Wind Stroke Case Report

(A) Diagnoses of Diseases and Patterns

[1] Wind Stroke – 1

Wind stroke is an emergency case manifested by falling down in a fit with loss of consciousness, or hemiplegia, slurred speech and deviated mouth. It is characterized by abrupt onset with pathological changes varying quickly like the wind, from which the term 'wind stroke' comes.

Etiology and Pathogenesis

Wind stroke often occurs in the aged who are in poor health, with deficiency of qi and blood, or deficiency in the lower part of the body and excess in the upper part. It may be caused by deficiency of the kidney yin due to sexual indulgence, or by irregular food intake, which impedes the transportation and transformation function of the spleen, leading to production of phlegm from accumulated dampness and transformation into heat. Then there appears imbalance of yin and yang in the zang-fu organs. Other causative factors are exasperation, agitation, alcohol indulgence or overeating, over strain and stress, or invasion of exogenous pathogenic wind, all leading to upsurge of liver yang and heart fire, which makes qi and blood go upward together with turbid phlegm, disturbing the mind and resulting in this disease. In mild cases there are only symptoms showing dysfunction of the meridians and collaterals, while in severe cases both dysfunction of zang-fu organs and that of the meridians and collaterals are manifested. The syndrome indicating the attack on the zang-fu organs may be subdivided into tense (excess) type and flaccid (deficiency) type.

Tense (excess) syndrome results from disturbance of the mind by the phlegm heat, or collection of excessive fire in the heart and liver, while flaccid (deficiency) syndrome results from deficiency of the primary qi or collapse of the kidney yang. In untreated or improperly treated cases, the tense syndrome tends to become flaccid and the prognosis is often poor.

Differentiation

1) Attack on the zang-fu organs:

a) Tense syndrome:

Main manifestations: Falling down in a fit with loss of consciousness, tightly closed hands and clenched jaws, flushed face, coarse breathing, rattling in the throat, retention of urine, constipation, red tongue with thick yellow or dark grey coating, string-taut, rolling and forceful pulse.

Analysis: Wind stirred up by upsurge of liver yang sends qi and blood upwards, which together with the accumulated phlegm fire disturb the mind, leading to sudden loss of consciousness with tightly closed hands and clenched jaws, flushed face, coarse breathing, retention of urine and constipation. Excessive wind phlegm brings about rattling in the throat. Red tongue with thick yellow coating or dark grey coating, string-taut, rolling and forceful pulse are the signs of wind combined with phlegm fire.

b) Flaccid syndrome:

Main manifestations: Falling down in a fit and sudden loss of consciousness with mouth agape and eyes closed, snoring but feeble breathing, flaccid paralysis of limbs, Incontinence of urine, flaccid tongue, thready, weak pulse, and in severe cases cold limbs, or flushing of face as rouged, fading or big floating pulse.

Analysis: Severe weakness of primary qi, separation of yin and yang and exhaustion of qi in the zang organs...
are indicated in mouth agape, eyes closed, snoring but feeble breathing, flaccid paralysis, and incontinence of urine. Flaccid tongue and thread weak pulse suggest the deficiency of blood and prostration of the kidney yang. If complicated with cold limbs, flushed face, fading or big floating pulse, it is a critical case, indicating exhaustion of yin in the lower portion of the body and upward going of the isolated yang.

2) Attack on the meridians and collaterals

There are two categories. One is that only the meridians and collaterals are attacked without the zang-fu organs being involved. The other is that after wind stroke the functions of the affected zang-fu organs have been restored, yet there exists stagnation of qi and blood in the meridians and collaterals.

Main manifestations: Hemiplegia, numbness of the limbs, deviated mouth, slurring of speech, accompanied by headache, dizziness, vertigo, twitching of muscles, red eyes and flushed face, thirst, dryness of the throat, irritability, string taut and rolling pulse.

Analysis: Wind phlegm enters the meridians and collaterals due to imbalance of yin and yang, or after treatment the functions of the affected zang-fu organs have been restored, but wind phlegm still blocks the meridians and collaterals, causing retarded circulation of qi and blood. Hence appears hemiplegia, numbness of the limbs, deviated mouth and slurring of speech. If complicated with upsurging of liver yang, and upward disturbance of wind yang, the symptoms are headache, dizziness, vertigo and twitching of muscles. If there is excessive fire in the heart and liver, there may be red eyes and flushed face, thirst, dryness of the throat and irritability. Stagnation of wind phlegm in the meridians and collaterals leads to a string-taut and rolling pulse.

Treatment

a) Attack on the zang-fu organs

i) Tense syndrome Method

Points of the Governor Vessel, the Liver Meridian of Foot-Jueyin and the twelve Jing-(Well) points are selected as the main points to promote resuscitation, reduce wind and fire and resolve phlegm. Either reducing method or pricking, to cause little bleeding, is applied.

Prescription: Baihui (GV 20), Shuigou (GV 26), Fenglong (ST 40), Taichong (LR 3), Yongquan (KI 1), twelve Jing-(Well) points on both hands (LU 11, HT 9, PC 9, LI 1, TE 1, SI 1).

Supplementary Points:
- Clenched Jaws: Xiaguan (ST 7), Jiache (ST 6), Hegu (LI 14)
- Aphasia and stiffness of tongue: Yamen (GV 15), Lianquan (CV 23), and Tongli (HT 5).

Explanation: As the condition is due to disturbance of the heart by phlegm fire associated with upsurging of liver yang and upward flowing of qi and blood, Baihui (GV 20) and Shuigou (GV 26) are selected to regulate qi of the Governor Vessel, effecting resuscitation, Yongquan (KI 1) is selected to conduct the heat downward, and Taichong (LR 3) to subdue the upsurging of qi in the Liver Meridian and pacify the liver yang. Pricking the twelve Jing-(Well) points on both hands, where qi of the three yin and three yang meridians meet, may dispel heat and regain consciousness. The spleen and stomach are the source of phlegm production. Fenglong (ST 40), the Luo-(Connecting) point of the Stomach Meridian can invigorate the functions of the spleen and stomach and help to resolve the turbid phlegm. Since the Yangming Meridians of Hand and Foot supply the cheeks, Xiaguan (ST 7), Jiache (ST 6) and Hegu (LI 4) are chosen to promote the circulation of qi and blood for relieving the clenched jaws. Yamen (GV 15) and Lianquan (CV 23), being local and adjacent points of the tongue, and Tongli (HT 5), the Luo-(Connecting) point of the Heart Meridian, may relieve stiffness of tongue.

ii) Flaccid syndrome
Method: Moxibustion is applied to points of the Conception Vessel to restore yang from collapse.

Prescription: Shenque (CV 8), Qihai (CV 6) (indirect moxibustion with salt), Guanyuan (CV 4).

