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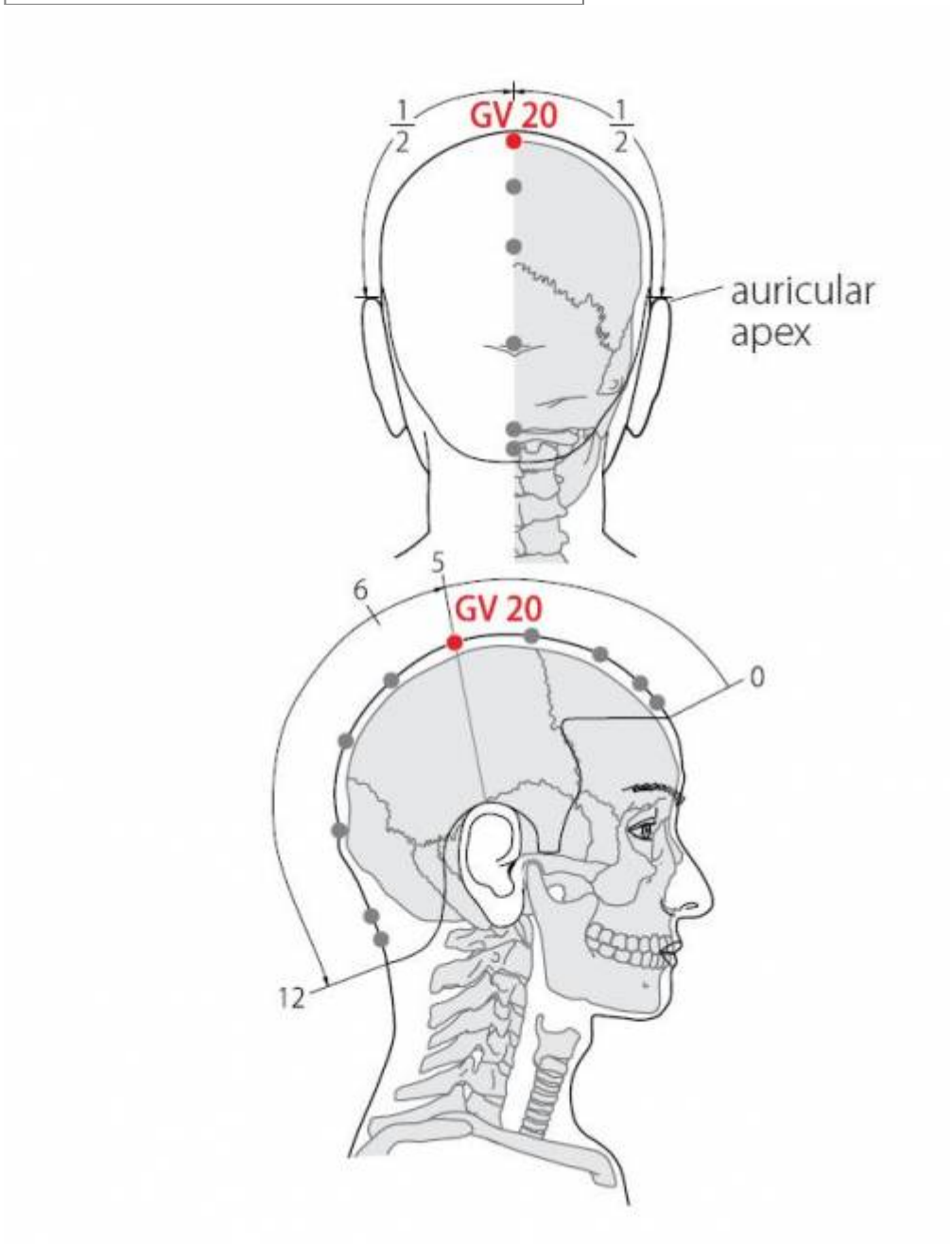
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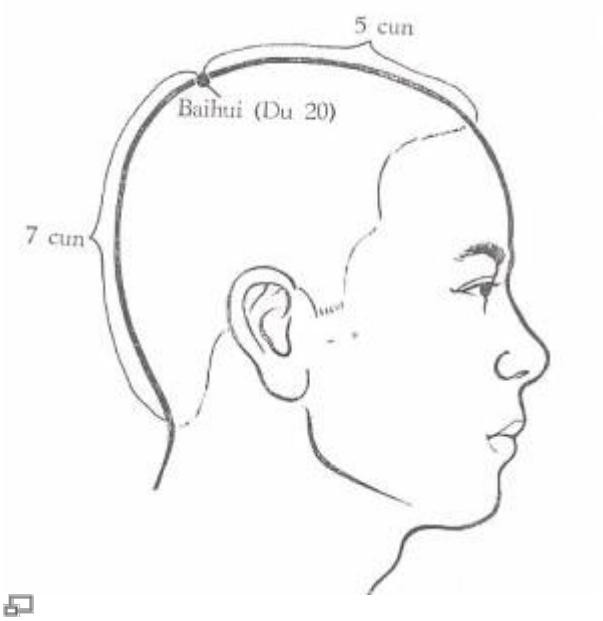
20VG Baihui 百会（百會）

prononciation baihui.mp3

articles connexes : - 19VG - 21VG - Méridien -



WHO 2009



Institut de MTC de Shanghai 1975

1. Dénomination

1.1. Traduction

bǎi huì 百会	Cent réunions (Nguyen Van Nghi 1971, Lade 1994, Laurent 2000) Réunion de cent vaisseaux (Pan 1993)	Hundred convergences (Ellis 1989) Hundred meetings (Li Ding 1992)

- Zhou Mei-sheng 1984 : *bai* hundred; all. *hui* meet; pay respects to; worship.
- Ellis 1989 : *bai*: one hundred; *hui*: meeting, convergence
- Li Ding 1992 : “*Bai*” （百) means many in number. “*Hui*” （会) means to converge.
- Pan 1993 : *bai* : cent, couramment utilisé pour « nombreux » ou « tous ». *hui*: réunion, se réunir, s'assembler, rencontrer, association.
- Guillaume 1995 : *Bai* 百 (Ricci 3758) : cent, centaine. *Hui* 会 (Ricci 2254) : se réunir, s'assembler, rencontrer ; association
- Laurent 2000: *Bai*, 百, représentation d'une tête humaine 白, le caractère *yi*, 一, unité, semble signifier l'unité des centaines. D'autres gloses disent que *bai* 白 est uniquement phonétique. *Hui* se réunir, se rassembler, réunion... Cf. 35V *Huiyang*.

1.2. Origine

- Jia Yi Jing (Deng 1993, Guillaume 1995)
- Zheng Qiwei. [Etude préliminaire sur le point bai hui (20VG)]. Chinese Acupuncture and Moxibustion. 1983;3(3):28. [4551]

> Après recherches dans les classiques médicaux, il apparaît que le Bai Hui apparaît pour la première fois dans le “classique systématique d'acupuncture et moxibustion”. Toutefois durant la période du “classique interne”, le point était utilisé en clinique mais connu sous le nom de “Gai” (couvercle). Il existe en tout sept noms pour ce point. L'auteur pense que le point est localisé dans la dépression du vertex. Les principales fonctions du point sont : clarification de l'esprit, ouverture de l'orifice du Coeur, éliminer le vent endogène, arrêter les céphalées et l'anxiété

1.3. Explication du nom

- Zhou Mei-sheng 1984 : *baihui* This point is on top of the head, the highest place. All parts of the body and all the meridians pay respects to it or worship it like stars paying respects to the polestar.
- Ellis 1989 : According to the Classic of Difficult Issues, yang converges at the head. GV-20 is the intersection-*jiaohui* point of the six yang channels and the governing vessel. In Chinese the number one hundred stands for many; thus the meeting of many channels is called Hundred Convergences. Further, the numerous bones of the skull all meet at this point. A passage in the text *Taoist Storehouse* refers to the head as the most important part of the body, and further states that it is the meeting place of the hundred spirits. As the uppermost point on the head GV-20 represents the place of convergence of the hundred spirits, or Hundred Convergences. The numerative hundred may also be a reference to this point's effectiveness “treating the hundred diseases,” as is stated in the *Life-Promoting Canon*.
- Li Ding 1992 : All the *Yang* meridians merge into the head and intersect at this point which is in the centre of the vertex. The Urinary Bladder Meridian of Foot-*Taiyang*, the Gall Bladder Meridian of Foot-*Shaoyang*, the *Sanjiao* Meridian of Hand-*Shaoyang*, the *Du* Meridian and the Liver Meridian of Foot-*Jueyin* all directly converge here, hence the name *Baihui* (Hundred Meetings).
- Pan 1993 : Le point *Baihui* se trouve au sommet du crâne, au milieu de la ligne unissant les pointes des deux oreilles. C'est le point qui occupe la position la plus élevée de tous les points d'acupuncture du corps. Il appartient au Vaisseau gouverneur, qui gouverne toute l'énergie *Yang*. Ce point est celui où se retrouvent tous les méridiens *Yang* et toute l'énergie *Yang* du corps.
- Lade 1994 : le nom fait référence à la localisation du point au sommet de la tête, le pôle *Yang* du corps, et à son influence sur les différents méridiens qui se réunissent à ce niveau. Dans la philosophie indienne, la région de ce point est appelée “Lotus aux Mille Pétales” (sahasrara-chakra), ce qui évoque une même compréhension des énergies situées en haut de la tête.
- Laurent 2000 : ce point situé au vertex entre en réunion avec de nombreux méridiens d'où son appellation. Certains médecins chinois disent qu'il s'agit d'un jeu de mot avec *Bai He* (bulbus lilii) un remède chinois qui traite les mêmes symptômes (mentaux) que *Baihui*.

1.4. Noms secondaires

Sanyangwuhui	三阳五会	Réunion des trois Yang (Laurent 2000)	Three Yang Fivefold Convergence (Ellis 1989)
Weihui	维会	réunion protectrice (Laurent 2000)	Linking Convergence (Ellis 1989)
Sanyang	三阳	trois yang (Laurent 2000)	Three Yang (Ellis 1989)
Wuhui	五会	cinq réunions (Laurent 2000)	Fivefold Convergence (Ellis 1989)
Dianshang	颠上	Au sommet (Laurent 2000)	Mountain top (Ellis 1989)
Niwangong	泥丸宫	Palais de Niwan (Laurent 2000)	Mud Ball Palace (Ellis 1989)
Tianman	宫满	Plénitude supérieure (Laurent 2000)	Celestial fullness (Ellis 1989)
Dingshanghuimao	顶上会毛	voir ci-dessous Qian jin yao fang (Guillaume 1995)	
Dingshangxuanmao	顶上旋毛	voir ci-dessous Sheng hui fang (Guillaume 1995)	
Lingshang	嶺上	sommet de la colline (Laurent 2000)	Ridge Top (Ellis 1989)

Lingshangtianman	嶺上宮满	plénitude céleste du sommet de la colline (Laurent 2000)	Ridge Top Celestial fullness (Ellis 1989)
Guimen	鬼门	porte du revenant (Laurent 2000)	
Tianshan	天山	montagne céleste (Laurent 2000)	
Dianshangtianman	颠上宫满	plénitude céleste du sommet (Laurent 2000)	

Guillaume 1995 :

- Sanyangwuhui :
  - origine Jia yi jing
  - Zhen jiu da quan distingue Sanyang et Wuhui comme deux noms de Baihui, ce qui est une erreur.
  - *San* (Ricci 4196) : trois ; triple.*Yang* (Ricci 5650) du couple Yin-Yang.*Wu* (Ricci 5559) : cinq.*Hui* (Ricci 2254) : se réunir, s'assembler, rencontrer, association.
- Weihui :
  - origine Biao you fu : nom secondaire de Baihui ou de Shenque 8VC.
  - *Wei* (Ricci 5512) : fibre, filament; lier, attacher, joindre, unir ; principe fondamental ; maintenir, sauvegarder, préserver.*Hui* (Ricci 2254).
- Sanyang :
  - origine Zhen jiu da quan
  - *San* (Ricci 4196).*Yang* (Ricci 5650).
- Wuhui
  - origine Zhen jiu da quan
  - *Wu* (Ricci 5559)*Hui* (Ricci 2254)
- Dionshang
  - origine : selon les commentaires de Wang Bing du chapitre « Gu gong lun » du Su wen, c'est le nom secondaire de Bai hui d'après le Zhen jiu ju ying.
  - *Dion* (Ricci 4919) : cime d'une montagne.*Shang* (Ricci 4268) : haut, supérieur, en haut, au-dessus de, sur ; monter, s'élever, monter sur, gravir ; souverain, empereur, roi, prince, chef.
- Niwangong :
  - origine Pu ji ben shi fang
  - *Ni* (Ricci 3635) : boue, bourbe, fange, mortier, pâte, purée.*Wan* (Ricci 5439) : balle, boulette, bille, pilule, oeuf. *Niwan* : expression taoïste qui désigne le « champ de cinabre ». *Gong* (Ricci 2874) :palais, résidence impériale, temple des ancêtres.
- Tianman
  - origine Zi sheng jing
  - *Tian* (Ricci 4938) : firmament, ciel, dieu. *Man* (Ricci 3360) : plein, rempli,comble, complet.
- Dingshanghuimao 顶上会毛
  - origine Qian jin yao fang : nom secondaire d'un point curieux et de Bai hui, selon
  - *Ding* (Ricci 4962) : sommet de la tête, vertex, sommet, cime, le haut d'un objet, faîte ; porter sur la tête. *Shang* (Ricci 4268) *Hui* (Ricci 2254). *Mao* (Ricci 3383) : poil, pelage, toison, laine, duvet.
- Dingshangxuanmao 顶上旋毛
  - origine Sheng hui fang
  - *Ding* (Ricci 4962). *Shang* (Ricci 4268) *Xuan* (Ricci 2081) : revenir sur ses pas, retourner, tourner.*Mao* (Ricci 3383).

1.5. Romanisations

- Pae-roe (EFEO et autres)
- Pai-Hui (Wade-Giles et autres)

1.6. Autres langues asiatiques

- Bách hội (viet)
- Paek'oe (cor)
- Hyakue (jap)

1.7. Code alphanumérique

20VG - VG20 (Vaisseau Gouverneur)
GV20 (Governor Vessel)
DM20 - 20DM (Du Mai)
Go20 (Governor)

2. Localisation

2.1. Textes modernes

- Nguyen Van Nghi 1971 : Au milieu du crâne, au sommet de la tête, à l'intersection de la ligne médiane et de la ligne partant de l'axe vertical des oreilles, dans un creux.
- Roustan 1979 : Au vertex, sur la ligne médiane, à son intersection avec la ligne transversale joignant les deux pointes des oreilles.
- Li Ding 1992 : Five *cun* within the frontal hairline on the midsagittal line, or midway between the posterior hairline and the landmark one finger's width superior to *Yintang* (extra)
- Deng 1993 : Sur la tête, directement à 5 *cun* au-dessus du milieu de la ligne de plantation des cheveux sur le front ou au milieu d'une ligne reliant le sommet des deux oreilles.
- Pan 1993 : le point *Baihui* se trouve au sommet du crâne, au milieu de la ligne unissant les pointes des deux oreilles. C'est le point qui occupe la position la plus élevée de tous les points d'acupuncture du corps. Il appartient au Vaisseau gouverneur, qui gouverne toute l'énergie *Yang*. Ce point est celui où se retrouvent tous les méridiens *Yang* et toute l'énergie *Yang* du corps.
- Qiu Mao-liang 1993 :7 *cun* directly above the midpoint of the posterior hairline (see Fig. 104). A simple way to locate this point is to look directly above the ear apex, at the middle of the vertex.
- Chen 1995 : In a seated position, draw the mid-sagittal line of the head and another line connecting the apexes of the two ears. The point is located at the intersection of the two lines. Or assuming that the distance between anterior and posterior hairlines is 12 inches, *Baihui* is found 5 inches posterior to the anterior hairline on the midline of the body.
- Guillaume 1995 : Sur la ligne médiane de la voûte crânienne, à 7 distances au-dessus de la ligne d'implantation des cheveux sur la nuque, au milieu de la ligne unissant les apex des auricules.
- Laurent 2000 : Sur la ligne médiane de la voûte crânienne, à 1,5 *cun* au-dessus de *Houding*

19VG.
- WHO 2009 : On the head, 5 B-*cun* superior to the anterior hairline, on the anterior median line. Note 1: GV20 is located in the depression 1 B-*cun* anterior to the midpoint of the line from the anterior hairline to the posterior hairline.
  Note 2: When the ears are folded, GV20 is located at the midpoint of the connecting line between the auricular apices.

