Internal Classic</i>	25	135	160
Huangfu Mi	<i>A-B Classic of Acupuncture and Moxibustion</i> in 259 AD	49	300	349
Sun Simiao	<i>Supplement to the Essential Prescriptions Worth a Thousand Gold</i> in 682 AD			
Wang Weiyi	<i>Illustrated Manual of Acupuncture Points of the Bronze Figure</i> in 1106AD	51	303	354
Hua Boren	<i>Elucidation of the Fourteen Meridians</i> in 1341 AD			
Yang Jizhou	<i>Complete Compendium of Acupuncture and Moxibustion</i> in 1601 AD	51	308	359
Wu Qian	<i>Golden Mirror of Medicine</i> in 1742 AD	52	309	361
Li Xuechuan	<i>Acupuncture Success and Advantage</i> in 1817 AD	52	309	361
Cheng Danou	<i>Chinese Acupuncturology</i> in 1931 AD	52	309	361

II: Depth of Inserting Needles

The earliest discussion of individual acupoint can be traced back to the unearthed medical manuscripts at Hantanpo at Wuwei, Gansu in 1972.³ Only two acupoints are mentioned: Feishu (BL13)⁴ and Zusanli (ST36).⁵ In spite of the discrepancy and difference of locations of both acupoints when compared to those found in *Huangdi's Internal Classic* and *A-B Classic of Acupuncture and Moxibustion*, it is obvious that during West Han (202 BC – 8 AD) dynasty, acupuncturists were alert to needling depth during clinical practices. However, no detailed and systematic analysis of acupoint insertion depth can be found.

The earliest regulations of insertion depth can also be found in *Huangdi's Internal Classic*, but are only limited to chapter Meridian Waters (Jingshui 經水):

Insert needles 6 fens deep into Zuyangming Stomach meridian

- Insert needles 5 fens deep into Zutaiyang Bladder meridian
- Insert needles 4 fens deep into Zushaoyang Gallbladder meridian
- Insert needles 3 fens deep into Zutaiyin Spleen meridian
- Insert needles 2 fens deep into Zushaoyin Kidney meridian
- Insert needles 1 fen deep into Zujueyin Liver meridian⁶

This is only a general discussion of meridian insertion depth instead of insertion depth analysis of all individual acupoints. This vacuum of knowledge of depth study lasted centuries and no increasing concern about acupoint insertion depth was mentioned until the publication of *A-B Classic of Acupuncture and Moxibustion* by Huangfu Mi around 282 AD. In other words, *A-B Classic of Acupuncture and Moxibustion* is the earliest extant acupuncture and moxibustion canon in which individual needling depth of 349 acupoints is mentioned, described, and regulated as a way to standardize insertion depth.

After this initial standardization, adjustment and variation of insertion depth changed with time. *Illustrated Manual of Acupuncture Points of the Bronze Figure* and *Classic of Nourishing Life with Acupuncture and Moxibustion* (針灸資生經 in 1220) took advantage of, shared with, and followed the majority of insertion depth contents found in *A-B Classic of Acupuncture and Moxibustion*. However, insertion depth of some acupoints became not deeper but shallower.⁷ In other works such as *Essential Collection of Acupuncture* (針經摘英集 in 1315) by Du Sijing (杜思敬), *Divine Jade-Dragon Scripture of Acupuncture and Moxibustion of Bian-que* (扁鵲神應針灸玉龍經 in 1329) by Wang Guorui (王國瑞), *Introduction to Medicine* (醫學入門 in 1575) by Li Chan (李梴), and *Six Collections of Acupuncture Prescriptions* (針方六集 in 1618) by Wu Kun (吳昆), insertion depth of individual acupoints became deeper than that in *A-B Classic of Acupuncture and Moxibustion*.

During Qing Dynasty (1636-1912), acupuncture and moxibustion were under a lot of social and cultural impact.⁸ In 1822, Emperor Dao-Gang (道光) ordered that the practice of acupuncture should be permanently suspended in Imperial Palace,⁹ causing the gradual decline of acupuncture. Thus, the development of insertion depth during this period stayed stagnant and unventilated. The standardized insertion depth of individual appoints in medical works remained almost homogeneous to that in *A-B*

Classic of Acupuncture and Moxibustion. Generally speaking, except for the stagnant development in Qing Dynasty, insertion depth, after the standardization in *A-B Classic of Acupuncture and Moxibustion*, follows this traditional depth and gradually becomes deeper with the passing of time as well as the advance of science and technology.¹⁰