Explanation: Shenque CV 8), Qihai (CV 6) and Guanyuan (CV 4) are located on the lower abdomen along the Conception Vessel and are the main points effective for collapse. Heavy moxibustion applied on Guanyuan (CV 4), a meeting point of the Conception Vessel and three yin meridians, can strengthen the primary qi, and restore yang from collapse.

b) Attack on the meridians and collaterals:

Method: Points along the Governor Vessel and the yang meridians of the affected side are mainly used to regulate qi and blood, remove obstruction from the meridians and collaterals and reduce the wind. Needle with even movement first from the healthy side and then the affected side.

Prescription: Baihui (GV 20), Tongtian (BL 7), Fengfu (GV 16).
Upper limbs: Jianyu (LI 15), Quchi (LI 11), Waiguan (TE 5), Hegu (LI 4).
Lower limbs: Huantiao (GB 30), Yanglingquan (GB 34), Zusanli (ST 36), Jiexi (ST 41).

Supplementary points:
Upward disturbance of wind yang: Reducing is applied to Fenchi (GB 20) and Taichong (LR 3), and reinforcing to Taixi (KI 3) and Sanyinjiao (SP 6).
Excessive fire in the heart and liver: Reducing is applied to Daling (PC 7) and Xingjian (LR 2), and reinforcing to Taixi (KI 3).
Deviated mouth: Dicang (ST 4), Jiache (ST 6).

Explanation: Governor Vessel is the sea of all yang meridians. Baihui (GV 20), Fengfu (GV 16) combined with Tongtian (BL 7) can eliminate wind and remove obstruction from the meridians and collaterals. Since the yang meridians dominate the exterior of the body and qi, points of the yang meridians are selected to regulate qi and blood of the body and promote smooth circulation in the upper and lower portions of the body. For the upper disturbance of wind yang, Fengchi (GB 20) and Taichong (LR 3) are selected to reduce the wind and pacify the liver. Reinforcing applied to Taixi (KI 3) promotes the production of the kidney yin to nourish the liver. Reinforcing applied to Sanyinjiao (SP 6) nourishes yin and pacifies yang.

For excessive fire in the heart and liver, reducing Daling (PC 7) and Xingjian (LR 2) can eliminate the fire, while reinforcing to Taixi (KI 3) nourishes yin to reduce the fire. Dicang (ST 4) and Jiache (ST 6) are selected for the purpose of promoting a free circulation of qi in the meridians and collaterals around the facial region.

Remarks

a) Wind stroke is referred to cerebral hemorrhage, thrombosis, embolism, subarachnoid hemorrhage, etc. When the acute stage is over, there may be sequelae, such as hemiplegia, monoplegia, aphasia, etc.

b) Prophylactic measures for wind stroke: The old aged with deficiency of qi and excessive phlegm, or with manifestations of upsizing of liver yang marked by dizziness and palpitations, may have premonitory symptoms such as stiff tongue, slurred speech and numbness of the finger tips. Attention should be paid to diet and life style and avoid overstraining. Frequent moxibustion on Zusanli (ST 36) and Xuanzhong (GB 39) may prevent an attack of wind stroke.

1) Channel & Network Vessel Stroke

Disease causes: Wind is a yang evil which may enter the exterior. From the skin, it may enter the channels and network vessels. The *Nei Jing* (内經) (*Inner Classic*) says: Stroke to the face affects the yang ming. Stroke to the neck affects the shao yang. Stroke to the upper back affects the tai yang.

Thus, when wind strikes a person, it affects the three yang channels and their network vessels.

Symptoms: Cold body, fever, a heavy body, aching and pain, insensitivity of the skin, nonfunctional sinews and bones, headache, stiff neck, possible arched-back rigidity, both pulses wiry and floating, and a thin, white tongue coating.

Treatment: Needle He Gu (LI 4) 3-4 fen and retain and twist for 2 minutes. Needle Qu Chi (LI 11) 5 fen and retain and twist for 2 minutes. Needle Yang Fu (GB 38) 3 fen and retain and twist for 2 minutes. Needle Yang Ling Quan (GB 34) 5 fen and retain and twist for 3 minutes. Needle Nei Ting (St 44) 2-3 fen and retain and twist for 2 minutes. Needle Feng Fu (GV 16) 3 fen and retain and twist for 2 minutes. Needle Gan Shu (BL 18) 3 fen and retain and twist for 2 minutes.

Adjunctive treatment: Da Hue Luo Dan (大活絡丹) (Great Activate the Network Vessels Elixir); take 1 pill with old wine. (Da Hue Luo Dan is a commercially available patent medicine.)

Zhou Hou Fang (肘後方) (Behind the Elbow Formulas): For the treatment of wind stroke, there is nothing like Xu Ming Tang (續命湯) (Continuing One’s Destiny Decoction). However, in order to give support in the initial stage of this disease, if asked for a harvest of gold, great moxa is good. This is because, in wind stroke, the vessels and pathways are inhibited and the blood and qi are blocked and obstructed. Moxibustion awakens the vessels and pathways. If the qi and blood obtain free flow, there is recovery. (Xu Ming Tang’s ingredients are Herba Ephedrae (Ma Huang), Ramulus Cinnamomi (Gui Zhi), Radix Panacis Ginseng (Ren Shen), Radix Angelicae Sinensis (Dang Gui), Radix Ligustici Wallichii (Chuan Xiong), Semen Pruni Armeniacae (Xing Ren), dry Rhizoma Zingiberis (Gan Jiang), Radix Glycyrrhizae (Gan Cao), Gypsum Fibrosum (Shi Gao).)

2) Blood Vessel Stroke

Disease causes: Wind evils may enter and strike the network vessels and vessels. The blood vessels thus become blocked and obstructed and not free flowing. Heat leads to sinew slackening, while cold leads to sinew tension. Hence, symptoms of crookedness and paralysis appear.

Symptoms: Deviated, crooked mouth and eyes, possible hemiplegia, contracture of the hands and feet, the left paralyzed, the right palsied, a wiry or slippery pulse, and a red tongue with a white coating.

Treatment: For deviated mouth and eyes, in case of Di Cang (ST 4) deviating to the left, needle or moxa the point on the right side of the face. Then do the same to the following points. Needle 3 fen and retain and twist 2 minutes or moxa 3-5 cones. Needle Jia Che (ST 6) 3-5 fen and retain and twist 2 minutes or moxa 3-5 cones. Moxa Shui Gou (GV 26) 3 cones. Needle He Gu (LI 4) 4-5 fen and retain and twist for 3 minutes. Moxa Jian Shi (PC 5) 20 cones.