2.2. Textes classiques

- Deng 1993 : **1)** “A 1,5 *cun* en arrière de Qianding (VG21), à l'intérieur de l'épi du sommet de la tête, dans une dépression où l'on peut enfoncer un doigt.” (Jia Yi) **2)** “A mi-distance entre *Yintang* (P.E.-C.F.3) situé au milieu des sourcils et la ligne de plantation des cheveux sur la nuque.” (Yu Long Jing). **Remarque :** Pour localiser ce point, beaucoup d'écoles de médecine acceptent la définition qui le situe “à 1,5 *cun* en arrière de *Qianding* (VG21)”, ou “à 1,5 *cun* au-dessus de *Houding* (VG19)”, ce qui revient au même, c'est-à-dire directement à 5 *cun* au-dessus du milieu de la ligne de plantation des cheveux sur le front. L'emplacement de l'épi au sommet de la tête varie selon les individus et ne peut donc être pris comme repère. Selon les unités proportionnelles de mesure des os, la localisation de *Baihui* (VG20) telle qu'elle est expliquée dans Yu Long Jing doit se trouver à 4,5 *cun* de la ligne de plantation des cheveux sur le front, avec une différence de 0,5 *cun*. Actuellement, on situe ce point sur la tête, directement à 5 *cun* au-dessus du milieu de la ligne de plantation des cheveux sur le front, à mi-distance d'une ligne reliant les deux sommets de l'oreille.
- Yi zong jin jian : One inch and five fen directly above *Behind the Vertex* (GV-19), in the depression that is in line with the apex of the ear. (Ellis 1989)

2.3. Etudes sur la localisation

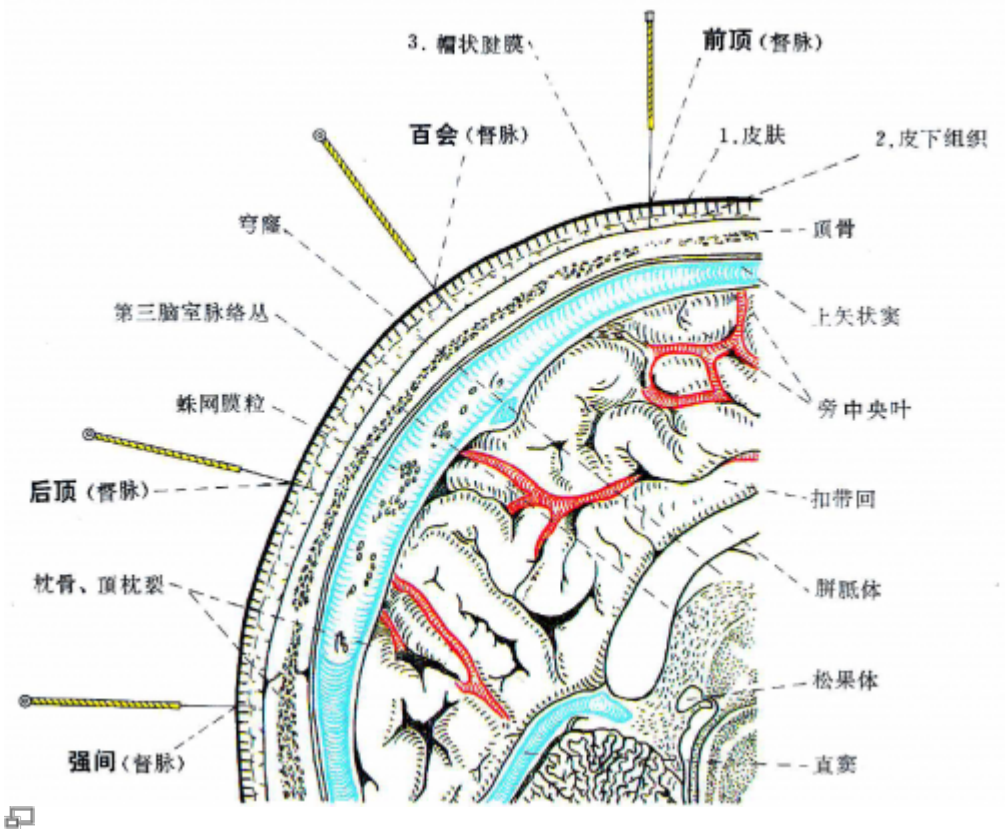
- Wang X, Zhu CG, Niu SP. [Question on Location of Baihui (GV 20)]. Chinese Acupuncture and Moxibustion. 2014;34(1):87. [171979]
- Berling G et Al. Positionnement du 20 VG lors de la réunion de cent confreres. Bai Hui. 2000;25:2-3. (fra). [95039]

2.4. Rapports et coupes anatomiques

- Roustan 1979 : Sur galea aponeurotica (aponévrose épicrânienne), ramifications des artères et veines temporalis superficialis et occipitalis; en profondeur, veines emissariae et branches des nerfs frontalis et occipitalis major.
- Deng 1993 : Peau, tissu sous-cutané, aponévrose épicrânienne, tissu conjonctif lâche sousaponévrotique. Dans cette région, on trouve les branches du nerf grand occipital et du nerf frontal, et l'anastomose des artères et des veines temporales superficielles gauches et droites avec les artères et les veines occipitales.
- Qiu Mao-liang 1993: In the galea aponeurotica; the anastomotic network formed by the superficial temporal arteries and veins and the occipital arteries and veins on both sides; the branch of the great occipital nerve and branch of the frontal nerve.
- Chen 1995 : *a. Skin*: the branches from the supraorbital, the greater occipital and the auriculotemporal nerves innervate the skin. The supraorbital nerve is a branch of the ophthalmic division of the trigeminal nerve (CN V). The greater occipital nerve contains fibers from the second cervical nerve (C2), and the auriculotemporal nerve is a branch of the

mandibular division of the trigeminal nerve (CN V). *b. Subcutaneous tissue*: includes the previously described skin nerve branches, the occipital artery and vein, and the superficial temporal artery and vein. The subcutaneous tissue consists of much vertical connective tissue, which connect the skin and the galea aponeurotica and separate the adipose tissue into many small septa. The occipital and superficial temporal arteries are branches of the external carotid artery. The occipital vein, together with the occipital artery, joins the external jugular vein. The superficial temporal artery is a terminal branch of the external carotid artery. The superficial temporal vein, together with the temporal artery, joins the retromandibular vein. *c. Galea aponeurotica*: a strong dense connective tissue which is connected anteriorly to the frontal muscle and posteriorly to the occipital muscles of the cranial vault, and is tightly connected with the subcutaneous tissue and the skin. *d. Loose connective tissue beneath the aponeurosis*: a thin loose connective tissue between the epicranium and the scalp. The loose connective tissue is connected anteriorly to the eyelids and posteriorly to the occipital hairline. If the blood is drained into this structure, it may cause a large hematoma. *e. Periosteum and bone of the skull*: the pericranium is thin and dense, fused firmly to the bone of the skull. Deep needling can reach the parietal bone.

- Guillaume 1995 : Artère temporale superficielle, artères et veines occipitales. Grand nerf occipital, nerf sus-orbitaire, nerf auriculo-temporal.



Yan Zhenguo 2002- 20VG

2.5. Rapports ponctuels

3. Classes et fonctions

3.1. Classe ponctuelle

- Nguyen Van Nghi 1971 : Reçoit l'énergie de tous les vaisseaux secondaires venant des

méridiens *Yang* de la main et du pied. Point important cité dans So Ouenn (Chap. 36), à puncturer dans les affections causées par le vent : « Lorsque le malade commence à se plaindre de maux de tête. Le Paé Roé (20VG) doit être associé aux points Chang Sing (23VG), Iuann Lo (5VB) et au Tsroann Tchou (2V) ; s'il commence par souffrir de la nuque et du dos, il faut puncturer le Fong Tcheu (20VB) et le Fong Fou (16VG). Notons dans So Ouenn (Chapitre 52) : « … Si on puncture trop profondément aux points Paé Roé (20VG) et Senn Roé (22VG) et que l'on touche le cerveau, c'est la mort immédiate. »

- Roustan 1979 : Point de rencontre de *Du Mai* et des méridiens *Yang* de main et de pied.
- Zhen Jiu Da Cheng : This point is the intersection-*jiaohui* point of the six *yang* channels and governing vessel (Ellis 1989)
- Ellis 1989 : Most earlier sources list this point only as an intersection-*jiaohui* point of the foot *tai yin* bladder channel and the governing vessel.
- Li Ding 1992 : *Baihui* (Du 20) is the coalescent point of the Du Meridian and the Yang meridians of both the foot and hand. It has the effect to restore consciousness, relieve heat, promote the brain functions, calm the mind, restore *Yang qi* from collapse, soothe the liver and dispel wind. Also, it can raise the sunken *qi* of the body organs.
- Pan 1993 : point de rencontre de tous les méridiens *Yang* avec le Vaisseau gouverneur.
- Guillaume 1995: Il s'agit d'un point *hui* des méridiens *Du mai* et *Zu tai yang*.
- Zhen jiu ju ying: c'est un point *hui* des trois *Yang* du pied et de la main et de *Du mai*. (Guillaume 1995)
- Lei jing tu yi: c'est le point *hui* des méridiens *Du mai* et *Zu tai yang*, le *Shao yang* du pied et de la main et le *Zu Jue yin* se réunissent à *Bai hui*. (Guillaume 1995)
- Laurent 2000 : Point “Mer des moelles” (avec 16 DM *Fengfu*) tous les deux en relation avec le cerveau. Point de croisement avec le *Zu Taiyang* et le *Zu Jueyin* et les branches secondaires de l'Estomac, de la Vésicule biliaire et du *Sanjiao*.

3.2. Classe thérapeutique

- Roustan 1979 : Calme l'esprit et ouvre les « orifices » , équilibre le foie et calme le vent du foie , fait monter le Yang.
  Note : Orifices « du coeur », selon une très ancienne tradition, c'est du coeur envisagé « à la chinoise » qu'il s'agit ici, avec toutes les implications psychiques que sous-entend le Shen — énergie mentale, qui est son « Ame végétative »; c'est aussi le maître suprême des entrailles et des organes. Il régit les organes des sens. Traditionnellement, l'épilepsie serait due à l'obstruction des « orifices du coeur » par des glaires… Cela peut vouloir dire que le coeur gouverne tous les orifices et, entre autres, les organes des sens qui permettent la communication avec le monde extérieur.
  Le vent est l'énergie spécifique du foie; quand on parle de « vent du foie », on sous-entend que cette énergie est en excès.
- Wang Yifang 1992 : It has the function of reinforcing the qi of the middle—jiao and treating collapse.
- Chen 1995 : Refreshes the brain to restore the Mind, and nourishes the Yang to alleviate collapse.
- Guillaume 1995 : *Bai hui* purifie la chaleur, ouvre les orifices, tonifie le cerveau, calme le Shen, restaure le Yang, contrôle l'échappement-*tuo*, apaise le Foie, calme le vent. Selon le Tai yi shen zhen, *Bai hui* fait monter le Yang, renforce le Qi, clarifie la tête et éveille le cerveau, calme le Shen et tranquillise.
- Laurent 2000 : Ranime le cerveau, ouvre les orifices du Cœur, calme le Shen et clarifie la tête, fait monter le Yang pur, chauffer ce point renforce l'énergie Yang (pour qu'elle monte et contracte ce qui est relâché), élimine la chaleur, disperse le vent, équilibre le Foie, élimine le

vent du Foie (Zhong Feng).

4. Techniques de stimulation

Acupuncture	Moxibustion	Source
Piqure tangentielle, vers l'avant, l'arrière, la gauche ou la droite, de 0,5-1,5 distance.	Cautériser 3 à 7 fois (faire 3 à 7 moxa cônes), ou chauffer 5 à 20 minutes.	Roustan 1979
Puncture horizontally 0.5-0.8 cun deep, or prick to cause bleeding.		Li Ding 1992)
Puncture transversely 0.5-0.8 cun		Qiu Mao-liang 1993
Anterior, posterior, right and left horizontal insertion 0.5-1.0 inch.	3-9 cones; stick 5-10 minutes	Chen 1995
Puncture tangentielle entre 0,3 et 0,5 distance de profondeur.	Cautérisation avec 3 à 5 cônes de moxa, moxibustion pendant 5 à 10 minutes.	Guillaume 1995
Piqure à plat de 0,5 à 0,8 cun	3 à 5 moxa chauffer 10 à 20 mn.	Laurent 2000
Qigong : focalisation de l'attention sur un point	voir 5.3	

Sensation de puncture
Sensation locale de gonflement ou de douleur. (Roustan 1979)
soreness, distension, and heaviness

Sécurité

- Chen 1995 : The subcutaneous tissue contains a large amount of fibrous connective tissue and blood vessels. When the needle passes through these structures, a moderate needle resistance will be felt. To avoid bleeding, no vigorous lifting and thrusting of the needle is permitted. If there are signs of bleeding, use a cotton compress to stop it.
- Guillaume 1995 : Selon Tong ren, il ne convient pas de Faire de nombreux moxas sur Bai hui. Le Sheng ji dit que lorsqu'on fait des moxas sur le sommet de la tête il ne faut pas dépasser le nombre de 7 x 7 parce que la peau du vertex est mince, précision qui est reprise dans le Lei jing tu yi.

5. Indications

Classe d'usage	★★	point essentiel

5.1. Littérature moderne

- Roustan 1979 : Céphalée, vertige et évanouissement, syncope, hypertension artérielle, insomnie, épilepsie, prolapsus anal. Douleurs du vertex, bourdonnements d'oreille, surdité, nez bouché, attaque directe du vent (apoplexie : *Zhong Feng*), trismus, hémiplégie, « épilepsie agitée » (syndrome psychique), prolapsus anal et utérin, hémorroïdes.
- Li Ding 1992 : Headache, dizziness and vertigo, heaviness in the head, prolapse of the rectum and shock.
- Lade 1994 :
    - Est bénéfique pour le Cerveau et clarifie le Cerveau, calme l'Esprit, et ranime la

conscience. Indications : épilepsie, démence, hystérie avec insomnie, méningite, choc, aphasie par ictus, insomnie, hyperactivité, perturbations des perceptions et des mouvements, sensation de lourdeur de la tête, pleurs incontrôlés, et pertes de mémoire.
    - Fait circuler le *Qi* du Foie, abaisse le *Yang* du Foie, éteint le Vent du Foie, et disperse le Vent. Indications : forme occluse d'Attaque-de-Vent, hémiplégie, hypertension, éblouissements, céphalées pariétales, céphalées du vertex, surdité, acouphènes, trismus, et raideur du cou.
    - Réchauffe le *Yang* et restaure les collapsus de *Yang*. Indications : syndromes de collapsus par vide, coma de forme relâchée, évanouissement, prolapsus utéro-vaginal ou rectal, saignements utérins anormaux, hémorroïdes, et diarrhée chronique.
    - Raffermit les orifices inférieurs, régularise et tonifie le *Qi*, et calme le fœtus. Indications : agitation du fœtus par vide de *Qi*, stérilité, impuissance, éjaculation précoce, incontinence urinaire, perte des cheveux ou grisonnement précoce, et acouphènes.
- Qiu Mao-liang 1993: Headache, vertigo, windstroke and aphasia, depressive-manic psychosis, prolapse of anus, prolapse of uterus, and insomnia.
- Chen 1995 : Headache, dizziness, prolapse of the anus, prolapse of the uterus, convulsions, cerebrovascular disease, hysteria, schizophrenia, insomnia, syncope.
- Guillaume 1995 : Céphalée, vertiges-lipothymies, angoisse, perte de mémoire, syncope-*hun jue*, folie-*dian kuang*, bourdonnement d'oreille, obstruction nasale, attaque directe par le vent *zhong feng* avec aphasie, prolapsus rectal, prolapsus de l'utérus, hémorroïdes ; schizophrénie, dépression nerveuse, hypertension artérielle, hypotension artérielle, syncope-*xiu ke*.