As a matter of fact, a thorough and scrupulous investigation into the study of insertion depth didn't begin until the mid of 1970s. Taking advantage of the knowledge of anatomy, both Lin Jaung-Geng (林昭庚) and Yan Zhen-Guo (嚴振國) have led a group of researchers to decipher secrets of insertion depth. Yan Zhen-Guo started his research in 1975 by dissecting unfrozen corpses to measure depth of acupoints.¹¹ Lin Jaung-Geng set out his research in 1980 on safety depth of acupoints on Bladder Meridian and has also published a series of works on insertion depth.¹² The arenas of their works are truly tremendous, for both scholars have been dedicated to deciphering secrets and hidden meanings of insertion depth of acupuncture, inherited from ancient canons whose legacy has been passed down and has reappeared in the four forms of discussion in the area of needling depth: danger depth, safety depth, De-Qi depth, and acupoint depth.¹³ Thus, modern studies of insertion depth have concentrated on these four fields of studies, resulting in a lot of important breakthroughs for ordinary learners and medical practitioners to follow. The more studies and categories on insertion depth scholars pay attention to, the more confident and safer acupuncture practitioners feel in their clinical practices. Due to some gaps and gulfs of diversified research on insertion depth, it is quite obvious that a systematic juxtaposition of comparison and contrast has gradually been formalized and regulated. In other words, formulating a standardized insertion depth has undergone obstacles and then tends to be an attainable and sustainable ideal.¹⁴

¹ In *SuWen of Huangdi's Internal Classic*, acupoints are referred to as radiating points of meridian qi (脈氣所發) and in *LingShu* as opening and closure of wandering spirits and qi (神氣之所游行出入也)

² For a more detailed analysis of acupoint number, See the following books and articles: Chen Bih-Cheng and Huang Ting-Yu, "The Reflection of WHO Standard Acupuncture Point Locations," *TJ TCM* 21(1) (2018): 139-154; Ma Chuan-Jiang, "Number and Standard of Acupoints Belonging to the Fourteen Meridians in TCM," *Journal of Shandong University of TCM* 26(1) (2002): 13-15; Li Fang, He Tian, Xu Qian, Lin Li-Ting, Li Hui, Liu Yan, Shi Guang-Xia, and Liu Cun-Zhi, "What is the Acupoint? A Preliminary Review of Acupoints," *Pain Medicine* 16 (2015): 1905-1915.

³ 甘肅省博物館 Gansusheng Bowuguan and 甘肅省武威縣文化館編 Gansusheng Wuweixian wenhuaguan · 《Wuwei Handai yijian 武威漢代醫簡》· 北京 Beijing: 文物出版社 Cultural Relics Publishing House · 1975 °

⁴ To insert a needle to the depth of four *fen* and to leave the needle at the acupoint for the patient to breathe one hundred and twenty times before the needle is removed. The title of this acupoint is Feishu. 「刺榮深四分，留針百二十息，乃出針，名曰肺輸。」

⁵ To insert a needle about five cun below the patients' knees to the depth of three *fen*, and to leave the needle at the acupoint for about the time that a pot of rice is cooked and then remove the needle. The title of this acupoint is called Zusanli. 「次刺膝下五寸分間，滯深三分，留針如炊一升米頃，出針，名曰三里。」

⁶ 足陽明刺深六分，留十呼。足太陽深五分，留七呼。足少陽深四分，留五呼。足太陰深三分，留四呼。足少陰深二分，留三呼。足厥陰深一分，留二呼。河北中醫學院編，《靈樞經校釋》北京：人民衛生出版社，1982。； for a juxtaposed bilingual translation of *Huangdi's Internal Classic*, please see Paul U. Unschuld, *Huang Di Nei Jing Ling Shu*. California: U of California P, 2016.

⁷ See Sun Yong-xian, Wang Qi-fang, and Zhang Jing, "On the Needling Depth of Filiform Needle at Acupoint," *Chinese Acupuncture & Moxibustion* 25(3) (2005): 203-206.

⁸ See 林昭庚 Lin Jaung-Geng and 鄒良 Yan Liang · 《針灸醫學史 A History of Acupuncture & Moxibustion》北京 Beijing: 中國中醫藥出版社 China Press of Traditional Chinese Medicine, 1995。黃龍祥 Huang Long-Xiang · 《中國針灸學術史大綱 The Historical Development of Acupuncture》, 華夏出版社 Huaxia Publishing House, 2001。

⁹ Cheng Xinnong, *Chinese Acupuncture and Moxibustion* (Beijing: Foreign Languages Press, 1987), 6-10.

¹⁰ A thorough discussion can be found in the following articles: Ling Jian-wei, "Discussion on the Depth in the Acupuncture Treatment," *CJTCMP*29(3) (2014):792-793; Hu Zhui-Cheng and Yang Hua-Yuan, "Reflection on Acupuncture Depth Qualification in Huangdi Internal Medicine," *Liaoning Acupuncture Magazine* 35(11) (2008): 1654-1656; Wang Bin and Dong Li, "Advances in Study on Safe Needling Depth of Acupoints," *Journal of Dali University* 11(3) (2012): 58-60.