For hemiplegia, i.e., paraplegia of the right or left side, moxa Bai Hui (GV 20) 3 cones. First needle He Gu (LI 4) on the side without disease, and then moxa it on the diseased side. Do this on the following points. Needle Qu Chi (LI 11) 5 fen and retain and twist for 2 minutes or moxa 3 cones. Needle Jian Yu (LI 15) 3 fen and retain and twist for 2 minutes or moxa 5 cones. Needle Shou San Li (LI 10) 3-5 fen and retain and twist for 2 minutes. Needle Kun Lun (BL 60) 3 fen and retain and twist for 2 minutes or moxa 3 cones. Needle Xuan Zhong (GB 39) 3 fen and retain and twist for 2 minutes or moxa 3-5 cones. Needle Yang Ling Quan (GB 34) 3-5 fen and retain and twist for 3 minutes or moxa 5-15 cones. Needle Zu San Li (ST 36) 5-8 fen and retain and twist for 2 minutes or moxa 5-7 cones. Finally, moxa Gan Shu (BL 18) 5-7 cones.
For hypertonicity or numbness of the hands, needle Shou San Li (LI 10) 3-4 fen and retain and twist 2 minutes or moxa 3 cones. Needle Jian Yu (LI 15) 3fen and retain and twist for 2 minutes or moxa 5 cones. Needle Qu Chi (LI 11) 5 fen and retain and twist for 2 minutes or moxa 3 cones. Needle Qu Ze (PC 3) 3 fen and retain and twist 2 minutes. Needle Jian Shi (PC 5) 3 fen and retain and twist for 1 minute or moxa 3 cones. Needle Hou Xi (SI 3) 3 fen and retain and twist for 2 minutes or moxa 5 cones. Needle He Gu (LI 4) 5 fen and retain and twist for 2 minutes or moxa 2 cones.

For hypertonicity or numbness of the feet, needle Xing Jian (LR 2) 2 fen and retain and twist 1 minute or moxa 3 cones. Needle Qiu Xu (GB 40) 3 fen and retain and twist 2 minutes or moxa 3-5 cones. Needle Kun Lun (BL 60) 3-5 fen and retain and twist 2 minutes or moxa 5 cones. Needle Yang Fu (GB 38) 3 fen and retain and twist 2 minutes or moxa 3-5 cones. Needle Yang Ling Quan (GB 34) 5 fen and retain and twist for 2 minutes or moxa 7 cones. Needle Zu San Li (ST 36) 5-8 fen and retain and twist for 2 minutes or moxa 7 cones.

Adjunctive treatment: Radix Astragali Membranacei (Huang Qi), 3 qian, Ramulus Cinnamomi (Gui Zhi), 1 qian, Rhizoma Atractylodis Macrocephalae (Bai Zhu), 1 qian, and Radix Angelicae Sinensis (Dang Gui), 2 qian. Boil into a decoction and administer.

Yang Shi Zhi Zheng Zong Yao (Master Yang’s Gathered Essentials for the Treatment of Disease): If there is hemiplegia due to wind stroke, use Xuan Zhong (GB 39), Kun Lun (BL 60), He Gu (LI 4), Jian Yu (LI 15), Qu Chi (LI 11), Shou San Li (LI 10), and Zu San Li (ST 36). If one does not know the fen and cun and draining and supplementing are not clear, and if one does not divide repletion from vacuity, this will result in the disease becoming worse. In that case, needle the first points and then needle the following points: Jian Jing (GB 21), Shang Lian (LI 9), and Wei Zhong (BL 40). Also, if there is paralysis on the left or palsy on the right, use San Li (Zu/Shou San Li [ST 36 & LI 10]), Yang Xi (LI 5), He Gu (LI 4), Zhong Du (GB 32), Yang Fu (GB 38), Kun Lun (BL 60), and Xing Jian (LV 2). If wind phlegm fills and pours into the channels and network vessels, blood and qi will wrestle with each other, and thus one will suffer from wind, cold, damp qi. If these enter internally and congeal and stagnate, and one has needled a number of the previous points, one can needle the following points: Feng Shi (GB 31), Qiu Xu (GB 40), and Yang Ling Quan (GB 34). (First needle the hand and foot without disease and then later needle the diseased hand and foot.)

3) Viscera & Bowel Stroke

Disease causes: If there is excessive phlegm and dampness and the bodily qi is not full, if one is addicted to smoking tobacco and drinking alcohol, or if one is excessively irritable and angry, external evils may take advantage of vacuity and enter the viscera and bowels, channels and network vessels. There they create what is called encephalemia condition.

Symptoms: Mouth shut, cannot open, phlegm drool congesting above, a thunderous (i.e., rumbling) sound in the throat, loss of consciousness of human affairs, paralysis of the four limbs, no knowledge of aching or pain, sluggish, astringent speech, and fecal and urinary incontinence. One may or may not have a pulse.

Treatment: For clenched jaws, moxa Jia Che (ST 6), Bai Hui (GV 20), and Shui Gou (GV 26) 3-5 cones each. For phlegm-drool congestion above, moxa Guan Yuan (CV 4) 15 to 10s of cones, moxa Qi Hai (CV 6) 10 to 10s of cones, and moxa Bai Hui (GV 20) 3-5 cones. For aphasia and no sense of aching and pain, moxa Shen Duo (GV 11) 100-300 cones. For sluggish or astringent speech, needle and moxa as instructed for channel and network vessel stroke.

Adjunctive treatment: Jilin Radix Panacis Ginseng (Ji Lin Ren Shen), 3 qian. Boil into a decoction and administer. Additionally, [take] Hei Xi Dan (Black Tin Elixir) with Ginseng soup and down. (Hei Xi Dan is prepared from Lignum Aquilariae Agallochae (Chen Xiang), Radix Lateralis Praeparatus Aconiti Carmichaeli (Fu Zi), Semen Trigonellae Foeni-graci (Hu Luo Bu), Actinolitum (Yang Qi Shi), Fructus Foeniculi Vulgaris (Hui Xiung), Fructus Psoraleae Corylifoliae (Po Gu Zhi), Fructus Cardamomi (Dou Kou), Fructus Meliae Toosendan...
(Chuan Liun Zi), Radix Auklandiae (Mu Xiung), Cortex Cinnamomi (Rou Gui), Sulphur (Liu Huang), and Galenitum (Hei Xi).

For spirit qi clouding and dimming: *Yang Shi Zhi Zheng Zong Yao* (Master Yang’s Gathered Essentials for the Treatment of Disease): For wind stroke with loss of consciousness of human affairs, one should needle Shui Gou (GV 26), Zhong Chong (PC 9), and He Gu (LI 4). If one has needled each of these points with no result, one’s needling ability does not reach the mark and thus supplementing and draining are not clear.

For lockjaw which will not open: *Yi Xue Ru Men* (*Entering the Gate of Medicine*): “Needle Jia Che (ST 6) and Di Cang (ST 4).”