5.2. Littérature ancienne

- Jia yi jing : Douleur du vertex, lourdeur de la tête due au vent, sensation d'arrachement d'impossibilité de regarder à droite ou à gauche , Bourdonnements d'oreille . (Guillaume 1995)
- Qian jin yao fang : *Kuang xian* (folie-épilepsie) avec défaut de reconnaissance des personnes, folie-*dian bing*, vertiges et désorientation.(Guillaume 1995)
- Ishimpo : Maladie pernicieuse ; céphalée du vertex due au vent ; sensation de tête lourde ; yeux exorbités ; raideur de la nuque (impossibilité de tourner la tête) ; épilepsie ; bourdonnements d'oreille ; maladies de la chaleur avec transpiration et nausées ; spasmes ; convulsions de l'enfant.(Guillaume 1995)
- Sheng hui fang : Épilepsie de type vent-*feng xian*, *Qing feng** *xin feng* , hyperextension en opisthotonos, cri du mouton avec pleurs, propos incohérents, perte de connaissance à chaque crise avec hypersialorrhée, sensation de chaleur et de malaise-*re men* dans le Coeur, vent de la tête, somnolence et inquiétude, angoisse..., manger sans goût, tête lourde, rougeur du visage et nez bouché après absorption d'alcool, prolapsus rectal de l'enfant. Vertige et douleur de la tête et des yeux, faiblesse du Coeur, perte de mémoire, esprit confus et désemparé *Huan hu*. *Remarque* : *Qing feng* : affection oculaire due au vide de Foie et de Rein avec reflux du vent et du Feu vers le haut, la pupille est vert pâle et légèrement dilatée avec un certain degré de rougeur périphérique, la tête et l'ceil sont douloureux, il existe une photophobie, un larmoiement et une baisse progressive de l'acuité visuelle (ce tableau évoque le glaucome). *Xin feng*, selon le chapitre « Du vent » de Su wen : « En été, si on est blessé par le vent aux périodes Bing Ding, c'est le vent du Coeur-*xin feng* », avec transpiration, crainte du vent, colère, faciès rouge et, dans les cas graves, le sujet ne peut pas parler rapidement.(Guillaume 1995)
- Pu ji fang : *Xin diao* (ou *Kuang huang*) attaque de folie avec vomissements inopinés, chaleur du corps (fièvre).(Guillaume 1995)
- Shennong jing : Dans le vent de la tête, il faut faire 3 cônes de moxa. En cas de prolapsus rectal du nourrisson, faire de 3 à 5 cônes de moxa de la taille d'un grain de blé.(Guillaume 1995)

- Yu long Fu : Associé à *Xin hui*- 22VG, il traite l'attaque directe par le vent brutal. (Guillaume 1995)
- Ling guong lu : Associé à *Guiwei* 1VG, il traite la diarrhée dysentériforme.(Guillaume 1995)
- Xi hong Fu : En cas de prolapsus rectal chronique du nourrisson, il faut d'abord faire des moxas sur *Bai hui* 20VG, puis sur l'extrémité du coccyx. Associé à *Tai Chong* 3F, *Zhao hai* 6Rn, *Yin jiao* 7VC, il traite les maladies de la gorge. (Guillaume 1995)
- Zhen jiu ju ying : Selon Su wen, puncturer à 0,2 distance. Selon Tong ren, appliquer de 7 à 7 x 7 cônes de moxa. A chaque fois, la moxibustion ne doit pas dépasser 7 cônes parce que la peau à cet endroit est fine ; puncturer à 0,2 distance, disperser dès l'obtention du *Deqi*. On dit aussi dans Su wen : puncturer à 0,4 distance. Indications : vent de la tête, attaque directe par le vent-*zhong feng*, difficulté d'élocution, mâchoires serrées (trismus), hémiplégie, sensation d'inquiétude et de plénitude-*fan men* du Coeur, angoisse et palpitations-*jing ji*, perte de mémoire, absence et défaut de concentration-*shen xu huang hu*, faiblesse du Coeur, maladies pernicieuses-*jie nue*, prolapsus rectal, épilepsie de type vent-*feng xian*. *Qing feng xin feng*, épilepsie avec opisthotonos, cri du mouton et pleurs, délire verbal, perte de connaissance en cas de crise, hypersialorrhée, transpiration et vomissements. Le faciès devient rouge après l'absorption de boisson alcoolisée, cerveau lourd, nez bouché, douleur de la tête, éblouissements, mange sans goût ; ce point peut traiter les cent maladies.(Guillaume 1995)
- Yi xue ru men : Prolapsus rectal, épilepsie de type vent-*feng xian*, *Qing feng xin feng*, opisthotonos, cri du mouton avec pleurs excessifs, délire verbal, perte de connaissance en cas de crise, hypersialorrhée, sensation de chaleur et de malaise-re men du Cœur, vent de la tête avec tendance à la somnolence, inquiétude-*xin fan*, angoisse avec palpitations-*jing ji*, alimentation sans goût, le faciès devient rouge après absorption d'alcool, tête lourde, obstruction nasale, larmoiement, bourdonnements d'oreille, surdité.(Guillaume 1995)
- Da cheng : Reprend intégralement les indications du Zhen jiu ju ying.(Guillaume 1995)
- Xun jing : Attaque directe par le vent-*zhong feng* avec *Jue* cadavérique, les divers types de syncope, Obstruction nasale avec rhinorrhée , Hémiplégie.(Guillaume 1995)
- Lei jing tu yi : Vent de la tête, céphalée, surdité, obstruction nasale, épistaxis, attaque directe par le vent-*zhong feng* avec difficulté d'élocution, trismus, tendance à être triste et à pleurer, hémiplégie, épilepsie de type vent-*feng xian* avec perte de connaissance brutale, opisthotonos, vomissement de salive avec esprit confus et désemparé-*huang hu*, angoisse et palpitations-*jing ji*, tendance à perdre la mémoire, maladies pernicieuses-*jie nue*, vent du Sang-*xue feng* chez la femme, maladies du vent avant ou après l'accouchement, convulsions de type vent du nourrisson-*feng xian jing feng*, prolapsus rectal qui ne guérit pas. Selon certains, *Bai hui*- 20VG guérit les cent maladies, il convient de le puncturer à 0,2 distance de profondeur et de disperser dès l'obtention du *Deqi*. Quand on fait jusqu'à 100 cônes de moxa, il faut arrêter pendant trois à cinq jours, utiliser l'aiguille triangulaire pour le faire saigner au quatre coins puis l'arroser avec de l'eau dans laquelle on a trempé des fleurs épanouies, et cela afin que le *Qi* soit perméabilisé et que l'on souhaite éviter la remontée du *Qi* du feu qui provoquerait une baisse de l'acuité visuelle. Selon certains, *Bai hui*- 20VG traite les alternances de tristesse et d'allégresse avec tendance à vouloir se tuer, le vent-froid des quatre membres avec tendance à l'épuisement alors que le corps et la bouche restent tièdes, on peut alors puncturer *Ren zhong* 26VG à 3 distances de profondeur et faire 3 cônes de moxa sur *Bai hui* 20VG, alors la conscience réapparaît.(Guillaume 1995)
- Tai yi shen zhen : Les différents types de syncopes et de vertiges (*hun jue ni*), attaque directe par le vent *zhong feng*, le *Qi yang* est vide et piégé.(Guillaume 1995)

5.3. Qigong : Indications de la focalisation de l'attention sur le point

symptomes	zheng	auteur
ptosis of the internal organ, distractable diarrhea, dizziness, shortness of breathing	yin deficiency of liver and kidney, deficiency of qi in middle—Jiao	Wang Yifang 1992

5.4. Associations

Indication	Association	Source
Angoisse avec palpitations	**20VG** + 11TR + 10TR + 2TR	Zi sheng jing (Guillaume 1995)
Prolapsus anal	**20VG** + 1VG + 57V	Roustan 1979
	20VG + 15VC + 1VG	Bai zheng fu (Guillaume 1995)
Prolapsus utérin	**20VG** + 6VC + Weibao (PC 11) + 36E	Roustan 1979
	20VG + 6VC + 12Rn + 28VB + 3F + 10Rn	Si ban jiao cai zhen jiu xue (Guillaume 1995)
Prolapsus rectal de l'enfant	**20VG** + 1VG + 25V	Da cheng (Guillaume 1995)
Céphalée	**20VG** + YinTang + TaiYang + 4GI	Roustan 1979
Encéphalite épidémique	**20VG** + 16VG + 14VG + 11GI	Roustan 1979
Vent de la tête	**20VG** + 19VB + 10V	Zi sheng jing (Guillaume 1995)
Douleur du sommet de la tête	**20VG** + 19VG + 4GI	Da cheng (Guillaume 1995)
Attaque de folie-*fa kuang*	**20VG** + 5MC + 7Rn + 10Rn + 36E	Lei jing tu yi (Guillaume 1995)
Céphalée par vide de Rein	**20VG** + 23V + 4VC + 1Rn	Zhong hua zhen jiu xue (Guillaume 1995)
Hémiplégie	**20VG** + 15GI + 11GI + 4GI + 30VB	Li Ding 1992
Perte de mémoire	**20VG** + 14VG + 15V + 7C + 36E	Zhen jiu xue shou ce (Guillaume 1995)
Schock	**20VG** + 26VG + 6MC	Li Ding 1992
Syncope	**20VG** + 6MC + 26VG	Roustan 1979
Eye disorders	**20VG** + 20VB + 1V + 4GI + 37VB	Li Ding 1992
Nasal disorders	**20VG** + 20VB + 20GI + 4GI	Li Ding 1992
Incontinence urinaire	**20VG** + 4VG + 33V + 4VC	Zhong hua zhen jiu xue (Guillaume 1995)

5.5. Revues des indications

- Zhi-Tao Wu. Clinical Applications of Acupoints Baihui (GV 20) and Sishencong (Ex-HN 1). Journal of Acupuncture and Tuina Science. 2010;8(6):394-396. [154446]
- Zhao Yinlong et Al. Experience of Clinical Application of Baihui (GV20) point. World Journal of Acupuncture-Moxibustion. 1997;7(1):18-21.[55209]

  Baihui (GV 20) point can treat many diseases, especially, Qi deficiency and Yang insufficiency in chronic, consumptive and intractable diseases, most achieving good therapeutic effects. The authors have treated epilepsy, deafness, blepharoptosis , etc. difficult and complicated miscellaneous diseases mainly using Baihui point combined with other adjuvant points, attaining better results. In treatment of epilepsy with Baihui point, reinforcing method was used at the resting stage, strengthening the body resistance to consolidate the constitution, promoting Yang function and removing obstruction of the Dumai, and the reducing method was used at the stage of attack, relieving convulsion and spasm , and inducing resuscitation for treating both the principal and the secondary aspects of the disease at the same time. In acupuncture treatment of deafness with reinforcing method, regulating Qi to reach the ear, supplementing Qi and replenishing essence, nourishing the orifices and improving the faculty of hearing. As treatment of

blepharoptosis with Baihui point, it has the function of supplementing Qi to sending up. Both reinforcing and reducing methods can be used for acupuncture at Baihui point, but reinforcing method is more used. The authors often use needle inserting method by pinching the skin, with twirling manipulation, and experiencing the needling sensation by the right hand, so that Qi can rapidly reach the diseased part.

- Han Ming. [Clinical Application of Baihui (GV20) Point]. Chinese Acupuncture and Moxibustion. 1993;13(2):31. [38296]
- Tran Dinh Can. Reflexion sur le Pae Roe (20VG). Mensuel du Médecin Acupuncteur. 1980;76:233. (fra). [821]

6. Etudes cliniques et expérimentales

6.1. Hypertension artérielle

- Dong YS, Xing SL. [Effect of Acupuncture Needle-Retention Duration at Baihui (GV 20) and Sishencong (EX-HN 1) on Blood Pressure in Hypertension Patients]. Acupuncture Research. 2012;37(3):233-6. [165800]

  OBJECTIVE: To observe the effect of needle-retention duration at Baihui (GV 20) and Sishencong (EX-HN 1) on blood pressure in hypertension patients. METHODS: Twenty-four patients with essential hypertension were randomly divided into acupuncture group and medication group. For patients of the acupuncture group, single-use sterilized filiform needles were inserted into Baihui (GV 20) and Sishencong (EX-HN 1) and manipulated for about 10 s till “Deqi”, and retained for 8 h. Patients of the medication group were treated by oral administration of Nifedipine tablets(20 mg)in the morning. Blood pressure (right brachial artery) was detected 0.5, 2, 4, 6 and 8 h after the treatment respectively. RESULTS: In comparison with pre-treatment, the systolic pressure levels at the time-points of 0.5, 2, 4, 6 and 8 h after taking Nifedipine in the medication group, and the systolic pressure levels at the time-points of 2, 4 and 6 h after the treatment in the acupuncture group, and the diastolic pressure levels at the time-points of 2, 4, 6 and 8 h in both acupuncture and medication groups were decreased obviously ($P<0.05$, $P<0.01$). The effect of acupuncture group was significantly weaker than that of the medication group in lowering systolic pressure at the time-points of 0.5 and 8 h after the treatment ($P<0.01$). No significant differences were found between the acupuncture and medication groups in lowering systolic pressure at the time-points of 2, 4 and 6 h after the treatment, and in lowering diastolic pressure at the time-points of 0.5, 2, 4, 6 and 8 h after the treatment ($P>0.05$). CONCLUSION: Acupuncture stimulation of Baihui (GV 20) and Sishencong (EX-HN 1) with sustained needle-retention works well in lowering blood pressure in hypertension patients, but is relatively slower and has a shorter period of time in lowering blood-pressure efficacy.

- Wu Qingming, Feng Guoxiang, Tang Xuefei . [Effects of Acupuncture at Siguan Points plus Warming Acupuncture-Moxibustion at Baihui (GV 20) On Content Plasma et and No in the Patient of Essential Hypertension]. Chinese Acupuncture and Moxibustion. 2004;24(1):53. [124556]
- Feng Guoxiang, Wu Qingming. [Clinical Study on treatment of Essential Hypertension with Acupuncture at “Siguan” Points plus Warming Acupuncture-Moxibustion at Baihui (GV 20) Point]. Chinese Acupuncture and Moxibustion. 2003;23(4):193. [114260]

  Objective : To observe the therapeutic effect of acupuncture at “Siguan” and warming acupuncture-moxibustion at Baihui (GV 20) on essential hypertension (EH). Methods : 60 cases of EH were randomly divided into the treatment group treated with acupuncture at Hegu (Ll 4), Taichong (LR 3) and Baihui (GV 20), and the control group treated with Captopril, 30 cases in each group. They were treated for 1 month. Results : The total effective rate for reducing high blood pressure was 80.0% in the treatment group and 73.3% in the control group, with no significant difference between the two groups ($P>0.05$). The markedly effective rate, the ineffective rate and the total effective rate for symptoms were 53.3%, 16.7% and 83.3% in the treatment group, and 40.0%,33.3% and 66.7% in the control group respectively, with significant differences between the two groups (all $P< 0. 05$). Conclusion : Acupuncture at “Siguan” points plus warming acupuncture-moxibustion at Baihui (GV 20) point is effective,for essential hypertension, especially

for improvement of headache, vertigo, palpitation and other symptoms.