¹¹ See Yan Zhen-guo, Bai Juan, Shao Shui-jin, et al., "Study on Needling Depth and Direction for Dangerous Acupoints," *Chinese Acupuncture and Moxibustion* 24(11) (2004): 769-772. Yan Zhen-guo has published a series of books on acupoint anatomy: 嚴振國 Yan Zhen-guo · 《經穴斷面解剖圖解：頭頸胸部 Jingxue Duanmian Jiepou Tujie: Head, Neck, and Breast》台灣 Taiwan: 志遠書局 ZhiYuan Bookstore · 2009。嚴振國 Yan Zhen-guo · 《經穴斷面解剖圖解：腹盆部 Jingxue Duanmian Jiepou Tujie: Abdominal and Pelvis Region》台灣 Taiwan: 志遠書局 ZhiYuan Bookstore · 2009。嚴振國 Yan Zhen-guo · 《經穴斷面解剖圖解：上肢部分 Jingxue Duanmian Jiepou Tujie: The Upper Limbs》台灣 Taiwan: 啟業書局 QiYe Bookstore · 1991。嚴振國 Yan Zhen-guo · 《經穴斷面解剖圖解：下肢部分 Jingxue Duanmian Jiepou Tujie: The Lower Limbs》台灣 Taiwan: 啟業書局 QiYe Bookstore · 1991。

¹² See Lin Jaung-Geng and Liu Yu-Qi, *Review on the History and Practice of the Needling Depth of Acupoint*. Taipei: National Research Institute of Chinese Medicine, 2012; Lin Jaung-Geng and Lee Der Maw, "An Investigation of Needling Depths for the Hand Tai Yin Small Intestine Meridian in Literature," *J Chin Med* 8(2) (1997): 73-84; 林昭庚 Lin Jaung-Geng · < 探討人體背部膀胱經經穴穴位直刺安全深度 A Research on Safety Depth of Bladder Meridian Acupoints on Human Back > · 台中 Taichung: 中國醫藥大學中國醫學研究所碩士論文 Master Thesis at Graduate Institute of Chinese Medicine in China Medical University · 1981 ; 林昭庚 Lin Jaung-Geng · < 電腦斷層掃描照相術探討人體胸背部各穴位安全深度之研究 A Research on Safety Depth of Chest and Back Acupoints by Computed Axial Tomography > · 台中 Taichung: 中國醫藥大學中國醫學研究所博士論文 Doctor Dissertation at Graduate Institute of Chinese Medicine in China Medical University · 1991。

¹³ Diversified studies have focused on these four fields, creating hundreds of essays and periodicals on individual acupoint. See Yang Song Di, Li Ya-Dong, Jiang Guo-Hua, Hu Ni-Na, and Cong Shu-Yuan, "Study on Needling Depth of Fengfu (GB 16) with CT," *Chinese Acupuncture & Moxibustion* 28(1) (2008): 47-48; Cheng Wei-Ping and Dong Sheng-Ping, "Discussion on the Safe Angle and Depth of Acupuncture at Jiuwei (CV 15)," *Chinese Acupuncture & Moxibustion* 23(6) (2012): 515-518.

¹⁴ Some scholars made comparisons and contrasts among individual acupoint insertion depth by

various kinds of studies. See 余佳穎 Yu Ji-Ying <各國針灸教科書穴位針刺深度探討 Study of Needling Depth in Different Acupuncture Textbooks from Various Countries> · 台中 Taichung: 中國醫藥大學中國醫學研究所碩士論文 Master Thesis at Graduate Institute of Chinese Medicine in China Medical University · 2006; 周建偉 Zhou Jian-Wei · 《針刺損傷與危險穴位的安全針刺方法 Insertion Injuries and Safety Insertion Methods of Danger Acupoints》· 成都 ChengDu : 四川科學技術出版社 SiChuan Science and Technology Publishing House · 1995 ° Jaung-Geng Lin, Tsai-Chung Li, Hsu-Jan Liu, Chin-Yin Sheu, “Determination of Safe Needling Depth via CT-Scan Studies of Tissue Thickness at Acupoint Locations of the Lower Back.” *American Journal of Acupuncture* 26(2/3) (1998): 121-127; Hsiao-Neng Chen, Jaung-Geng Lin, Albert D. Yang, Shu-Kuei Chang, “Safe Depth of Abdominal Acupoints in Pediatric Patients,” *Complementary Therapies in Medicine* 16 (2008): 331-335.