If wind phlegm blocks and obstructs and qi and blood become chaotic, yin and yang will not obtain up-bearing and down-bearing. If one needles the preceding points with no result, then needle the following points: Lian Quan (CV 23) and Shui Gou (GV 26).

*Ling Shu* (*Spiritual Pivot Classic*): For wind stroke with the sound of phlegm, exuberant like the sound of sawing, do not administer precipitating medicinals. One should moxa the points under the navel. Do not choose channel points.

4) Quasi Wind Stroke

Disease causes: If there is kidney vacuity and a person has excessive desire, the yin qi will not be secured and vacuous yang will easily stir. If this mixes with phlegm and congests above, one may suddenly fall down. This is quasi wind stroke.

Symptoms: Spirit clouding, phlegm congestion, qi counterflow, mouth open, eyes shut; immediately at onset the head rocks. The pulse is deep.

Treatment: Treat the same as for viscera and bowel stroke.

Adjunctive treatment: Old, mountain, Jilin Radix Panacis Ginseng (Ji Lin Ren Shen), 3 qian. Boil into a decoction and pour down the throat to administer.


Korean Eastern Medicine doctor and scholar, Heo Jun (許浚, 1546-1615), studied vast classic TCM books and arranged each individual formula according to the stages of wind stroke and symptoms. He explained about them in detail, and clearly noted the origin texts. According to his book, *Dong Yi Bao Jian* (*Principles and Practice of Eastern Medicine*, 東醫寶鑑, 1610), following as;

Strokes are classified into four large groups. (Qian Jin, 千金)

1) Pian Ku (偏枯) – Cannot use one side of the body
2) Feng Fei (風痱) – Cannot use arms and legs well
3) Feng Yi (風懿) – Cannot recognize persons
4) Feng Bi (風痺) – Several Bi syndromes

Formulas and symptoms briefly are following as;

1) Shu Feng Tang (疏風湯) – Treatment of the following symptoms: numb sensations in the arms and legs due to an invasion of wind to six fu. First release the exterior with this formula and then take care of the health by Yu Feng Tang (愈風湯), *Hui Chun*, 回春
2) Jia Jian Xu Ming Tang (加減續命湯) – Treatment of the symptoms due to an invasion of wind to six fu. (*Zheng
3) Qing Yang Tang (清陽湯) – Treatment the symptoms due to deviation of the mouth and stiffening of the cheek by wind stroke. These result from hyperactivity of stomach fire. Continuous sweating and frequent urination. (Hui Chun, 回春)

4) Pai Feng Tang (排風湯) – Treatment of the following symptoms: lethargic stupor, insensitivity of arms and legs, deviation of the mouth and eyes due to an invasion of wind to the five zang. (Ju Fang, 局方)

5) Jia Jian Pai Feng Tang (加減排風湯) – Treatment of the following symptoms: lethargic stupor, insensitivity of arms and legs, deviation of mouth and eye due an invasion of wind to five zang. Treatment of Wu Zang Feng (五臟風) also. (Yi Lao, 易老)

6) Qiang Huo Yu Feng Tang (羌活愈風湯) – Treatment of the symptoms due to an invasion of wind to the five zang and six fu. First use the basic formula then take care of the health with this formula. (Hui Chun, 回春)

7) Zhi Bao Dan (至寶丹) – Slurred speech and lethargic stupor due to sudden stroke (an invasion of wind to five zang). (Ju Fang, 局方)

8) Zi Run Tang (滋潤湯) – Blocking bowel movement and urine due to an invasion of wind to the five zang. First take this formula then take care of the health with Yu Feng Tang (愈風湯). (Hui Chun, 回春)

9) Niu Hwang Qing Qin Wan (牛黃清心丸) – Lethargic stupor due to stroke or blocking by phlegm-fluids, slurred speech, deviation of the mouth and eyes, difficulty moving arms and legs (Yi Jian, 醫鑑)

10) Niu Hwang Jin Hu Wan (牛黃金虎丹) – Loss of consciousness due to sudden stroke, clenched jaw, body stiffness, dry nose, darkened face, high fever on whole body, greasy sweating, eyes opened with a fierce glare, purple lips, lethargic stupor. (Ju Fang, 局方)

11) She Sheng Yin (獅生飲) – Loss of consciousness due to stroke but no fever. (Hui Chun, 回春)

12) Xing Feng Tang (醒風湯) – Loss of consciousness due to stroke with fever. (Hui Chun, 回春)

13) Dao Ming San (奪命散) – Letting saliva flow, blocking qi, clenched jaw, eye opened, tetanus, infantile convulsion. (Yi Jian, 醫鑑)

14) Kai Guan San (開關散) – Clenched jaw and eyes closed due to stroke. (Ru Men, 入門)

15) Tong Guan San (通關散) – Loss of consciousness, clenched jaw and blocking qi due to sudden stroke. (De Xiao, 得效)

16) Tong Ding San (通頂散) – Take this formula in cases of loss of consciousness due to stroke to regain one’s consciousness. (Dan Qin, 丹心)

17) Zao Jiao San (皂角散) – Blocking phlegm due to sudden stroke. (De Xiao, 得效)

18) Ba Dou Wan (巴豆丸) – In case of emergency due to phlegm blocking because of stroke. (Ben Shi, 本事)

19) Shen Li Tang (腎瀉湯) – Stammering due to Shen Zang Feng (腎臟風). (De Xiao, 得效)

20) Di Huang Yin Zi (地黃飲子) – Tongue stiffness and slurred speech, and difficulty moving legs due to stroke, qi cannot reach under the tongue because of heart qi deficiency and blocking qi. (He Jian, 河間)

21) Zheng She San (正舌散) – Special virtue for tongue stiffness and slurred speech due to stroke. (De Xiao, 得效)

22) Jie Yu Wan (解語丸) – Slurred speech due to stroke. (Hai Jiang, 海藏)

23) Qing Shen Jie Yu Tang (清神解語湯) – Slurred speech and loss of consciousness by stroke due to being blocked by wind to be mist the mind. (Yi Jian, 醫鑑)

24) Zi Shou Jie Yu Tang (資壽解語湯) – Slurred speech due to tongue stiffness because heart and spleen are attacked by wind. (Ru Men, 入門)

25) Si Bai Dan (四白丹) – When lethargic stupor is due to stroke, this formula clears lung qi and nourishes the corporeal soul (Po, 魄). (Yi Lao, 易老)

26) Er Shen Dan (二參丹) – Short of memory (amnesia) due to stroke. This formula makes the spirit clear and calms down the mind, and makes blood flow regular. (Yi Lao, 易老)

27) Huo Ming Jin Dan (活命金丹) – Unclear spirit due to heart being attacked by stroke. (Gang Mu, 綱目)

28) Niu Huang Ding Zhi Wan (牛黃定志丸) – Unclear spirit or loss of consciousness due to heart being attacked
by wind. This formula stops fright, calms down the mind spirit, removes phlegm and fluids. *(Dan Qin, 丹心)*