6.2. Céphalées

- Li Xiu-Mei. Treatment of 35 cases of Parietal Headache with Baihui (GV 20) and Taichong (LR 3). Journal of Acupuncture and Tuina Science. 2004;2(4):48. [132727]

  Thirty-five cases of parietal headache were treated with needling Baihui (GV 20) and bilateral Taichong (LR 3) and the therapeutic effect was as follows: Recovery: 14 cases; marked effect: 13 cases; better: 6 cases; no effect: 2 cases and the total effective rate: 94.3%.

6.3. Accidents vasculaires cérébraux

1. Lin Zhi-Cheng, Chen Li-Dian, Tao Jing ,et al. [Effects of Electroacupuncture GV 20 on Auditory p300 in Cerebral Infarction Patients]. Shanghai Journal of Acupuncture and Moxibustion. 2014;33(1):14. [[184661]

   Objective To investigate the effect of electroacupuncture at point Baihui(GV 20) 011 P300 auditory event-related potentials in patients with cognitive disorder post cerebral infarction. Methods Fifty-nine patients with cerebral infaretion were randomy allocated to a treatment group of 30 cases and a control group of 29 cases. The treatment group received elecroacupuncture plus cognitive training and the control group, cognitive training alone. Pre-treatment and post-treatment Montreal Cognitive Assessment (MOCA) scores and auditory P300s were compared between the two groups. Results There were statistically significant pre-/post-treatment differences in the MoCA item scores in the two groups (P<.05). There were statistically significant post-treatment differences in the MoCA item scores except the speech score between the treatment and control groups (P<.05). There were statistically significant pre-/post-treatment differences in P300 latency and amplitude in the two groups (P<.01). There were statistically significant post-treatment differences in P300 latency and amplitude between the treatment and control groups (P<0.05). P300 latency was negatively correlated to the MoCA score. P300 amplitude was positively correlated to the MoCA score. Conclusion Electroacupuncture at point Baihui(GV 20) can improve cognitive function in patients with cognitive disorder post cerebral infarction.

2. Guo Zhengang et Al. [Treatment of 84 cases of Cerebral Infarction by drug and injection at Baihui Point (GV 20). Chinese Acupuncture and Moxibustion. 1999;19(9):527. [73411]
3. Sun Shentian et Al. [Traitement de 500 cas d'affection vasculaire cérébrale par puncture du 20VG vers le 7VB]. Chinese Acupuncture and Moxibustion. 1984;4(4):5. [12685]

   Puncture de 1,5 inches, manipulation pendant 5 minutes (200 fois/mn). 15 séances contituant une série. Le traitement est appliqué à diverses affections vasculaires cérébrales (ischémie, hémorragie hypertensive, hémorragie arachoïdienne, malformation vasculaire).

4. Wang WW, Xie CL, Lu L, Zheng GQ. A systematic review and meta-analysis of Baihui (gv20)-based Scalp Acupuncture in Experimental Ischemic Stroke. Sci Rep. 2014. [170664]

   Acupuncture for stroke has been used in China for over 2,000 years and nowadays is increasingly practiced elsewhere in the world. However, previous studies had conflicting findings on the results of acupuncture. Here, we conducted a systematic review and meta-analysis to assess the current evidence for the effect of Baihui (GV20)-based scalp acupuncture in animal models of focal cerebral ischemia. Six databases from the inception of each database up to June 2013 were electronically searched. Primary outcomes were infarct size and neurobehavioral outcome. Ultimately, 54 studies involving 1816 animals were identified describing procedures. Meta-analysis results showed that twelve studies reported significant effects of Baihui (GV20)-based scalp acupuncture for improving infarct volume compared with middle cerebral artery occlusion group (P < 0.01), and thirty-two studies reported significant effects of Baihui (GV20)-based scalp acupuncture for improving the neurological function score when compared with the control group (P <

0.01). In conclusion, Baihui (GV20)-based scalp acupuncture could improve infarct volume and neurological function score and exert potential neuroprotective role in experimental ischemic stroke.

5. Han Wei, Wang Ying, Chen Hong-Liang. [Influence of Acupuncture at Yongquan(KI 1) and Moxibustion at Baihui(GV 20) on VEGF Expression in Rats with Focal Cerebral Ischemia]. Shanghai Journal of Acupuncture and Moxibustion. 2009;28(9):554. [179830]

   Objective To explore the mechanism of action of acupuncture on ischemic cerebral stroke. Methods Forty male Wistar rats were randomly allocated to model and acupuncture-moxibustion groups, 20 rats each. A model of focal cerebral ischemia and reperfusion injury was made by thread-occlusion of the middle cerebral artery. The expression of vascular endothelial growth factor (VEOF) protein in the ischemic brain tissue was examined by immunohistochemical staining with the SABC method. The expression of VEGF niRNA in the ischemic brain tissue was examined by RT-PCR. The area of cerebral infarction was measured by TTC staining. Results Cerebral VEGF mENA expression in the ischemic penumbra increased obviously in the acupuncture- moxibustion group compared with the model group and there was a significant difference (P<0.05). Cerebral VEGF protein expression increased obviously in the acupuncture-moxibustion group compared with the model group and there was a significant difference (F<0.05). A large area of cerebral infarction occurred in the brain tissue of the model group and there was a significant difference compared with the normal group (P<0.01). The area of cerebral infarction was obviously reduced in the acupuncture-moxibustion group compared with the model group and there was a significant difference (P<0.01). Conclusion Acupuncture at Yongquan(M 1) and moxibustion at Baihui(GV 20) can significantly increase VEGF protein and VEGF mRNA expressions in the brain tissue and promote angiogenesis in the ischemic penumbra, which my be one of the mechanisms of acupuncture-moxibustion treatment for cerebral ischemia.

6. Wang S-J, Sun G-J, Wu X-P. Effect of Electroacupuncture at “Baihui” (百会 GV 20) and “Shuigou” (水沟 GV 26) Acupoints on the Contents of Plasma d-dimer and Fibrinogen in Rats with Acute Cerebral Infarction. World Journal of Acupuncture-Moxibustion. 2009;19(3):49. [165063]

   To investigate the mechanisms of electroacupuncture (EA) at “Baihui” (百 CV 20) and “Shuigou” (水沟 GV 26) for treating cerebral infarction. Methods Forty healthy SD rats were randomly divided into model group (n = 10), EA group (n = 10), normal group (n= 10), and sham operation group (n = 10). The model of acute cerebral infarction was established by blocking the middle cerebral artery with an intraluminal thread. EA was applied at “ Baihui ”（百会CV 20) and “Shuigou”（水沟 GV 26) in the rats of EA group after the models were developed. The contents of D-dimer (D-D) and fibrinogen (Fib) were measured in each group. Results The contents of D-D and Fib increased significantly in model group as compared with normal and sham operation groups, respectively (P<0. 01), and they decreased significantly in EA group as compared with model group (P<0. 01). Conclusion EA can ob-viously decrease the contents of D-D and Fib, improve abnormal fibrinolysis, lower blood viscosity and ameliorate cerebral blood circulation in the rats with acute cerebral infarction.

7. Zhang Hui-Min, Fei Yu-Tong, She Yu-Jing, et al. [Effects of Acupuncture of “Baihui” (GV 20) and “Taiyang” (Ex-HN 5) on Functions of Vascular Endothelial Cells in Cerebral Ischemia Injury Rats]. Acupuncture Research. 2006;31(2):67. [143331]

   Objective:To study the mechanism of acupuncture of “Baihui” (GV 20) and “Taiyang” (EX-HN 5) in improving cerebral ischemia (CI) injury and vascular endothelial cellular function. Methods: Eighty old male Wistar rats were randomized into control (n=8), model (n=32), acupuncture (n=32), sham-operation (n=8) groups. Model and acupuncture groups were further evenly and respectively divided into 1 d, 3 d, 5 d and 10 d subgroups. CI model was established joy using middle cerebral artery occlusion (MCAO) method. “Baihui” (GV 20) and “Taiyang” (EX-HN 5) were punctured with filiform needles which were twirled rapidly at a frequency of about 200 revolutions/min for 1 min (1 time/10 min), and retained for 30 min. The treatment was given once daily, continuously for 1, 3, 5 and 10 days respectively in different subgroups. Endothelin (ET)-1, intercellular adhesion molecule (ICAM)-1, and factor VIII related antigen (FVIIIR-Ag) of CA3 area tissue of the hippocampus were assayed with immunohistochemical method (SABC). Results: The CI rats' behavioral symptoms of 5 d and 10 d groups were improved significantly in comparison with the corresponding subgroups of model group (P< 0.05, 0.01). Compared with 1 d, 3 d, 5 d and 10 d subgroups of control group, the total area and integral optical density (100) values of ICAM-1, ET-1 and FVIIIR-Ag expression in CA3 of hippocampus all increased significantly in the 4 subgroups of model group (P< 0.01).

Compared with 4 subgroups of model group, the total area values of acupuncture group, ICAM-1 expression in the 4 subgroups, ET-1 in 5 d and 10 d subgroups decreased significantly, and FV11:1-Ag expression in 3 d, 5 d and 10 d subgroups increased; 100 values of ICAM-1 in 3 d, 5 d and 10 d subgroups, ET-1 in 5 d and 10 d subgroups decreased markedly, and FVIIIR-Ag in 3 d, 5 d and 10 d subgroups all increased considerably (P< 0.05, 0.01). Conclusion: Acupuncture of “Baihui” (GV 20) and “Taiyang” (EX-HN 5) can improve CI rats' behavior and regulate the expression of vascular endothelial ICAM-1, ET-1 and FVIIIR-Ag in CA3 of hippocampus and has accumulative effects.

8. Shi Xian, Zuo Fang, Tian Jia-He. [Clinical Research Effects of Electroacupuncture of Baihui (GV 20) Qubin (GB 7) on Glucose Metabolism of Cerebral Motor Function Areas in Stroke Patients]. Acupuncture Research. 2005;30(3):167.[135843]

   Objective: To investigate the effect of electroacupuncture (EA) on glucose metabolism of the cerebral motor function regions in stroke patients. Methods: A total of 6 volunteer stroke patients with the duration of disease being 1-3 months were subjected into this study. Positron emission tomography (PET) and 18F-2-fluoro-2-deoxy-D-glucose (18F-FDG, v.) were used to evaluate cerebral glucose metabolism 1) during fist-clenching movement and without acupuncture stimulation, 2) after EA stimulation (frequency 4 Hz, strength 4-6 mV, duration 20 min) at Baihui(GV 20)and right Qubin (GB 7) , and 3) three weeks after the acupuncture treatment. Talairach coordinates (Atlas of brain) and statistical parametric mapping (SPM) software were used to deal with the acquired imaging data. Resultes: a) Hypermetabolism of glucose was found mainly in precentral gyrus (PCG) , medial frontal gyrus (MFG) , superior parietal lobule (SPL) , middle temporal gyrus (MTG) , superior temporal gyrus (STG) , cerebellum and putamen in the healthy hemisphere MFG on the affected side after EA stimulation, while hypometabolism found in PCG, median frontal gyrus (Area 6, 10) , SPL, MFG and MTG (Area 21) , on the affected side; b)Three weeks after EA, hypermetabolism still existed in PCG, superior frontal gyrus and STG in the healthy hemisphere; while hypometabolism existed in PCG, inferior frontal gyrus, thalamus, STG, MTG, etc. in the affected hemisphere. Conclusion: EA of Baihui (GV 20)- Qubin (GB 7) can elevate or lower glucose metabolism in cerebral structures related to motor function in the bilateral cerebral hemispheres, which may systematically induce excitement of motor nerve, expiate or assist the injured nerve network and expedite the reestablishment of the cerebral motor function.

9. Ding WG, Li LX, Xu H et Al. [Effects of needling Baihui (gv 20) on local Cerebral Blood Flow in rats of Acute Cerebral Hematoma.]. Shanghai Journal of Acupuncture and Moxibustion. 2003;22(5):7. [120396]

   Objective : To observe the changes of local cerebral blood flow and symptoms concerning nerve function in rats suffering from acute cerebral hematoma before and after treatment. Methods LS-III type blood-flow detector was used to measure the blood flow, and acupoint Baihui (GV 20), a common point for acute cerebral hemorrhage, was needled. Results The local blood flow in the brain in different tjmes in modeling group diminished more obviously in comparison with those in normal group and sham group (PeO. 01); the immediate flow in the modeling group is similar to that in acupuncture group, but it is different during the lst and 4th hours between the two groups (PeO. 01); there was a significant difference in the neurological symptoms during the lst hour between modeling and acupuncture groups (PeO. 01), with a negative correlation between the Iocal blood flow and symptoms during tbe lst hour. Conclusions Local cerebral blood flow diminishes remarkably in rats of acute cerebral hematoma; after acupuncture on GV 20, the diminishment is relieved effectively, and the symptoms concerning neurological functi□n improve to different ranges.

10. Chen SH, Sun H, Xu H, Zhang YM, Gao Y, Li S. [Effects of Acupuncture of “Baihui”(GV 20) and “Zusanli”(ST 36) on Peripheral Serum Expression of microrna 124, laminin and integrin β1 in Rats with Cerebral Ischemia Reperfusion Injury. Chin J Integr Med. 2015. [183651]

    OBJECTIVE: To explore the effects of acupuncture at Baihui (GV 20) and Zusanli (ST 36) on the peripheral serum expression of microRNA 124 (miRNA 124), laminin and integrin β1 in rats with cerebral ischemia reperfusion injury (CIRI). METHODS: Seventy-two healthy male Sprague-Dawley rats were randomized into a model group, an acupuncture group, and a sham-operated group using a random digits table, with 24 rats per group. Each group was further randomly divided into 1-, 3-, 5-, and 7-day subgroups based on the reperfusion time according to a random digits table, with 6 rats in each subgroup. In the model and acupuncture groups, CIRI was induced using the thread occlusion method. Electroacupuncture stimulation

was applied daily to GV 20 and left ST 36 for 20 min at the indicated time points after successful operations. Serum was sampled for detecting laminin and integrin β1 protein via enzyme-linked immunosorbent assay, and serum miRNA 124 was examined using quantitative polymerase chain reaction. RESULTS: The serum level of miRNA 124 in the cerebral ischemia rats increased signifificantly, and the peak expression of miRNA 124 in both the model and acupuncture groups occurred at 3 days. The expression of miRNA 124 in the acupuncture group was higher than in the model group at the same time point (5.96±0.01 vs. 3.11±0.04, P<0.05). Laminin expression in serum from the cerebral ischemia group was higher than that in the sham-operated group. Compared with the model group, the level of laminin in the serum of the acupuncture group was significantly lower at each time point, especially at the 3-day, and 7-day time points (589.12±3.57 vs. 793.05±5.28, and 600.53±3.05 vs. 899.06±5.74, P<0.05). The level of integrin β1 in the serum from the acupuncture group was lower than that in the model group particularly at the 3-day and 7-day time points (208.66±0.95 vs. 280.83±1.77, and 212.36±0.95 vs. 316.77±2.42, P<0.05). Additionally, the model group and the acupuncture group showed dual peaks of integrin β1 and laminin expression at 3-day and 7-day. CONCLUSIONS: Acupuncture at GV 20 and ST 36 in rats alleviated CIRI and was associated with upregulated expression of miRNA 124 and with downregulated expression of integrin β1 and laminin in peripheral serum. These changes may represent one of the mechanisms underlying acupuncture's attenuation of CIRI.

11. Chen Su Hui , Sun Hua, Xu Hong , et Al. [Effects of Acupuncture of “ Baihui” (GV20) and “ Zusanli” (ST36) on the Expression of Interleukin-6 in Bilateral Rats' Brain after Cerebral Ischemia Reperfusion Injury]. Journal of Clinical Acupuncture and Moxibustion. 2014;30(1):42. [168906]

    Objective : To explore the effects of acupuncture of DV2O and ST36 on the expression of interleukin 6 in rats' brain after cerebral ischemia reperfusion injury(CIRI).Methods:CIRI rat models were established by right middle cerebral artery occlusion and reperfusion. SD rats were randomly divided into four groups:acupuncture group (A), model group (M), sham - operation group (S) and normal control group (N). The Group M didnl do any disposal after successful modeling. The Group A was acupunctured at Baihui (GV2O) and Zusanli (ST36) for 20 min once a day afier successful operation. The Group S was to imitate the operation procedure, without inserting line bolt into artery and with no treatment. The Group N was regarded as blank control group, without any operation and treatment. The expression of Interleukin - 6 (IL - 6) in bilateral brain tissues was examined by immunohistochemistry. Results: The expression of IL - 6 in cerebral ischemia regions exhibited a single - peak, the peak time in CIRI of group M was at 96h, whiie in group A it was at 72h, compared with group M, the expression of IL - 6 in group A declined obviously, but the level was still above the group S and group N;the expression of IL —6 in cerebral non —ischemia regions was above the group S and group N, except the time - points of 12h and 96h , and the expression in group A was higher than that in group M. Conclusion:Acupuncture of GV2O and ST36 can affect the expression of IL —6 in bilateral cerebral tissues of CIRI rats, interfering the inflammation response of CIRI

12. Xu H, Zhang Y, Sun H, Chen S, Wang F. Effects of Acupuncture at GV20 and St36 on the Expression of matrix metalloproteinase 2, aquaporin 4, and aquaporin 9 in Rats subjected to Cerebral Ischemia/Reperfusion Injury. plos one. 2014;9(5).[170002]

    BACKGROUND/PURPOSE: Ischemic stroke is characterized by high morbidity and mortality worldwide. Matrix metalloproteinase 2 (MMP2), aquaporin (AQP) 4, and AQP9 are linked to permeabilization of the blood-brain barrier (BBB) in cerebral ischemia/reperfusion injury (CIRI). BBB disruption, tissue inflammation, and MMP/AQP upregulation jointly provoke brain edema/swelling after CIRI, while acupuncture and electroacupuncture can alleviate CIRI symptoms. This study evaluated the hypothesis that acupuncture and electroacupuncture can similarly exert neuroprotective actions in a rat model of middle cerebral artery occlusion (MCAO) by modulating MMP2/AQP4/APQ9 expression and inflammatory cell infiltration. METHODS: Eighty 8-week-old Sprague-Dawley rats were randomly divided into sham group S, MCAO model group M, acupuncture group A, electroacupuncture group EA, and edaravone group ED. The MCAO model was established by placement of a suture to block the middle carotid artery, and reperfusion was triggered by suture removal in all groups except group S. Acupuncture and electroacupuncture were administered at acupoints GV20 (governing vessel-20) and ST36 (stomach-36). Rats in groups A, EA, and ED received acupuncture, electroacupuncture, or edaravone, respectively, immediately after MCAO. Neurological function (assessed using the Modified Neurological Severity Score), infarct volume, MMP2/AQP4/AQP9 mRNA and protein expression, and inflammatory cell infiltration were all evaluated at 24 h post-reperfusion. RESULTS: Acupuncture and electroacupuncture significantly decreased infarct size and

improved neurological function. Furthermore, target mRNA and protein levels and inflammatory cell infiltration were significantly reduced in groups A, EA, and ED vs. group M. However, MMP2/AQP levels and inflammatory cell infiltration were generally higher in groups A and EA than in group ED except MMP2 mRNA levels. CONCLUSIONS: Acupuncture and electroacupuncture at GV20 and ST36 both exercised neuroprotective actions in a rat model of MCAO, with no clear differences between groups A and EA. Therefore, acupuncture and electroacupuncture might find utility as adjunctive and complementary treatments to supplement conventional therapy for ischemic stroke.

13. Cheng CY, Lin JG, Tang NY, Kao ST, Hsieh CL. Electroacupuncture-like stimulation at the Baihui (GV20) and Dazhui (gv14) acupoints protects Rats against subacute-phase cerebral ischemia-reperfusion.. plos one. 2014;9(3).[170083]

    OBJECTIVES: The purpose of this study was to evaluate the effects of electroacupuncture-like stimulation at the Baihui (GV20) and Dazhui (GV14) acupoints (EA at acupoints) during the subacute phase of cerebral ischemia-reperfusion (I/R) injury and to establish the neuroprotective mechanisms involved in the modulation of the S100B-mediated signaling pathway. METHODS: The experimental rats were subjected to middle cerebral artery occlusion (MCAo) for 15 min followed by 1 d or 7 d of reperfusion. EA at acupoints was applied 1 d postreperfusion then once daily for 6 consecutive days. RESULTS: We observed that 15 min of MCAo caused delayed infarct expansion 7 d after reperfusion. EA at acupoints significantly reduced the cerebral infarct and neurological deficit scores. EA at acupoints also downregulated the expression of the glial fibrillary acidic protein (GFAP), S100B, nuclear factor-κB (NF-κB; p50), and tumor necrosis factor-α (TNF-α), and reduced the level of inducible nitric oxide synthase (iNOS) and apoptosis in the ischemic cortical penumbra 7 d after reperfusion. Western blot analysis showed that EA at acupoints significantly downregulated the cytosolic expression of phospho-p38 MAP kinase (p-p38 MAP kinase), tumor necrosis factor receptor type 1-associated death domain (TRADD), Fas-associated death domain (FADD), cleaved caspase-8, and cleaved caspase-3 in the ischemic cortical penumbra 7 d after reperfusion. EA at acupoints significantly reduced the numbers of GFAP/S100B and S100B/nitrotyrosine double-labeled cells. CONCLUSION: Our study results indicate that EA at acupoints initiated 1 d postreperfusion effectively downregulates astrocytic S100B expression to provide neuroprotection against delayed infarct expansion by modulating p38 MAP kinase-mediated NF-κB expression. These effects subsequently reduce oxidative/nitrative stress and inhibit the TNF-α/TRADD/FADD/cleaved caspase-8/cleaved caspase-3 apoptotic pathway in the ischemic cortical penumbra 7 d after reperfusion.

14. Chen SH, Sun H, Xu H, Zhang YM, Gao Y, Li S. [Effects of Acupuncture of “Baihui”(GV 20) and “Zusanli”(ST 36) on Expression of Cerebral il-1beta and tnf-alpha Proteins in Cerebral Ischemia Reperfusion Injury Rats]. Acupuncture Research. 2012;37(6):470-5. [164668]

    OBJECTIVE: To observe the effects of acupuncture of “Baihui” (GV 20) and “Zusanli” (ST 36) on the expression of interleukin (IL)-1beta and tumor necrosis factor (TNF)-alpha proteins in the bilateral cerebral tissue in cerebral ischemia reperfusion injury (CI/RI) rats, so as to explore its mechanism underlying improving CI.METHODS: Seventy-eight SD rats were randomized into sham-operation (control) group (n = 6), model group (n = 36) and acupuncture group (n = 36), and the latter two groups were further divided into 12,24, 48, 72, 96 and 144 h subgroups (n = 6 in each subgroup) according to the reperfusion time. Acupuncture stimulation was applied to GV 20 and left ST 36 for 20 min at the required time-points after successful operation, once a day. The expression of IL-1beta and TNF-alpha in bilateral brain tissue was examined by immunohistochemistry.RESULTS: Immunohistochemical staining showed that the expression of cerebral IL-1beta protein in cerebral ischemia regions exhibited a double-peak, and the peak time in the model group was at 48 h and 96 h, while the expression of TNF-alpha protein in cerebral ischemia regions exhibited a single-peak, and the peak time in both model and acupuncture groups was at 72 h. In comparison with the normal group and sham group, cerebral IL-1beta and TNF-alpha protein expression levels of both ischemic and non-ischemic regions were increased significantly in the model group ($P < 0.05$). Compared to the model group, the expression levels of cerebral IL-1beta and TNF-alpha of both ischemic and non-ischemic regions in the acupuncture group at most of the time-points afterCI/RI were decreased obviously ($P < 0.05$).CONCLUSION: Acupuncture can effectively suppress the expression of IL-1beta and TNF-alpha proteins in bilateral ischemic and non-ischemic cerebral regions in CI/RI rats,suggesting an anti-inflammatory effect of acupuncture intervention

6.4. Insuffisance circulatoire cérébrale et basilaire

- Huang Jin-Bai, Pan Hui. [Moxibustion at Baihui (GV20) combined with manipulation in the treatment of Chronic Cerebral Circulation Insufficiency]. Journal of Clinical Acupuncture and Moxibustion. 2011;27(10):31. [174531]

  Objective : To observe the effect of moxibustion on the point baihui with spinal rotation manipulation on chronic cerebral circulation insufficiency. Methods:Sixty subjects were divided into moxibustion with spinal rotation manipulation group (thirty -three cases) and acupuncture therapy group(twenty -seven cases),The clinical efficacy and hemodynarnics of vertebral artery were observed. Results : The effective rate was 90. 9% in moxibustion with spinal rotation manipulation group and 62. 9% in control group. In moxibustion with spinal rotation manipulation group, the systolic peak value blood flow speed and end - diastolic speed were accelerated (P <0. 05) , blood flow resistance index was reduced(P <0. 05) after treatment; In control group, the systolic peak value blood flow speed,end -diastolic flow speed and blood flow resistance index of vertebral artery had no statistical difference (P > 0. 05). Conclusion: Moxibustion on the point baihui combined with spinal rotation manipulation can dilate vertebral artery and improve its blood flow to treate patients with chronic cerebral circulation insufficiency.

- Wang XL, Huang HY. [Observation on Therapeutic Effect of Long-Time Needle Retention at Baihui (gv 20) on Vertebroarterial Cervical Spondylopathy]. Chinese Acupuncture & Moxibustion. 2007;27(6):415-6. [146774]

  OBJECTIVE: To compare therapeutic effects of long-time needle retention at Baihui (GV 20) and routine needle retention on vertebroarterial cervical spondylopathy. METHODS: One hundred and twenty cases of vertebroarterial cervical spondylopathy were randomly divided into a treatment group and a control group, 60 cases in each group. The treatment group were treated with needle retention at Baihui (GV 20) for 8 h and electroacupuncture at local points, and the control group with needle retention at Baihui (GV 20) for 30 min and electroacupuncture at local points. RESULTS: The cured rate and the total effective rate were 70.0% and 98.3% in the treatment group and 45.0% and 86.7 in the control group with very significant difference or significant difference in the cured rate and the total effective rate between the two groups (P < 0.01, P < 0.05). CONCLUSION: Long-time needle retention at Baihui (GV 20) has a better therapeutic effect on vertebroarterial cervical spondylopathy.

- Zhu XP,Zhuang LX,Jiang GH. [Compressive Moxibustion on Baihui(GV 20) for Vertebral Artery type of Cervical Spondylosis]. Shanghai Journal of Acupuncture and Moxibustion. 2003;22(11):22. [122779]

6.5. Insomnie

- Takeishi K, Horiuchi M, Kawaguchi H, Deguchi Y, Izumi H, Arimura E, Kuchiiwa S, Tanimoto A, Takeuchi T. Acupuncture improves Sleep Conditions of minipigs representing diurnal animals through an anatomically similar point to the acupoint (GV20) effective for humans. Evid Based Complement Alternat Med. 2012. **[165847]**

  Acupuncture, an alternative medicine, has been widely applied for people with sleep disturbances; therefore, the effects should be evaluated objectively. Micro-minipigs (MMPigs), the smallest miniature pigs for animal experiments, were used. Acupuncture was performed at two different points: Dafengmen is located on the head and is an anatomically similar point to human-Baihui (GV20), an effective acupoint for sleep disturbances in humans; pig-Baihui is on the back. The procedure was performed as follows: shallow, within 5 mm depth for several seconds; deep, 10-20 mm depth for 20 min. The sleep conditions were evaluated by actigraph, and the amount of catecholamine in pooled urine after acupuncture treatment. MMPigs with deep acupuncture at Dafengmen showed significantly efficient values on actigraph and catecholamine analysis as compared with untreated MMPigs. The effective acupoint for sleep conditions in the porcine model is at an anatomically similar point to humans, rather than the point determined by traditional Chinese medicine.

- Li Zi-Ping□李滋平□ Zhlixiang-Ying□朱祥英□ Yanxiao-Yan (闰晓燕□. Therapeutic Observation on Improving Efficacy of Moxibustion at Baihui (百会 gv 20) for Insomnia. World Journal of Acupuncture-Moxibustion. 2011;21(1):25. **[165120]**

  To compare the therapeutic effect between needling combined with moxibustion at Baihu□百会 GV 20) and conventional needling for treatment of insomnia, and to verify the synergy of moxibustion at Baihui (百会 GV 20) on insomnia. Methods Two hundreds and seven cases of insomnia patients were randomly divided into observation group and control group. The conventional needling combined with moxibustion at Baihui (百会 CV 20) was applied in observation group, arid the conventional needling was employed in control group, once a day, and for 5 consecutive days per week, 4 weeks as a course, and 1 course in total. Pittsburgh Sleep Quality Index (PSQI) Scale was adopted before and after the treatment, and the therapeutic effects of two groups as well as of asthenia and sthenia syndromes and among syndromes were observed and compared in observation group. Results After treatment, PSQI scores of both groups significanily improved (both P<0.05), and the score of observation group was superior to that of control group (P<0.05); after 1 course, the total effective rate in observation group was 88.0% (88/100), superior to 74.5% (73/98) in control group (P<0.05); in observation group, the total effective rate was 92.4% (61/66) of asthenia syndrome, superior to that of 79.4% (27/34) of sthenia syndrome (P<0.05). Conclusion Needling combined with moxibustion at Baihui (百会 CV 20) has marked therapeutic effect on insomnia, with better effect on prolonging the time of sleep, improving the sleep quality than that of single needling. And the therapeutic effect on asthenia syndrome was superior to that of sthenia syndrome.

- Li-Xia Yang 杨丽霞, Yan-Li Ju 鞠琰莉. Clinical Observation on Suspended Moxibustion at Baihui (GV 20) for Insomnia. Journal of Acupuncture and Tuina Science. 2010;8(1):42-43. [161009]
- Ju YL, Chi X, Liu JX. Forty Cases of Insomnia treated by Suspended Moxibustion at Baihui (GV 20). Journal of TCM. 2009;29(2):95-6.[159059]

  OBJECTIVE: To observe the therapeutic effect of suspended moxibustion at Baihui (GV 20) for insomnia. METHODS: 75 cases were divided randomly into two groups, with 40 cases in the treatment group treated by suspended moxibustion over Baihui (GV 20) and 35 cases in the control group treated by oral administration of Estazolam. RESULTS: The difference in therapeutic effect between the two groups was not statistically significant (P > 0.1). CONCLUSION: It was concluded that suspended moxibustion at Baihui (GV 20) is as effective as Estazolam for insomnia.

6.6. Dépression

- Deng D, Liao H, Duan G, Liu Y, He Q, Liu H, Tang L, Pang Y, Tao J. Modulation of the default mode network in first-episode, drug-naïve Major Depressive Disorder via acupuncture at Baihui (GV20) Acupoint. Front Hum Neurosci. 2016.[186366]

  BACKGROUND: Previous neuroimaging studies have revealed that acupuncture modulates the default mode network (DMN) in healthy subjects and patients with certain disorder. However, few studies have been performed to investigate whether or not acupuncture might modulate the DMN in patients with major depressive disorder (MDD). Thereby, the aim of the present study was to assess alterations of the DMN induced by acupuncture stimulation in patients with first-episode, drug-naïve MDD. MATERIALS AND METHODS: Twenty nine patients with first-episode, drug-naïve MDD and 29 healthy subjects were enrolled in this study. All the healthy subjects underwent 6-min resting-state functional magnetic resonance imaging (R-fMRI) scan. While patients underwent acupuncture stimulation for 20-min electro-acupuncture stimulation (EAS) at Baihui acupoint (GV20) and two 6-min R-fMRI scans before and after EAS. Based on the precuneus/posterior cingulate cortex (PC/PCC) as the seed region, functional connectivity (FC) method was adopted to examine abnormal DMN in patients by comparing with healthy subjects and to evaluate the influence of EAS on intrinsic connectivity within the DMN in patients with MDD. RESULTS: Compared to healthy subjects, MDD patients had abnormal DMN. Moreover, results showed that EAS at GV20 induced increased FC between the PC/PCC and bilateral anterior cingulate cortex (ACC), and decreased FC between the PC/PCC and left middle prefrontal cortex, left angualr gyrus and bilateral hippocampus/parahippocampus (HIPP/paraHIPP) in patients with MDD, which were the main brain regions showing significant differences between the patients and healthy subjects. CONCLUSION: Our findings

provide imaging evidence to support that GV20-related acupuncture stimulation may modulate the DMN in patients with first-episode, drug-naïve MDD. This study may partly interpret the neural mechanisms of acupuncture at GV20 which is used to treat patients with MDD in clinical.