30) Qu Feng Zhi Bao Dan (祛風至寶丹) – Unclear spirit due to attack by wind, wind-heat syndrome. *(Dan Qin, 丹心)*

31) Qin Jiao Sheng Ma Tang (秦艽升麻湯) – Deviation of the mouth and eyes due to the Hand and Foot Yang Ming channels being invaded by wind. *(Bao Jian, 寶鑑)*

32) Bu Huan Jin Dan (不換金丹) – Deviation of the mouth due to stroke. *(Dan Qin, 丹心)*

33) Qian Zheng San (千正散) - Deviation of the mouth and eyes due to stroke. *(Dan Qin, 丹心)*

34) Li Qi Qu Feng San (理氣祛風散) – Deviation of the mouth and eyes due to stroke. *(Yi Jian, 醫鑑)*

35) Qing Tan Shun Qi Tang (清痰順氣湯) – Deviation of the mouth and eyes due to wind attacking channel. *(Hui Chun, 回春)*

36) Xi Jiao Sheng Ma (犀角升麻湯) – Pain in the area between the nose and the forehead due to stroke. Difficulty opening the mouth due to pain below the lower lip (the area where the beard starts). Pain and tightening of the skin like when glue is applied between the cheek or forehead. Symptoms of poor circulation due to blood being blocked by Foot Yang Ming being invaded by wind-poison *(風毒). *(Bao Jian, 寶鑑)*

37) Tian Xian Gao (天仙膏) – Deviation of the mouth and eyes due to wind stroke. *(De Xiao, 得效)*

38) Jia Jian Run Zao Tang (加減潤燥湯) – Difficulty moving the left side of the body due to dead blood. *(Yi Jian, 醫鑑)*

39) Qu Feng Chu Shi Tang (祛風除濕湯) – Difficulty moving the right side of the body due to qi deficiency and dampness-phlegm. *(Hui Chun, 回春)*

40) Jia Wei Da Bu Tang (加味大補湯) – Difficulty moving the whole body due to severe deficiency of qi and blood. *(Hui Chun, 回春)*

41) Tian Tai San (天台散) – Difficulty moving arms and legs with pain on the arms and legs. *(Yi Jian, 醫鑑)*

42) Xing Fu San (星附散) – Arms and legs hang down and are dragged due to stroke. *(Dan Qin, 丹心)*

43) Quan Sheng Hu Tang (全生虎骨湯) – Difficulty moving one side of the body and becoming thin due to muscle drying. This is called ‘Pian Ku (偏枯)’. In this case, it is prohibited to use herbs that causes sweating. Just release muscle/tendon and dispel wind. *(Dan Qin, 丹心)*

44) Shu Jin Bao An San (舒筋保安散) – Difficulty moving arms and legs, cramping muscle/tendon and pain. *(Dan Qin, 丹心)*

45) Shu Feng Shun Qi Tang (疏風順氣散) – Excess wine and women even though yuan qi *(元氣) deficient, also being attacked by external pathogenic factors. These can lead to stroke and one side or whole body cannot be used. *(Zheng Chuan, 正傳)*

46) Mi Fang (秘方) – This formula works especially well when the arms and legs cannot be used well due to stroke. *(Hui Chun, 回春)*

47) Dao Tan Tang (導痰湯) – Slow speech and dizziness due to copious sputum by wind. *(Ru Men, 入門)*

48) Jia Jian Dao Tan Tang (加減導痰湯) – Slurred speech due to copious sputum. Much better in case of heat syndrome. *(Hui Chun, 回春)*

49) Di Tan Tang (瀉痰湯) – Stiffness of the tongue and slurred speech due to heart orifices being blocked by stroke. *(Dan Qin, 丹心)*

50) Da Xing Feng Tang (大聖風湯) – Deviation of the mouth and eyes, difficulty moving one side of the body due to copious sputum. *(Ru Men, 入門)*

51) Shen Xing Ban Xia Tang (沉香半夏湯) – When one has copious sputum due to stroke, this formula removes phlegm, and tonifies the spleen and heart, and makes the qi flow regular. *(Zi Sheng, 資生)*

52) San Sheng Yin (三生飲) – Falling down in a fit with loss of consciousness due to blocking by phlegm from stroke, in case of deep pulse and no fever. *(De Xiao, 得效)*

53) Jing Zhou Bai Yuan Zi (青州白元子) – Because of phlegm and fluids, deviation of the mouth and eyes, difficulty moving arms and legs, stroke by several causes, women’s Xue Feng syndromes *(血風症)*, infantile convulsion. *(Tan Yin Men, 痰飲門)*
54) Jia Wei Jing Zhou Bai Yuan Zi (加味青州白元子) – Deviation of the mouth and eyes due to stroke, difficulty moving arms and legs. (*Dan Qin*, 丹心)
55) Xie She Bai Yuan Zi (泻膈白元子) – Blocking due to phlegm-fluids by stroke, when not effective in case of taking several formulas for diverse kinds of stroke. (*De Xiao*, 得效)
56) Long Xing Dan (龍星丹) – Vague memory and vertigo due to attacking by wind-heat and copious sputum. (*Dan Qin*, 丹心)
57) Su Zhou Yuan (蘇青元) – Regulate qi, scatter wind-phlegm. (*Dan Qin*, 丹心)
58) Tian Ma Wan (天麻丸) – Tonify blood, regulate the nutritive and protect qi (營衛), strengthen muscle and bone. (*Yi Jian*, 醫鑑)
59) Fang Feng Tong Sheng San (防風通聖散) – Slurred speech due to wind-heat (stroke), suddenly becoming aphasia, when being attacked by wind after washing hair, tetanus, convulsion due to diverse stroke, infantile convulsion. (*Dan Qin*, 丹心)
60) Ren Shen Qiang Huo San (人蔘羌活散) – Copious sputum and agitation due to stroke. (*De Xiao*, 得效)
61) Chuan Xiong Shi Gao San (川芎石膏散) – Clear spirit, refresh mind, circulate qi and blood. (*Xuan Ming*, 宣明)
62) Qing Qi Xuan Feng Tang (清氣宣風散) – Treatment of wind-heat. (*Yi Lim*, 醫林)
63) Tou Bing Dan (透水丹) – Swelling of the head and face and itching due to wind-poison (風毒) raising-up, dry mouth and feeling heavy in the chest due to phlegm-fluids blocking, swelling in the waist and legs, pain, getting boils due to phlegm going down, difficult urination and discharging stool, difficulty moving arms and legs. (*Ju Fang*, 局方)
64) Wan Jin Tang (萬金湯) – Treatment of stroke, tonify deficiency, special virtue for stroke on arms and legs especially. (*De Xiao*, 得效)
65) Ba Bao Hui Chun Tang (八寶回春湯) – Apply for all wind-deficiency syndromes. A fine formula that dispels wind-evil (風邪) and regulates qi and circulates blood well. If qi and blood is normally regulated, nutritive and protect qi circulation well, wind disease is spontaneously cured. (*De Xiao*, 得效)
66) Ren Shen Shun Qi Tang (人蔘順氣散) – Qi deficiency and deviation of the mouth and eyes due to stroke, difficulty moving arms and legs, slow speech, whole body pain. (*Ju Fang*, 局方)
67) Wu Yao Shun Qi Tang (烏藥順氣散) – When treating all kinds of stroke, first use this formula and let qi circulate normally, and then use other anti-stroke formulas. Apply for difficulty moving legs and Li Jie (歷節風). (*Ju Fang*, 局方)
68) Ba Wei Shun Qi Tang (八味順氣散) – When treating stroke, must take this formula between taking other formulas. Also, it is better to take this formula and regulate qi for all kinds of stroke. (*Qi Men*, 氣門)
69) Yun Qi San (雲氣散) – Qi deficiency and difficulty moving the body due to stroke. (*Dan Qin*, 丹心)
70) Huan Gu Dan (環骨丹) – Deviation of the mouth and eyes, and difficulty moving arms and legs due to stroke. (If you do not sweat a lot, stroke is not cured.) (*Za Fang*, 雜方)
71) Qu Feng Dan (祛風丹) – Several kinds of stroke, and difficulty moving arms and legs. Hansen’s disease, tetanus. (*Ru Men*, 入門)
72) Xu Ming Zhu San (續命煮散) – Sweating spontaneously due to wind-deficiency. (*Dan Qin*, 丹心)
73) Ding Feng Bing Zi (定風餅子) – Facial palsy due to stroke, thick and sticky nasal discharge, headache due to phlegm-reverting (痰厥), dizziness and vomiting. (*Ben Shi*, 本事)
74) Tong Qi Qu Feng Tang (通氣驅風湯) – Deviation of the mouth and eyes due to stroke, difficulty moving one side of the body, slurred speech and difficulty walking due to copious sputum, unclear spirit. (*De Xiao*, 得效)
75) Mi Chuan Shun Qi San (秘傳順氣散) – Deviation of the mouth and eyes due to stroke, difficulty moving arms and legs. All kinds of stroke. (*Yi Jian*, 醫鑑)
76) Wu Yao Shun Qi San (烏藥順氣散) – Pain on arms and legs due to wind wandering about arms and legs,
contracting muscle and tendon. In these cases, it is good to sweat a lot, but it is good for hands and feet to let sweat a little.

77) Mu Xiang Bao Ming Dan - All kinds of stroke. (Yu Yao)

78) Yu Feng Dan - Deviation of the mouth and eyes due to stroke, difficulty moving one side of the body, cloudy spirit, hard speech.

79) Wu Long Dan - Deviation of the mouth and eyes, arms and legs hang down and dragging, slurred speech.

80) Yi Li Jin Dan - All kinds of stroke.

81) Tie Tan Yuan - Several wind disease, tetanus, acute and chronic infantile convulsion.

▲ Western Differential Diagnosis:

What is a stroke? 1)

A stroke or "brain attack" occurs when a blood clot blocks an artery (a blood vessel that carries blood from the heart to the body) or a blood vessel (a tube through which the blood moves through the body) breaks, interrupting blood flow to an area of the brain. When either of these things happen, brain cells begin to die and brain damage occurs.

When brain cells die during a stroke, abilities controlled by that area of the brain are lost. These abilities include speech, movement and memory. How a stroke patient is affected depends on where the stroke occurs in the brain and how much the brain is damaged. For example, someone who has a small stroke may experience only minor problems such as weakness of an arm or leg. People who have larger strokes may be paralyzed on one side or lose their ability to speak. Some people recover completely from strokes, but more than 2/3 of survivors will have some type of disability.

Ischemic Stroke

In everyday life, blood clotting is beneficial. When you are bleeding from a wound, blood clots work to slow and eventually stop the bleeding. In the case of stroke, however, blood clots are dangerous because they can block arteries and cut off blood flow, a process called ischemia. An ischemic stroke can occur in two ways: embolic and thrombotic strokes.

Embolic Stroke

In an embolic stroke, a blood clot forms somewhere in the body (usually the heart) and travels through the bloodstream to your brain. Once in your brain, the clot eventually travels to a blood vessel small enough to block its passage. The clot lodges there, blocking the blood vessel and causing a stroke. The medical word for this type of blood clot is embolus.

Thrombotic Stroke

In the second type of blood-clot stroke, blood flow is impaired because of a blockage to one or more of the arteries supplying blood to the brain. The process leading to this blockage is known as thrombosis. Strokes caused in this way are called thrombotic strokes. That's because the medical word for a clot that forms on a blood-vessel deposit is thrombus.

Blood-clot strokes can also happen as the result of unhealthy blood vessels clogged with a buildup of fatty deposits and cholesterol. Your body regards these buildups as multiple, tiny and repeated injuries to the blood vessel wall. So your body reacts to these injuries just as it would if you were bleeding from a wound; it responds
by forming clots. Two types of thrombosis can cause stroke: large vessel thrombosis and small vessel disease (or lacunar infarction.)

**Large Vessel Thrombosis**
Thrombotic stroke occurs most often in the large arteries, so large vessel thrombosis is the most common and best understood type of thrombotic stroke. Most large vessel thrombosis is caused by a combination of long-term atherosclerosis followed by rapid blood clot formation. Thrombotic stroke patients are also likely to have coronary artery disease, and heart attack is a frequent cause of death in patients who have suffered this type of brain attack.

**Small Vessel Disease/Lacunar Infarction**
Small vessel disease, or lacunar infarction, occurs when blood flow is blocked to a very small arterial vessel. The term's origin is from the Latin word lacuna which means hole, and describes the small cavity remaining after the products of deep infarct have been removed by other cells in the body. Little is known about the causes of small vessel disease, but it is closely linked to hypertension (high blood pressure).

**Hemorrhagic Stroke**
Strokes caused by the breakage or "blowout" of a blood vessel in the brain are called hemorrhagic strokes. The medical word for this type of breakage is hemorrhage. Hemorrhages can be caused by a number of disorders which affect the blood vessels, including long-standing high blood pressure and cerebral aneurysms. An aneurysm is a weak or thin spot on a blood vessel wall. These weak spots are usually present at birth. Aneurysms develop over a number of years and usually don't cause detectable problems until they break. There are two types of hemorrhagic stroke: subarachnoid and intracerebral.

In an intracerebral hemorrhage, bleeding occurs from vessels within the brain itself. Hypertension (high blood pressure) is the primary cause of this type of hemorrhage.