- Zhu XC, Huang HJ, Han QQ, Yue N, Li B, Yang L, Liu Q, WU gc, Yu j. [Effect of Electroacupuncture Stimulation of “Baihui” (GV 20) , etc. on changes of Behavior and plasma Ghrelin content in Depression Rats]. Acupuncture Research. 2015;40(4):283-9. [184495]

  OBJECTIVE: To observe the effect of electroacupuncture (EA) stimulation of “Baihui” (GV 20) + “Anmian” (EX-HN 16) and “Baihui” (GV 20) + “Zusanli” (ST 36) on behavior reactions and plasma ghrelin level in depression rats, so as to explore the correlation between its antidepressant effect and plasma ghrelin level. METHODS: A total of 45 SD rats were randomly divided into 5 groups: normal control, model, Baihui (GV 20) + Anmian (EX-HN 16), Baihui (GV 20) + Zusanli (ST 36) and medication (clomipramine) groups, with 9 rats in each group. The depression model (unpredictable chronic mild stresses, UC-MS) was established by giving the animals with higher temperature environment (45 °C, 5 min), forced ice-water swimming (0- 4 °C, 5 min) , day and night reversal environment (12 h), stroboflash stimulation (12 h), noisy stimulation (12 h), rocking-bed movement (30 min) and damp pad dwelling (6-24 h), etc. for 4 weeks. EA was applied to GV 20-EX-HN 16, and GV 20-ST 36 for 30 min once every other day for 4 weeks after modeling. For rats of the medication group, clomipramine (5 mg/kg) was given (i. p.) once a day for 4 weeks after modeling. The forced swimming test, sucrose preference test and open field test were used to evaluate the rats depressive-like behavior. Plasma ghrelin content was assayed by ELISA. RESULTS: After exposure to UCMS for 4 weeks, the immobility time was significantly increased, and the struggling time was significantly decreased in the model group ($P < 0.05$, $P < 0.01$). In comparison with the model group, the immobility time levels were obviously decreased, while the struggling time and sucrose preference were markedly increased in the Baihui (GV 20) + Anmian (EX-HN 16) , Baihui (GV 20) + Zusanli (ST 36) and medication groups ($P < 0.05$, $P < 0.01$). No significant changes were found in the rearing times and total distance of open-field test (locomotor activity) and plasma ghrelin content among the 5 groups among all the groups ($P > 0.05$). No significant differences were found among the two EA and medication groups in the decreased immobility time and the increased struggling times and sucrose preference levels ($P > 0.05$). CONCLUSION: EA intervention can improve the depression rats' hopeless behavior of forced swimming test and anhedonia behavior (sucrose preference test) , which may be not correlated to plasma ghrelin level at the late-stages and the antidepressant effect of EA intervention.

- Sun H, Zhao H, Zhang J, Bao F, Wei J, Wang DH, Zhang YX.. [Effect of Acupuncture at Baihui (GV 20) and Zusanli (ST 36) on the Level of Serum Inflammatory Cytokines in Patients with Depression]. Chinese Acupuncture and Moxibustion. 2010;30(3):195-9. [155722]

  OBJECTIVE: To investigate the immunologic mechanism of acupuncture at Baihui (GV 20) and Zusanli (ST 36) for treatment of depression. METHODS: Eighty-four cases of depression patients were randomly divided into an electroacupuncture observation group (group A), an electroacupuncture control group (group B) and a medication control group (group C), 28 cases in each group. Baihui (GV 20) and Zusanli (ST 36) were used in the group A; Taichong (LR 3), Sanyinjiao (SP 6), Neiguan (PC 6) and Shenmen (HT 7) were used in the group B; and the group C was treated with oral administration of Fluoxetine. The scores of Hamilton Depression Scale (HAMD) were tested and the level of serum interleukin 1 (IL-1 beta), interleukin 6 (IL-6), and tumor necrosis factor alpha (TNF-alpha) were measured by Enzyme Linked Immunosorbent Assay (ELISA) before and after treatment.RESULTS: Their scores of HAMD were obviously decreased after treatment in three groups (all $P<0.01$). In the group A, 2 cases were cured, 19 cases were markedly effective, 5 cases were effective and 2 cases were ineffective. In the group B, 16 cases were markedly effective, 12 cases were effective. While in the group C, 1 case was cured, 17 cases were markedly effective, 7 cases were effective and 3 cases were ineffective. The grade distribution of clinical effect showed that the effect of group A was better ($P<0.05$). The levels of serum IL-1 beta and IL-6 in the three groups were obviously decreased after treatment ($P<0.05$, $P<0.01$), while there was no significant difference between the level of serum TNF-alpha before and after treatment.CONCLUSION: The effect of electroacupuncture observation group is superior to those of electroacupuncture control group and medication control group. All of these three methods can clear the inflammatory cytokines such as IL-1 beta and IL-6 away and improve the symptoms of depression.

6.7. Démence vasculaire

- Huang Yong, Chen Jing, Lai Xin-Sheng, Tang An-Wu, Li Dong-Jiang. Effects of Needling in Baihui (DU 20), Shuigou (DU 26) and Shenmen (HT 7) on Glucose Metabolism in the Lentiform Nuclus in Patients with Vascular Dementia. J First Mil Med Univ. 2005;25(11):1405. [145611].
- Lai XS, Huang Y. [Comparative Study on Therapeutic Effects of Baihui (GV 20), Shuigou (GV 26) and Shenmen (HT 7) in Treatment of Vascular Dementia]. Chinese Acupuncture and Moxibustion. 2005;25(8):559-63. [122138]

  OBJECTIVE: To compare the relative characteristics of Baihui (GV 20), Shuigou (GV 26) and Shenmen (HT 7) in treatment of vascular dementia. METHODS: Fifty cases of vascular dementia (VD) were divided into 5 groups randomly. The patients in the group A were treated by acupuncture at routine acupoints. Besides the routine acupoints of the group A, Baihui (GV 20), Shuigou (GV 26) and Shenmen (HT 7) were added to treat the patients in group B, C, D, respectively, while Baihui, Shuigou and Shenmen were added to the group E. The clinical symptoms and signs were observed. RESULTS: Baihui and Shenmen can improve memory, orientation, reaction, obstinacy and trance of VD patients. Baihui is good at helping the patients to understand, calculate and adapt the society. Shuigou is good at improvement of sleeping, slow reaction, trance and memory of the patients. The combination of Baihui, Shuigou and Shenmen can generally promote intelligence level and society adaptive ability. CONCLUSION: Baihui, Shuigou and Shenmen have own characteristics in improving clinical signs and intelligence of patients of VD, and the combination of the 3 acupoints has the best effect in treating VD.

- Huang Yong, Win Moe Htut, Chen Jing, Lai Xin-Sheng. A Comparative Study on the Treatment of Vascular Dementia by puncturing Baihui (GV 20) , Shuigou (GV 26) and Shenmen (HT 7). World Journal of Acupuncture and Moxibustion. 2005;15(1):3.[140335]

  Objective: To observe the relative specialty of the therapeutic effect of acupuncture of Baihui (U GV 20) , Shuigou and Shenmen in the treatment of vascular dementia (VD) patients. Methods: Fifty VD patients were randomly divided into routine treatment group (control group), Baihui (GV 20) group (GV 20 group) , Shuigou (GV 26) group (GV 26 group) , Shenmen (HT 7) group (HT 7 group) and GV 20+ GV 26+ HT 7 group (joint treatment group) , with 10 cases in each group. In control group. acupoints used were Jianyu , Quchi Waiguan etc. (which were also used in the other four groups) on the paralyzed side. The treatment was conducted once a day except weekends, 20 sessions all together. Clinical Dementia Rating Scale (CDR), Mini-Mental State Examination (MMSE) test, Blessed Dementia Rating Scale (BDR) and Clinical Neurological Deficit Rating (CNDR) were used to assess the patients' intelligence state before and after acupuncture treatment. Results: After acupuncture treatment, the VD patients' intelligence in all the five groups was improved at different degrees. Additional acupuncture of each of GV 20, GV 26 and HT 7 had a remarkable effect in improving the VD patients' fluid intelligence, and could obviously promote their abilities of temporal orientation, spatial orientation and figure drawing; and additional joint acupuncture of the three acupoints could improve their cognitive and non-cognitive functions, such as reducing the severity of dementia, raising the temporal orientation, spatial orientation, calculation, short-term memory and figure drawing abilities, and improving their activities of daily living and personality. Besides, acupuncture of GV 20 could improve the abilities of calculation and short term memory, and correct the personality change of VD patients, while acupuncture of GV 26 could improve the abilities of naming and short-term memory. Conclusion: Acupuncture of GV 20, GV 26 and HT 7 all had a certain therapeutic effect in improving VD; the therapeutic effects of acupuncture of GV 20 and GV 26 were better than that of acupuncture of HT 7; and the efficacy of the three points used in combination was the best.

- Lai Xin-Sheng, Huang Yong. Comparative Study on the Effect of Baihui (GV 20), Shuigou (GV 26) and Shenmen (HT 7) on Cognition of Patients with Vascular Dementia. Journal of Acupuncture and Tuina Science. 2005;3(5):20. **[141624]**

  Objective: To study the relative specificity of Baihui (GV 20), Shuigou (GV 26) and Shenmen (HT 7) in improving the cognitive function of patients with vascular dementia (VD). Method: Fifty VD cases were randomized into 5 groups, which were treated with routine points, routine points plus Baihui (GV 20), routine points plus Shuigou (GV 26), routine points plus Shenmen (HT 7), and routine points plus the above-mentioned three points together respectively. The scale of elderly cognitive function (SECF) was measured before and after the treatment for statistical management. Results: The total score of SECF was markedly

increased after Baihui (GV 20), Shuigou (GV 26) and Shenmen (HT 7) were added to the routine points, more specifically, with addition of Baihui (GV 20), the patients with VD got increased scores in such aspects as orientation, instant memory, long-term anamnesis, animal names, cancellation and calculation, and classification and analogy; with addition of Shuigou (GV 26), the patients with VD got increased scores in such aspects as orientation, cancellation and calcul ation, and classification and analogy; with addition of Shenmen (HT 7), the patients with VD got increased scores in such aspects as digital scope, animal names, and classification and analogy. Conclusion: Baihui (GV 20), Shuigou (GV 26) and Shenmen (HT 7) could improve the cognitive function of patients with VD, and the combination of the three points got the best result despite their respective specificity.

- Lai Xin-Sheng, Huang Yong. Comparative Study on the Effect of Baihui (GV 20), Shuigou (GV 26) and Shenmen (HT 7) on Cognition of Patients with Vascular Dementia. Acupuncture Research. 2006;31(1):54.[143359]

  Objective: To compare the effects of acupuncture of Baihui (GV 20), Shuigou (GV 26) and Shenmen (HT 7) on the cognitive ability in vascular dementia (VD) patients. Methods: Fifty cases of VD patients were randomly and evenly divided into body-acupoint, GV-20, GV-26, HT-7 and GV-20 + GV-26 + HT-7 groups. Body-acupoints were Jianyu (LI 15), Quchi (LI 11), Zusanli (ST 36), etc and were used in all the patients of the 5 groups. The acupuncture treatment was given once daily (except weekend days), 4 weeks altogether. The therapeutic effects were assessed by using “Scale for Evaluating the Cognition Function” (SECF) before and after the treatment. Results: After the treatment, the total scores of SECF in GV-20, GV-26, HT- , 7 and GV-20+ GV-26+ HT-7 groups were significantly higher than those of their respective pre-treatment (P< O. 05). Adding Baihui (GV 20) could significantly raise the patients' scores of orientation, short and long-term memory, animal naming, calculating and classification (P<O. 05, 0.01); adding Shuigou (GV 26) could raise the scores of orientation, calculating and classification (P< 0.05) ; adding Shenmen (HT 7) could raise the scores of digital range, animal naming and classification (P< O. 05). And adding GV-20, GV-26 and HT-7 could raise the scores of orientation, digital range, short-term memory, animal naming, calculation, classification and painting abilities (P<0.05, 0.01). The effects of GV-20 + GV-26 + HT-7 group were significantly better than those of body-acupoint group in improving the total score, orientation, digital range, animal naming, calculation and painting (P< 0.01) ; than that of GV-20 group in calculation (P<0.05); than those of GV-26 in digital range, animal naming, calculation and painting (P<0. 05, 0.01); and than that of HT-7 group in calculation (P< 0.01). Conclusion: Acupuncture of the added Baihui (GV 20), Shuigou (GV 26) and Shenmen (HT 7) works better in improving VD patients' cognitive ability.

- Huang Y, Lai XS, Tang AW. Comparative Study of the Specificities of Needling Acupoints DU 20, DU 26 and HT 7 in Intervening Vascular Dementia in Different Areas. Chin J Integr Med. 2007;13(2):103-8. [146494].

  OBJECTIVE: Using methods of clinical scale assessment and cerebral functional imaging to compare the relative specificity of needling acupoints Baihui (DU20), Shuigou (DU26) and Shenmen (HT7) in intervening vascular dementia (VD) in different areas in the brain. METHODS: Fifty patients with VD were randomized into 5 groups. Needling on conventionally used acupoints of hand and foot three Yang-meridians aiming at hemiplegia was applied to the patients in Group A, and needling on DU20 to Group B, on DU26 to Group C, on HT7 to Group D and on all the three to Group E was applied additionally. Assessments of Mini Mental State Examination (MMSE), Activities of Daily Living (ADL) and Family Attitude Questionnaire (FAQ) were made. And the positron emission computerized tomography (PET) and single photon emission computerized tomography (SPECT) examinations were conducted in 5 selected patients from each group before and after treatment. RESULTS: Needling on conventional acupoints plus DU20 could effect the inner temporal system, thalamencephalon system and prefrontal cortical system to improve memory and executive capacity of VD patients; conventional acupoints plus DU26 could effect more to the prefrontal cortical system to obviously elevate the executive capacity; that plus HT7 would reveal an effect similar to but rather weaker than plus DU20, and effect more to memory; and that plus all the three simultaneously could effect rather roundly multiple aspects of the nervous system related to intellectual activities, to elevate the recognition and enhance the executive capacity. CONCLUSION: Needling on various acupoints like DU20, DU26 and HT7 have effects on different brain areas.

- Chen J, Wang S, Huang Y, Shi N, Li Q. Effect of Needling Baihui (DU20), Shuigou (DU26) and Shenmen (HT7) on 18FDG Pet Cerebral Function Imaging in Vascular Dementia Patients. International Journal Of Clinical Acupuncture. 2007;16(2):99.[151973].

Objective: To observe the effect of needling Baihui (DU20), Shuigou (DU26) and Shenmen (HT7) on glucose metabolism in different regions of the brain in patients with vascular dementia (VD). Method: Ten patients suffering from vascular dementia were divided into 2 groups randomly. Patients in the control group received needling treatment at the routine acu-points for hemiplegia (acu-points were chosen from the 6 Yang Meridians of the Hand and Foot). Patients in the treatment group received the same treatment with the addition of 3 acupoints chosen especially to treat dementia: Baihui (DU20), Shuigou (DU26) and Shenmen (HT7). All of the patients were examined by positron emission tomography (PET) in order to detect the glucose metabolism in different regions of the brain before and after acupuncture treatment. A semi-quantitative analysis was used to compare the average glucose metabolisms of different cerebral regions of interest before and after treatment. Result: The addition of the 3 acu-points, Baihui (DU20), Shuigou (DU26) and Shenmen (HT7), obviously increased the glucose metabolism of VD patients in the bilateral frontal lobes and thalamus, temporal lobe and lentiform nucleus in the healthy side. Conclusion: The effect of treating VD by needling Baihui (DU20), Shuigou (DU26) and Shenmen (HT7) has a close relationship with its ability to improve cerebral glucose metabolism.