In a subarachnoid hemorrhage, an aneurysm bursts in a large artery on or near the thin, delicate membrane surrounding the brain. Blood spills into the area around the brain, which is filled with a protective fluid, causing the brain to be surrounded by blood-contaminated fluid.

**Stroke symptoms include:**
SUDDEN numbness or weakness of face, arm or leg - especially on one side of the body.
- SUDDEN confusion, trouble speaking or understanding.
- SUDDEN trouble seeing in one or both eyes.
- SUDDEN trouble walking, dizziness, loss of balance or coordination.
- SUDDEN severe headache with no known cause.

**Western Medicine Disease Names:**
1. Hypertension (ICD Codes: 401.9 )
2. Cerebral Infarction (ICD Codes: 434.91)
3. Acute Myocardial Infarction (ICD Codes: 410.00)
4. Angina Pectoris (ICD Codes: 413.9)

**TCM Patterns (Pattern/Syndrome Differentiation):**
1. Attack on zang-fu organs: Tense/Excess pattern
2. Attack on zang-fu organs: Flaccid/Deficiency pattern
3. Attack on the meridians & collaterals

(P) Treatment
Treatment Principle: Regulate qi and blood, eliminate wind and remove obstruction from the meridians. [Needling] Use the even method first on the healthy side and then the affected side.

Treatment Plan: Even if zang-fu functions are restored gradually, wind-phlegm is still obstructing channels, and circulation of qi and blood is blocked. Symptoms appear as follows: hemiplegia, numbness of limbs, deviated mouth, slurred speech. In addition to these symptoms, in the case of liver-yang rising and upward disturbance of wind yang, it appears as a headache, vertigo, twitching of muscles. In the case of excessive fire in the heart and liver, symptoms appear as red eyes, flushed face, thirsty and dry throat, irritability, etc.

Acupuncture Points:

a) Prescription:

General acupuncture points\(^{5}\) according to symptoms are followed as;

<table>
<thead>
<tr>
<th>Attack on zang-fu organs: Tense/Excess pattern</th>
<th>DU 20, Du 26, ST 40, KD 1, LV 3, Jing-well points of hand (+) PC 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clenched jaw</td>
<td>(+) ST 6, ST 7, LI 4</td>
</tr>
<tr>
<td>Stiffness of the tongue</td>
<td>(+) Du 15, REN 23, HT 5</td>
</tr>
<tr>
<td>Attack on the zang-fu organs: Flaccid/Deficiency pattern</td>
<td>Moxa (REN 4, REN 6, REN 8)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attack on the meridians &amp; collaterals</th>
<th>DU 20, DU 16, UB 7 [Upper limbs] LI 15, LI 4, SJ 5 [Lower limbs] GB 30, GB 34, ST 36, ST 41</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upward disturbance of wind yang</td>
<td>(+) GB 20, LV 3, KD 3, SP 6</td>
</tr>
<tr>
<td>Excessive fire in heart and liver</td>
<td>(+) PC 7, LV2, KD 3</td>
</tr>
<tr>
<td>Deviated mouth</td>
<td>(+) ST 4, ST 6</td>
</tr>
</tbody>
</table>

Herbal Prescription:

Bulk:

- After stroke, it is important to treat cerebral edema and lower the intracranial pressure, Xing Xiang Zheng Qi San (星香正氣散) should be taken immediately after having a stroke.
- There are several formulas such as Shu Feng Dao Tan Tang (疏風導痰湯), Qu Feng Xu Ming Tang (祛風續命湯), Qiang Huo Yu Feng Tang (羌活愈風湯), Da Qin Jiao Tang (大秦艽湯), whose function is recover the nerve palsy.
- Slurred speech, or aphasia results from turbid phlegm obstructing heart orifices, so Di Tan Tang (旋痰湯), Qing Shen Jie Yu Tang (清神解語湯) can be used for recovering speech difficulties.
- In case of facial paralysis, it is characterized by similar wrinkles appearing on both sides of the forehead and eyelid movement. The formulas such as Jie Wei Xu Ming Tang (加味續命湯), Yang Long Tang (養榮湯) can be prescribed.
Bu Yang Huan Wu Tang (補陽還五湯) can be used for the following symptoms; Hemiplegia, deviation of the mouth and eyes, slurred speech, shedding saliva on corner of mouth, dried feces, frequent urination, and enuresis.