- Lin YW, Hsieh CL. Electroacupuncture at Baihui Acupoint (GV20) reverses behavior deficit and long-term potentiation through n-methyl-d-aspartate and transient receptor potential vanilloid subtype 1 receptors in middle. J Integr Neurosci. 2010;9(3):269-82. [156128]

  Vascular dementia is one of the most important causes that account for 20-40% of all dementia cases. The aim of this study was to investigate whether electroacupuncture can reduce behavior deficit and long-term potentiation (LTP) in vascular dementia. Here we used a middle cerebral artery occlusion (MCAo) technique to induce a vascular dementia model with additional electroacupuncture (EA) manipulation. Behaviors were impaired in animals with MCAo, and similar results were observed with long-term potentiation induction. MCAo decreased the expression of LTP from 180.4±14.9% to 112.5±18.3%, suggesting that cerebral ischemia could impair the hippocampal LTP. In addition, immunostaining results showed that the expressions of N-methyl-D-aspartate receptor subtype 1 (NR1) and transient receptor potential vanilloid subtype 1 (TRPV1) receptors were significantly increased in the hippocampal CA1 areas. Noticeably, these phenomena can be reversed by 2 Hz EA at Baihui acupoint (GV20) for six consecutive days. Our results support a rescue role of 2 Hz EA for MCAo-induced behavior and LTP impairment. These results also suggest that NMDAR1 and TRPV1 may be involved in this pathway.

6.8. Démence expérimentale

- Zhao Jian-Xin et al. [Effect of Electroacupuncturing Shenshu Geshu and Baihui Points on SOD Activity and MDA Content in Brain Tissue of Mouse with Synthetic Vascular Dementia]. Chinese Journal Of Traditional Medical Science And Technology. 2000;7(2):65. [86290].

  Purpose: To observe the effect of electroacupuncturing Shenshu, Geshu and Baibaw ponits on brain tissue SOD activity and MDA content of synthetic Vascular Dementia (VD) mouse. Method: duplicated the re-perfusion synthetic VD mouse model of cerebral ischemia,electroacupunctured Shenshu, Geshu and Baihui points, compared with Hydergine after seven days, fiteen days and thirty days and determined the mouse's brain tissue SOD activity and MDA content im each group. Result: the brain tissue SOD activity in model group was remarkably reduced in every time- point and MDA content was obviously increased, which suggested that the free radical injury was obvious and the ability of anti - freeradical injury was reduced; while both electroacupuncture amd Hydergine could increase SOD activity, reduce MDA content and resist free radical injury and the electroacupuncture got a better result. Conclusion: electroacupuncturing Shenshu - Geshu - Baihui points could increase SOD activity and reduce free radical injury, which might be one of the action mechanism of treating VD with acupuncture.

- Zhao Jian-Xin et al. [Effect of Shenshu (BL23)-Geshu (BL17)-Baihui (DU20) Electroacupuncture on Cerebral Ischemia, Cerebral Anoxia and Cerebral Edema of Synthetic Vascular Dementia Mouse]. Chinese Journal of Basic Medicine in TCM. 2000;6(6):60. [91414].

  Objective: to observe the effect of Shenshu-Geshu-Baihui electropuncture on cerebral ischemia, cerebral anoxia and cerebral edema of synthetic vascular dementia mouse. Methods: duplicated cerebral ischemia and perfused the mouse model of synthetic vascular dementia as well as electropunctured Shenshu, Geshu

and Baihui. And then compared Hydergine with the model after seven days, fifteen days and thirty days recorded the mouse's gasp time and calculated cerebral index and cerebral water content. Results: Modelling led to mouse's cerebral ischemia, cerebral anoxia, and cerebral edema at the early stage, which showed a, shortening of gasp time and increase of cerebral index and cerebral water content. Both electropuncture and Hyderegine could lengthen the gasp time; reduced cerebral index and cerebral water content resist cerebral anoxia and reduce the degree of cerebral edema. But the curative effect in electropuncture group was superior to that in medical group. Conclusion - Shenshu-Geshu-Baihui electropuncture can remarkably improve the model's cerebral ischemia, cerebral anoxia and cerebral edema at early stage, which might bc one of the mechanism of treating VD with acupuncture therapy.

6.9. Maladie d’Alzheimer

- Li F, Li LN, Wang X, Bai Y, Jiawula A, Bu QY, Gao TK, Xue WG. [Effect of Electroacupuncture Stimulation of “Baihui” (GV 20) and “ Yongquan” (KI 1) on Expression of Hippocampal amyloid-β and low density lipoprotein receptor-related protein-1 in app/ps 1.... Acupuncture Research. 2015;40(1):30-4. [183157]

  OBJECTIVE: To observe the effect of electroacupuncture (EA) treatment on the level of hippocampal amyloid-beta peptide (Aβ) and its key transport receptor low density lipoprotein receptor-related protein-1 (LRP 1) in APP/PS 1 transgenic mice so as to explore its mechanism underlying improvement of Alzheimer's disease (AD). METHODS: Twenty-four male APP/PS 1 transgenic mice were equally and randomly divided into model group and EA treatment group, and 12 C 57 BL/6 mice were used as the normal control group. EA (1 Hz/50 Hz, 0.3 mA) was applied to “Baihui” (GV 20) and “Yongquan” (KI 1) for 15 min, once every other day for 6 weeks. The learning-memory ability was detected by using Morris water maze testing, left hippocampal Aβ 1-40 and Aβ 1-42 contents were assayed by ELISA, and right hippocampal LRP 1 expression was detected using Western blot (WB). RESULTS: Results of Morris water maze test showed no significant differences among the three groups in the escape latency, the times of the platform-site crossovers, the time spent in the target platform quadrant (P>0.05). Compared with the model group, the moderately increased escape latency had a decreasing tendency in the EA treatment group. ELISA assaying showed that hippocampal Aβ 1-42, Aβ 1-40, and ratio of Aβ 1-42/Aβ 1-40 of the model group were significantly higher than those of the normal control group (P<0.01). After EA intervention, the increased Aβ 1-42 , Aβ 1-40, and ratio of Aβ 1-42/Aβ 1-40 were remarkably down-regulated in the EA treatment group (P<0.01). WB detection displayed that the right hippocampal LRP 1 expression level of the model group was markedly lower than that of the normal control group (P<0.05). After EA treatment, LRP 1 expression level was moderately up-regulated but without significant difference between the model and EA treatment groups (P>0.05). CONCLUSION: EA intervention can lower the level of hippocampal Aβ in APP/PS 1 transgenic mice, but its effects on Aβ transport receptor LRP 1 expression and learning-memory ability need being confirmed further.

- Zhao Li-Gang, Ma Li, Zheng Zu-Yan, et al. [Effect of Acupuncture of “Baihui -(GV 20) and “Sishencong” (ex-fin 1) on Memory and Cerebral SOD Activity in Alzheimer' s Disease Rats]. Acupuncture Research. 2005;30(1):26. [141667]

  Objective: To investigate the effect of acupuncture on the memory and SOD activity in the cerebral issues in Alzheimer' s disease (AD) rats. Methods: 48 healthy Wister rats were randomly divided into control group (n =11) , model group (n = 10) , medication group (n 10) and acupuncture group (n = 11). AD model was established by microinjection of 13-amyloid protein (3-AP)1-40 (1 uL) into the hippocampal CA1 region (AP: 2.22 mm; ML: 3.0 mm, DV: 2.8 mm). In acupuncture group, “Baihui”(GV 20) and “Sishencong”(EX-HN 1) were punctured with filiform needles which were lifted, thrust and twirled continuously for 5 min, and then retained for 20 min. The treatment was conducted once daily except Sundays and continuously for one month. Rats of medication group were fed with Piracetum (40 mg/mL, 6 mL/kg/time) once daily for 30 days. The rats' memory was detected with shuttle-box test and the activity of superoxide dismutase (SOD) in the cerebral issues assayed by enzymological method. Results: Shuttle box test showed that compared with control group, the times and duration of electric shock were significantly more and longer than those of model group (P<0. 05) ; while compared with model group, the times and duration of electric shock of both acupuncture and medication groups were significantly more and longer (P<0. 01) . No significant differences were found between two groups in these two indexes, suggesting that both acupuncture and

medication can improve AD rats' memory. In comparison with control group, SOD activity in the cerebral tissue lowered considerably; while in comparison with model group, SOD activity of both medication and acupuncture groups increased significantly (P < 0. 01) , and no significant difference was found between the later two groups (P >O. 05). Conclusion: Acupuncture treatment can improve AD rats' learning and memory and raise SOD activity in the cerebral tissue.

6.10. Troubles cognitifs post-AVC

Liu Fang, Yao Li-Qun, Chen Jin-Hui. [Therapeutic Efficacy of Acupuncture at Baihui (GV 20) and Shenting (GV 24) for Post-stroke Cognitive Impairment: A Systematic Review]. Shanghai Journal of Acupuncture and Moxibustion. 2018;37(1):104-111. [100878].

Objective	To evaluate the clinical efficacy of acupuncture at Baihui (GV 20) and Shenting (GV 24) in treating post-stroke cognitive impairment (PSCI) by using the systematic review method.
Method	Via computer, Chinese Journal Full-text Database, Wanfang, China Biology Medicine disc (CBMdisc),Chinese Science and Technology Periodical Database, Pub Med, Foreign Evidence-Based Medicine(FEMB), the Cochrane Library were retrieved. Chinese Acupuncture and Moxibustion and Shanghai Journal of Acupuncture-moxibustion were manually retrieved. Randomized controlled trials published before Jan 31 st of 2013 on acupuncture at Baihui (GV 20) and Shenting (GV 24) in treating PSCI, both in Chinese and English, were collected. The required data were extracted, then were evaluated according to the criteria of Cochrane systematic review and underwent meta-analysis by using Rev Man 5.0.
Results	Twenty-two clinical trials were finally recruited, including 1 637 subjects. The meta-analysis showed that acupuncture at acupoints including Baihui (GV 20) and Shenting (GV 24) produced a more significant rehabilitation result compared to single rehabilitation training or medication. The comparison of Mini-Mental State Examination(MMSE) score showed: [WMD=3.37, 95%CI(1.70, 5.05), P<0.00001]; the comparison of P300 latency: [WMD=1.22, 95%CI(0.84, 1.59), P<0.00001]. Severe adverse reactions were not discovered.
Conclusion	Acupuncture at Baihui (GV 20) and Shenting (GV 24) can effectively improve the cognitive function of PSCI patients. However, the diagnostic criteria and evaluation indexes are expected to be unified and standardized, and the clinical trials on acupuncture intervening PSCI are required to be further improved methodologically.

6.11. Syndrome de Ménière

- Xu Meichun. Rapport sur 177 cas de Syndrome de Ménière traités par moxibustion au point Baihui. Journal de MTC:1986;2:117-20. **[13442]**.

  20VG. Couper les cheveux autour du point, le marquer au violet de gentiane. Mettre en place 2 cônes d'armoise de la taille d'un grain de soja. Quand les cônes sont à moitié consumés, les écraser avec une feuille de papier. Laisser les cendres en place. Mettre un nouveau cône jusqu'à extinction. Au total, 20 à 30 cônes, le patient doit ressentir une sensation de bien-être au niveau du crâne. Une à deux séances. Guérison : 156 cas, amélioration (persistance de légers vertiges) : 19 cas.

6.12. Vertiges

- Huang CJ, Wu YH. [Fire Needle Pricking at Baihui (GV 20) for Dizziness with Turbid Phlegm Type]. Chinese Acupuncture and Moxibustion. 2013;33(3):284. [162593]

- Li Yue-Mei, Zhuang Li-Xing, Li Yan-Hui,. [Observations on the Efficacy of Pressing Moxibustion on Point Baihui (GV 20) plus Acupuncture at Cervical Huatuojiaji (Ex-B2) Points in Treating Cervical Vertigo]. Shanghai Journal of Acupuncture and Moxibustion. 2012;31(2):112. [175488]

  Objective To investigate the clinical efficacy of pressing moxibustion on point Baihui (GV 20) plus acupuncture at cervical Huatuojiaji (Ex-B2) points in treating cervical vertigo. Method Eighty-eight patients were randomly allocated to two groups. The treatment group received pressing moxibustion on point Baihui plus acupuncture at cervical Huatuojiaji points and the control group, conventional acupuncture. The therapeutic effect was evaluated in the two groups. Result The cure and marked efficacy rate was 66.7% in the treatment group and 42.5% in the control group; there was a statistically significant difference between the two groups (P<0.05). Conclusion The cure and marked efficacy rate of pressing moxibustion on point Baihui plus acupuncture at cervical Huatuojiaji points is significantly higher than that of conventional acupuncture in the treatment of cervical vertigo.

6.13. Paralysie faciale

- Wang HW, Wen X, Wei QL. [Moxibustion at Baihui (GV 20) for Intractable Facial Paralysis and its Impacts on Immunoglobulin]. Chinese Acupuncture and Moxibustion. 2013;33(4):306-8. [162587]

  OBJECTIVE: To observe the efficacy of moxibustion at Baihui (GV 20) on intractable facial paraly sis and the impacts on immune globulin IgA, IgG and IgM. METHODS: One hundred and twenty cases of intractable facial paralysis that was in compliance with the inclusive criteria were randomized into a moxibustion group and an acupuncture group, 60 cases in each one. In the moxibustion group, moxibustion was applied at Baihui (GV 20). In the acupuncture group, the patients were treated with acupuncture, once a day, the treatment of 15 days made one session in two groups. Before treatment and after 2 sessions treatment, the levels of IgA, IgG and IgM were detected respectively for the patients in two groups and compared. RESULTS: The difference in the levels of IgA, IgG and IgM was not significant for the patients between two groups (all P > 0.05) before treatment, but the levels of all three indices were increased significantly as compared with the normal reference values (all P < 0.05). Componed before the treatment, the levels of IgA, IgG and IgM were reduced significantly in two groups after treatment, indicating the significant difference (all P < 0.05). In comparison between two groups after the treatment, the levels of IgA, IgG and IgM in the moxibustion group were lower significantly than those in the acupuncture group, presenting the significant difference after treatment (all P < 0.05). CONCLUSION: The ottack of intractable facial paralysis is relevant with the abnormal increase of immunoglobulin. Moxibustion at Baihui (GV 20) reduces significantly the levels of IgA, IgG and IgM for the patients with intractable facial paraly sis, which is probably one of the mechanisms in the treatment of intractable facial paralysis.

6.14. Toxicomanies

- Ou Quizhen et Al. [Experimental Study on Effects of Moxibustion of Baihui Point (gv 20) on behavior in Mice of Morphine hydrochloride Addiction]. Chinese Acupuncture and Moxibustion. 1998;18(9):549. [73467]

  Effect of moxibustion of Baihui (GV20) point on behaviour (the duration of lifting the tail and continuous running) in the mice of morphine hydrochloride addiction was observed for approach to possibility and mechanism of moxibustion abstaining from drug using. Results showed that there were significant differences in duration of lifting the tail and continuous running between the moxibustion group and the control group in the mice of morphine hydrochloride addiction (P<0. 05). This provides a certain basis for moxibustion abstaining from drug using.

6.15. Syncope vagale

- Wang XM, Gao XY. [Acupuncture-Moxibustion at Baihui (GV 20) for 56 cases of Vasovagal Syncope]. Chinese Acupuncture and Moxibustion. 2011;31(11):974. [161676]

6.16. Enurésie

- Wang Jianxing et Al. Clinical Observation on 32 cases of Functionnal Enuresis treated with Acupuncture at Baihui (GV20). World Journal of Acupuncture-Moxibustion. 1994;4(4):5-8. **[12781]**

  Acupuncture at Baihui (GV20) was employed in treating 32 cases of functional enuresis. As a result, the curative rate reached 81.25%, but that in control group of 32 cases without needling Baihui point was 56.25%. There was a significant difference in statistics (P<0.05). It indicates that Baihui can enhance the therapeutic effect of acupuncture on treating enuresis.

6.17. Cancer du sein

- Li-Sheng Wu, Xue Hong , Wang Jun-Juan, et Al. [Influence of electroacupuncture Changqiang (GV1) and Baihui (GV20) on SCN output signal molecular of Mice bearing Breast Cancer]. Journal of Nanjing University of Traditional Chinese Medicine. 2012;28(5):457. [177973]

  OBJECTIVE Observe the change of TGFaand EGFR level in SCN, serum and tumor tissues of mice bearing breast cancer after elecreoacunpuncture for further discuss on the regulating mechanism of SCN output signal molecular of electroacupuncture on the spontaneous activity rhythm of animals bearing tumors. MFTHODS 18 male C57BL/6J mice were ran domly divided into 3 groups with 6 in each group. LD domestication for 10 days, model establishment after DD domestication for 10 days and electroacupuncture after 7 days since model establishment succeed. Electroacupuncture on Changqiang (GV 1) and Baihui (GV 20) on CT4 with HANS Acupoint and Nerves Stimulator(HANS-200), 2/15 Hz, 0. 5 mA, 15 min for each time. Electroacupuncture for three times with one time everday. Animals were sacrificed after 2 hours in the third time. Ex tract the sample and detect the indexes by ELISA. RESULTS There was no significant differences in SCN TGFalevel among 3 groups; In the serum and tumor tissues, the TGFalevels of model group were higher significantly than blank group(Pe(0. 05) while there was no significantly difference between electroacupuncture group and model group. There was no significanly difference in SPz EGFR level between model group and blank group. The EGFR levels of electroacupuncture group were higher significantly than model group(Pe(0. 05). In the serum and tumor tissues, the EGFR levels of model group were higher significantly than hlank group (P e(0. 05) while there was no significantly difference between electroacupuncture group and model group. In SCN and serum, the PK2 levels of electroacupuncture group were higher significantly than model group(Pe(0. 05) while there was no significantly djfference between blank group and model group. CONCLUSION TGFa and EGFR levels jn serum and tumor tissues of mice bearing breast cancer were significantly higher than normal mice. Electroacupuncture can de crease EGFR levels in SPz and increase PK2 levels in SCN and serum of mice bearing breast cancer whjch suggested that electroacupuncture affect on the spontaneous activity rhythms probably through regulating PK2 levels in SCN and EGFR levels in SPz which regulate TGFo levels indirectly. The effect on EGFR levels in SPZ of mice bearing tumors of electroacupuncture also suggested it play a part in the anti-tumor effect.

6.18. Mal des transports

- Ji JF, Lei JH. [Press at Baihui (GV 20) for Carsickness]. Chinese Acupuncture and Moxibustion. 2013;33(11):1047.[162358]

6.19. Asthénie

- Guo K, Zhu J, Quan X, Zhang D, Chen X, Yang C, Li X, Shi J, Hu W, Zhu Q. Comparison of the effects of pretreatment with repeated electroacupuncture at GV20 and ST36 on Fatigue in rats. Acupunct Med. 2015. [182511]

  OBJECTIVE: To investigate and compare the effects of electroacupuncture (EA) pretreatment at GV20 and ST36 on fatigue in rats. METHODS: Rats were randomly allocated into 4 groups: control, fatigue, fatigue+GV20 and fatigue+ST36. The last two groups received EA pretreatment at GV20 or ST36 for 5 days before being maintained in cages filled with water to a height of 1.5 cm to establish an animal model of fatigue. We used the weight-loaded forced swimming test and open-field test and measured 5-hydroxyindoleacetic acid (5-HIAA)/5-hydroxytryptamine (5-HT) ratios and serum levels of blood urea nitrogen (BUN), lactic dehydrogenase (LDH) and testosterone as behavioural and biochemical markers of fatigue in the rats. RESULTS: Compared with controls, rats in the (untreated) fatigue group exhibited reduced weight-loaded swimming times and total movement/distance in the open-field test, plus higher BUN/LDH and lower testosterone levels. Both EA pretreatment at GV20 and ST36 increased swimming times, and reduced serum BUN/LDH. EA pretreatment at GV20 (but not ST36) increased serum testosterone. The 5-HIAA/5-HT ratios in four brain regions were decreased in the fatigue+GV20 group compared with the fatigue group ($p<0.05$). By contrast, 5-HIAA/5-HT ratios in striatum and hypothalamus (but not hippocampus or midbrain) were decreased in the fatigue+ST36 group compared with the fatigue group ($p<0.05$). Furthermore, only pretreatment at GV20 affected the results of the open-field test. CONCLUSIONS: These results suggest that EA pretreatment had a positive effect on the prevention of fatigue. Pretreatment at GV20 had a greater anti-fatigue effect than pretreatment at ST36.

6.20. Actions sur le SNC

6.20.1. Vascularisation cérébrale

- Byeon HS, Moon SK, Park SU, Jung WS, Park JM, Ko CN, Cho KH, Kim YS, Bae HS. Effects of GV20 Acupuncture on Cerebral Blood Flow Velocity of Middle Cerebral Artery and Anterior Cerebral Artery Territories, and CO2 Reactivity During Hypocapnia in Normal Subjects. J Altern Complement Med. 2011;17(3):219-24. [160047]

  OBJECTIVES: Acupuncture has been gaining popularity among practitioners of modern medicine as an alternative and complementary treatment. However, the mechanism of its therapeutic effect still remains uncertain. The present study chose the GV20 acupoint to evaluate acupoint effectiveness, hypothesizing that its stimulation induces cerebrovascular responses. DESIGN AND SETTING: The effects of GV20 acupuncture treatment on middle cerebral artery (MCA) and anterior cerebral artery (ACA) blood flow velocities, and CO(2) reactivity during hypocapnia were evaluated in 10 healthy male subjects (mean age 25.6 ± 0.8 years). Measurements were done at rest and during hypocapnia, and were repeated four times each at different cerebral artery territories with an interval of 1 week. MCA and ACA blood flow velocities were measured with a transcranial Doppler flowmeter. Blood flow velocity was corrected to 40 mm Hg of end-tidal CO(2) partial pressure (P(ETCO2)), and was expressed as CV40. CO(2) reactivity was measured as percent change in mean blood flow velocity/mm Hg P(ETCO2). RESULTS: Mean MCA and ACA blood flow velocities at rest, CV40, and CO(2) reactivity during hypocapnia increased significantly after GV20 acupuncture treatment, whereas mean arterial blood pressure and pulse rate at rest did not change significantly. The increases in MCA and ACA blood flow velocity were associated with improved CO(2) reactivity after GV20 acupuncture treatment. CONCLUSIONS: The data suggest that GV20 acupuncture treatment increases cerebral blood flow. The results of this small-scale study provide preliminary evidence for acupuncture effectiveness.

- Satoh H. Acute Effects of Acupuncture Treatment with Baihui (GV20) on Human Arterial Stiffness and Wave Reflection. Journal of Acupuncture and Meridian Studies. 2009;2(2):130-4. [164978]

OBJECTIVES: Treatment by manual acupuncture needling affects the vascular wall tone, and hemodynamic parameters for arterial stiffness may be characterized by treatment at the traditional acupuncture point (acupoint) of Baihui (GV20). METHODS: The acute effects of acupuncture treatment on arterial stiffness and wave reflection were investigated and, simultaneously, an augmentation index (AI), as an index of wave reflection, was estimated. These parameters were measured in male volunteers using applanation tonometry during 20 minutes of acupuncture treatment and 40 minutes post-acupuncture. RESULTS: During treatment, diastolic blood pressure (BP), but not systolic BP, increased significantly. Heart rates (HR) initially tended to increase and then decrease. The AI from radial arteries increased significantly, while central aortic blood pressure (CBP) was unaffected. Post-acupuncture, the effects lasted for 30-40 minutes. The average BP and HR were +10.1+/-0.3% and -7.2+/-0.2%, respectively, and the CBPs were not altered, but the AI decreased markedly; this latter effect presumably resulted from the involvement of neurovascular modulators. CONCLUSIONS: These results indicated that acute treatment at Baihui enhanced arteriosclerotic parameters. In post-acupuncture, the AI profoundly decreased, presumably resulting from the involvement with neurovascular modulators.

- Zhao NX, Guo RL, Ren QY, Guo RF, Pan N. [Influence of Moxibustion of Baihui (GV 20) on Hemodynamics of Common Carotid Artery in Healthy Subjects]. Acupuncture Research. 2007;32(4):252.[147242]

  OBJECTIVE: To observe the effect of moxibustion of Baihui (GV 20) on the hemodynamics of internal carotid artery in health subjects so as to study its underlying mechanism of moxibustion in the treatment cerebrovascular disorders. METHODS: Thirty healthy male volunteer students between 20 and 22 years in age were enrolled into this study. Qm (mean blood flow), Vm) (mean velocity of blood flow), Vmax (maximal velocity of blood flow), Vmin (minimal velocity of blood flow), Wv (pulse wave velocity), Zcv (characteristic impedance), Rv (peripheral resistance), DR (dynamic resistance), CP (critical pressure) and DP (difference of pressure) of the right and left common carotid arteries were measured before and after moxibustion of GV20 (5-10 min each time, once daily, 5 times altogether) by using CBA CV-300 Cerebrovascular Hemodynamics Detector. RESULTS: Following moxibustion of GV20, Qm, Vm and Vmin of both right and left common carotid arteries increased significantly ($P < 0.01$); while Rv and DR of the brain artery lowed evidently ($P < 0.05$); The rest indexes had no significant changes ($P > 0.05$). CONCLUSION: Moxibustion of Baihui (GV 20) can significantly raise the velocity of blood flow of the common carotid artery and low the resistance of blood vessels.

- Zhao Ningxia, Guo Ruilin, Ren Qinyou, et Al. [Effect of Moxibustion of GV 20 Point on Blood Flow Velocity of the Middle Cerebral Artery in Healthy People]. Chinese Acupuncture and Moxibustion. 2003;23(11):679. [122029]

6.20.2. EEG

- Kim MS, Seo KM. Effects of Atipamezole and Naloxone on Electroencephalographic Spectral Edge Frequency 95 in Dogs Sedated by Acupuncture at GV20 and Yintang Point. J Vet Med Sci. 2007;69(5):577-9.[146284]

  The purpose of this study was to evaluate the antagonism of acupuncture-induced sedation by electroencephalographic spectral edge frequency (SEF) 95 in 10 healthy intact male Miniature Schnauzer dogs (4.2-6.1kg; 2-3 years old) without neurological disorder. The GV20 and Yintang acupoints were administered for 20 min. While the dogs were conscious, SEF 95 baseline values were recorded at 2-min intervals for 4 min. Then acupuncture was administered at the GV20 and Yintang acupoints. During the acupuncture procedure, the SEF 95 values were recorded at 2-min intervals for 10 min. Subsequently, antagonist drugs, naloxone and atipamezole, were administered through the cephalic vein. The SEF 95 values were then measured again at 2-min intervals for 10 min. Those values were found to be significantly increased after administration of atipamezole in dogs sedated by acupuncture at the GV20 and Yintang acupoints ($p<0.05$). However, the SEF 95 values in the naloxone groups did not show any significant changes before and after administration of the antagonist. It was concluded that sedation induced by acupuncture at the GV20 and Yintang acupoints might be partially associated with the alpha(2)-adrenergic system.

- Schichido T. [Changement à l'EEG, “implications émotionnelles” à la moxibustion au point 20VG]. Journal of the Japan Society of Acupuncture and Moxibustion. 1981;30(1):14. [5782]

6.20.3. IRM fonctionnelle

- Zhang G, Qu S, Zheng Y, Chen J, Deng G, Yang C, Huang Y. Key Regions of the Cerebral Network are altered after Electroacupuncture at the Baihui (GV20) and Yintang Acupuncture Points in Healthy Volunteers: an analysis based on resting functional MRI. Acupuncture in Medicine. 2013;31(4):383-8. [164437]

  OBJECTIVE: To identify the key cerebral functional region affected by acupuncture point needling by examining cerebral networks using functional connectivity MRI (fcMRI) and analysing changes in the key regions of these brain networks at different time points after needle removal. METHODS: Twelve healthy volunteers received 30 min of electroacupuncture (EA) at the Baihui (GV20) and Yintang acupuncture points and then underwent two fMRI scans, one each at 5 and 15 min after needle removal. Related brain networks were analysed centred at different 'seeds', centres which functionally connect the other cerebral regions in an organised network, such as the anterior frontal lobe, anterior cingulate gyrus, parahippocampal gyrus, amygdala, hypothalamus, head of the caudate nucleus and anterior lobe of the cerebellum. Networks were analysed based on the resting cerebral functional connection, and the differences in the activities of the brain networks between the two time points were compared.RESULTS: At 5 min after needle removal, 12 brain functional regions were involved in organising the network centred at the caudate nucleus 'seed.' This number was greater than the number of related brain networks centred at the other 'seeds'. At 15 min after needle removal, 15 and 14 brain functional regions were involved in organised networks centred at the parahippocampal and hypothalamus 'seeds', respectively; these numbers were greater than the numbers of other related brain networks centred at the other 'seeds'.CONCLUSIONS: A brain network composed of a large number of cerebral functional regions was found after EA at GV20 and Yintang in healthy volunteers. The key brain 'seed' supporting the largest brain network changed between 5 and 15 min after needle removal.

- Zheng Y, Qu S, Wang N, Liu L, Zhang G, Jiang X, Chen J, Huang Y, Zhang Z. Post-stimulation effect of electroacupuncture at Yintang (ex-hn3) and GV20 on cerebral functional regions in healthy volunteers: a resting functional MRI study. Acupuncture in Medicine. 2012;30(4):307-15. [164507]

  Objective The aim of the present work was to observe the activation/deactivation of cerebral functional regions after electroacupuncture (EA) at Yintang (EX-HN3) and GV20 by functional MRI (fMRI). Design A total of 12 healthy volunteers were stimulated by EA at Yintang and GV20 for 30 min. Resting-state fMRI scans were performed before EA, and at 5 and 15 min after needle removal. Statistical parametric mapping was used to preprocess initial data, and regional homogeneity (ReHo) and amplitude of low-frequency fluctuation (ALFF) were analysed. Results ReHo at 5 min post stimulation showed increases in the left temporal lobe and cerebellum and decreases in the left parietal lobe, occipital lobe and right precuneus. At 15 min post stimulation, ReHo showed increases in the left fusiform gyrus; lingual gyrus; middle temporal gyrus; postcentral gyrus; limbic lobe; cingulate gyrus; paracentral lobule; cerebellum, posterior lobe, declive; right cuneus and cerebellum, anterior lobe, culmen. It also showed decreases in the left frontal lobe, parietal lobe, right temporal lobe, frontal lobe, parietal lobe and right cingulate gyrus. ALFF at 5 min post stimulation showed increases in the right temporal lobe, but decreases in the right limbic lobe and posterior cingulate gyrus. At 15 min post stimulation ALFF showed increases in the left frontal lobe, parietal lobe, occipital lobe, right temporal lobe, parietal lobe, occipital lobe and cerebellum, but decreases in the left frontal lobe, anterior cingulate gyrus, right frontal lobe and posterior cingulate gyrus. Conclusions After EA stimulation at Yintang and GV20, which are associated with psychiatric disorder treatments, changes were localised in the frontal lobe, cingulate gyrus and cerebellum. Changes were higher in number and intensity at 15 min than at 5 min after needle removal, demonstrating lasting and strong after-effects of EA on cerebral functional regions.

6.20.4. Fonction immunologique des Globules rouges

- Tian Yuanxiang et al. [The Effect of Electro-Acupuncture in Shenshu, Geshu and Baihui on the Immune Organs of Synthetic VD Mouse]. Hebei Journal Of TCM. 2001;23(1):67. [90031].

7. Références

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