<table>
<thead>
<tr>
<th>Formula</th>
<th>Ingredients (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xing Xiang Zheng Qi San (星香正氣散)</td>
<td>Huo Xiang (藿香) 6g / Su Ye (蘇葉), Nan Xing (南星), Mu Xiang (木香), Bai Zhi (白芷), Da Fu Pi (大腹皮), Bai Fu Ling (白茯苓), Hou Po (厚朴), Bai Zhu (白朮), Chen Pi (陳皮), Ban Xia (半夏) 4g / Gan Cao (甘草), Jie Geng (桔梗) 3g / Da Zao (大棗) 2 pieces / Sheng Jiang (生薑) 3 pieces</td>
</tr>
<tr>
<td>Dao Tan Tang (導痰湯)</td>
<td>Ban Xia (半夏) 8g / Nan Xing (南星), Ju Hong (橘紅), Zhi Ke (枳殼), Chi Fu Ling (赤茯苓) 4g, Sheng Jiang (生薑) 5pieces</td>
</tr>
<tr>
<td>Xu Ming Tang (續命湯)</td>
<td>Xing Ren (杏仁) 4g, Ma Huang (黃芩), Gui Zi (桂枝), Ren Shen (人蔘), Dang Gui (當歸) 3g / Chuan Xiong (川芎), Gan Jiang (乾薑), Gan Cao (甘草) 2g / Shi Gao (石膏) 6g</td>
</tr>
<tr>
<td>Qiang Huo Yu Feng Tang (羌活愈風湯)</td>
<td>Cang Zhu (蒼朮), Sheng Di Huang (生地黃), Shi Gao (石膏) 1.8g / Qiang Huo (羌活), Man Jing Zi (蔓荊子), Xi Xin (細辛), Zhi Ke (枳殼), Ma Huang (黃芩), Gan Ju (甘菊), Gou Qì Zhí (拘杞子), Zhi Mu (知母), Du Huo (獨活), Qin Jiao (秦艽), Bai Shao Yao (白芍藥), Fang Feng (防風), Dang Gui (當歸), Chuan Xiong (川芎), Huang Qi (黃芪), Sheng Ren (人蔘), Bai Zhi (白朮), Bo He (薄荷), Chai Hu (柴胡), Di Gu Pi (地骨皮), Du Chong (杜仲), Huang Qín (黃芩), Gan Cao (甘草) 1.2g / Rou Gui (肉桂) 0.6g</td>
</tr>
<tr>
<td>Da Qin Jiao Tang (大秦艽湯)</td>
<td>Qin Jiao (秦艽), Shi Gao (石膏) 4g / Qiang Huo (羌活), Du Huo (獨活), Chuan Xiong (川芎), Bai Zhi (白朮), Sheng Di Huang (生地黃), Shu Di Huang (熟地黃), Dà Qín Jiaò (當歸), Bai Shao Yao (白芍藥), Huang Qín (黃芩), Bai Fu Ling (白茯苓), Fang Feng (防風), Bai Zhu (白朮), Gan Cao (甘草) 2.8g / Xi Xin (細辛) 1.2g</td>
</tr>
<tr>
<td>Di Tan Tang (蕁內湯)</td>
<td>Ban Xia (半夏), Nan Xing (南星) 8g / Zhi Shi (枳脣) 6g / Fu Ling (茯苓), Chen Pi (陳皮) 4g / Shi Chang Pu (石菖蒲), Sheng Ren (人蔘), Zhu Ru (竹茹) 2g / Gan Cao (甘草) 1g</td>
</tr>
<tr>
<td>Qing Shen Jie Yu Tang (淸神解語湯)</td>
<td>Yang Jiao Jue (羚羊角), Gui Pi (桂枝) 4g / Qiang Huo (羌活), Gan Cao (甘草) 3g / Fang Feng (防風), Fu Zi (附子), Suan Zao Ren (酸棗仁), Tian Ma (天麻) 2g</td>
</tr>
<tr>
<td>Yang Long Tang (養榮湯)</td>
<td>Dāng Guǐ (當歸), Chuan Xiong (川芎), Bai Shao Yao (白芍藥), Sheng Di Huang (生地黃), Yuan Zhi (遠志), Shi Chang Pu (石菖蒲), Chen Pi (陳皮), Wu Yao (烏藥), Bai Fu Ling (白茯苓), Zhi Shi (枳實), Huang Lian (黃連), Fang Feng (防風), Qiang Huo (羌活), Qin Jiao (秦艽), Ban Xia (半夏), Nan Xing (南星), Gan Cao (甘草) 3g</td>
</tr>
<tr>
<td>Bu Yang Huan Wu Tang (補陽還五湯)</td>
<td>Huang Qi (黃芪) 20g / Dang Gui Wei (當歸尾) 1g / Chi Shao Yao (赤芍藥) 1g / Di Long (地龍) 0.5g / Chuan Xiong (川芎) 0.5g / Tao Ren (桃仁) 0.5g / Hong Hua (紅花) 0.5g</td>
</tr>
</tbody>
</table>
Recommendations/Nursing/Lifestyle Advice:

Recovery after a stroke is often a lifelong process for everyone impacted by this event. Some people recover fully from a stroke while others face challenges for the rest of their lives. Just as every stroke is different, life after stroke is different for everyone. There is hope in that progress is possible at one month, one year or 20-plus years after a stroke. Recovery may depend on the location, type and severity of a stroke. Being equipped with information about recovery-related treatments and management strategies will help ease the transition to life after stroke.

Restoring physical, mental and emotional health will increase quality of life for stroke survivors and those impacted by stroke. Learn as much as possible about stroke survivors, post-stroke recovery and the many ways to restore independence.

Remarks:

Use the FAST test to recognize and respond to the signs of stroke.
F = FACE Ask the person to smile. Does one side of the face droop?
A = ARMS Ask the person to raise both arms. Does one arm drift downward?
S = SPEECH Ask the person to repeat a simple sentence. Does the speech sound slurred or strange?
T = TIME If you observe any of these signs (independently or together), call 9-1-1 immediately.

Reducing Stroke Risk
Everyone has some stroke risk. Some risk factors are beyond your control, including being over age 55, being a male (stroke is more common in men than women at younger ages, but more women experience strokes at older ages and more women than men die from stroke), being African-American, having diabetes, and having a family history of stroke. If you have one of these risk factors, it is even more important that you learn about the lifestyle and medical changes you can make to prevent a stroke. However, everyone should do what they can to reduce their risk for stroke – learn more by reading and following the Prevention Guidelines below.

Medical stroke risk factors include: Previous stroke, previous episode of TIA (or mini stroke), high cholesterol, high blood pressure, heart disease, atrial fibrillation and carotid artery disease. These medical risk factors can be controlled and managed even if you have already had issues with any of them in the past. Talk with your doctor about what will work best for you.

Lifestyle stroke risk factors include: Smoking, being overweight and drinking too much alcohol. You can control these lifestyle risk factors by quitting smoking, exercising regularly, watching what and how much you eat and limiting alcohol consumption.

Public Stroke Prevention Guidelines

- **Know your blood pressure.** If it is elevated, work with your doctor to keep it under control. High blood pressure is a leading cause of stroke. Have your blood pressure checked at least once each year—more often if you have a history of high blood pressure.

- **Find out if you have atrial fibrillation (AF).** If you have AF, work with your doctor to manage it. Atrial fibrillation can cause blood to collect in the chambers of your heart. This blood can form clots and cause a stroke. Your doctor can detect AF by carefully checking your pulse.

- **If you smoke, stop.** Smoking doubles the risk for stroke. If you stop smoking today, your risk for stroke will begin to decrease.

- **If you drink alcohol, do so in moderation.** Drinking a glass of wine or beer or one drink each day may lower your risk for stroke (provided that there is no other medical reason you should avoid alcohol). Remember that alcohol is a drug - it can interact with other drugs you are taking, and alcohol is harmful if taken in large doses. If you don’t drink, don’t start.

- **Know your cholesterol number.** If it is high, work with your doctor to control it. Lowering your cholesterol may reduce your stroke risk. High cholesterol can also indirectly increase stroke risk by putting you at greater risk of heart disease - an important stroke risk factor. Often times, high cholesterol can be controlled with diet and exercise; some individuals may require medication.

- **Control your diabetes.** If you are diabetic, follow your doctor’s recommendations carefully because diabetes puts you at an increased risk for stroke. Your doctor can prescribe a nutrition program, lifestyle changes and medicine that can help control your diabetes.

- **Include exercise in the activities you enjoy in your daily routine.** A brisk walk, swim or other exercise activity for as little as 30 minutes a day can improve your health in many ways, and may reduce your risk for stroke.

- **Enjoy a lower sodium (salt), lower fat diet.** By cutting down on sodium and fat in your diet, you may be able to lower your blood pressure and, most importantly, lower your risk for stroke.

- **Ask your doctor if you have circulation problems.** If so, work with your doctor to control them. Fatty deposits can block arteries that carry blood from your heart to your brain. Sickle cell disease, severe anemia, or other diseases can cause stroke if left untreated.

- **Act FAST.** If you have any stroke symptoms, seek immediate medical attention.

References:

4) http://www.stroke.org/
6) http://www.stroke.org/site/PageServer?pagename=cont