Scalp Acupuncture Theory and clinical Applications

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General introduction

Conception
Scalp acupuncture is a therapeutic method by needling the specific areas or lines of the scalp, and often used to treat cerebral diseases.

Introduction

Scalp acupuncture: 2 schools, and 2 system

School-A. Theory base: cerebral physiology and anatomy
   Dr. Jiao’s scalp acupuncture, Fang’s and Zhu’s Scalp acupuncture. Began in 1958 and popularized in 1970s

School-B. Based on Meridian theory and acupoints on the head.

International standard scalp line
History of Jiao’s Scalp Acupuncture

Began in 1958 and popularized in 1970s

Founder: Dr. Jiao, Shunfa, MD of Shanxi province

Dr. Fang, Yunpeng, MD
Base of Traditional Scalp Acupuncture

1. Front-mu & Back-Shu treating Zang-fu organs
2. Selecting Local points
3. Relationship between Head and Channels
   All Yang Channels go to the head
   Yin Channels: HT, LIV
4. Relationship between brain and qi & blood(zangfu)
5. Crossing phenomenon of meridian system
Different Areas of Brain

- Primary Motor Area
- Premotor Area
- Primary Somesthetic Area
- Frontal Eye Field Area
- Visual Area
  - Visual I, II, III
- Broca's Area
- Primary Auditory Area
- Wernicke's Area
Functional Areas of the Cerebral Cortex

- Premotor cortex
- Corpus callosum
- Cingulate gyrus
- Primary motor area
- Central sulcus
- Primary somatosensory cortex
- Parietal lobe
- Somatosensory association area
- Parieto-occipital sulcus
- Occipital lobe
- Visual association area
- Orbitofrontal cortex
- Olfactory bulb
- Olfactory tract
- Fornix
- Temporal lobe
- Uncus
- Calcarine sulcus
- Olfactory areas
- Parahippocampal gyrus
The different central area in the brain controls the different body areas’ functions. They have the corresponding reflex area or line on the scalp.
Motor area

Anatomic structure:
Precentral gyrus, Paracentral lobule

Physiology
control muscular contraction on the opposite side, but Extraocular muscles, frontal muscles, masticatory muscles of both sides

Reflex image
upside down, but face is upright
Sensory area

- **Anatomic structure:**
  postcentral gyrus, post side of Paracentral lobule

- **Physiology:**
  feeling the nerve pulses coming from the correspondent area of the opposite side
Speech area

- Wernicke’s area: Sensory speech (3rd)
- Broca’s area: Motor speech (1st)
- Angular gyrus: Anomic speech (2nd)
- Aphasia: Absent or defective speech or language comprehension
Visual Area

Occipital lobe: Visual

- Medial surface: primary visual cortex (striate cortex)
  - input: thalamus (lateral geniculate nucleus)
  - contralateral representation

Rest: visual association cortex: interpretation of visual stimuli
Location of Stimulating Scalp areas and their indications

- Standard lines on the scalp
  - Anterior-posterior midline
  - Eyebrow-occipital line

- Anatomical landmark
  - Ear apex,
  - parietal tubercle
  - external occipital protuberance
  - Frontal hair line (or angle)
Motor Area

Locations:
1. Upper point
2. Lower point

Indications:
upper 1/5: lower limbs, trunk; For paralysis of the opposite side
middle 2/5: upper limbs; For paralysis of the opposite side
lower 2/5: facial area or Speaking Area 1; For contralateral central facial paralysis; Motor aphasia, salivation and dysphonia.
Sensory Area

Locations:
the parallel line 1.5 cm behind to motor area

Indications:

**upper** 1/5: lower limbs, trunk, posterior head and neck; For contralateral lumbar, leg pain, numb, paralysis; occipital headache, pain in the nape area; tinnitus

**middle** 2/5: upper limbs; For contralateral upper limb pain, numbness, paralysis, abnormal senses

**lower** 2/5: facial area; For contralateral facial numbness, migraine, TMJ; trigeminal neuralgia, toothache.
Chorea-trembling Controlled Area

Locations:
the parallel line 1.5cm anterior to motor area

Indications:
Chorea, Parkinson’s disease; trembling palsy
If the symptom is unilateral, needle the contra-lateral stimulation area.
If bilateral needle bilaterally
Vascular dilation & Constriction Area

Locations:
the parallel line 1.5cm anterior to chorea & tremor controlling area

Indications:
To treat essential hypertension and cortical edema
Vertigo-auditory Area

Locations:
2 cm anterior and posterior horizontal straight to the points 1.5 cm right above the auricular apex

Indications:
Tinnitus, hearing losing, dizziness, auditory vertigo, etc.
Speaking area 3

Locations:
1. midpoint of Vertigo-auditory area → draw a line of 4 cm backwards
2. 4 cm horizontal posterior to the point 1.5 cm above the ear apex

Indications:
Sensory aphasia
Speech area 2

Locations:

2cm- posterior+inferior → parietal tubercle → draw a 3cm-long line, paralleled to anterior-posterior midline

Indications:

nominal aphasia
Usage area

Locations:

Taking the parietal tubercle as a starting point. Draw a vertical line from the point, and draw the other two lines from the point separately forwards and backwards, at 40 degree angle with the vertical line; each line is 3 cm long.

Indications:

Apraxia (normal muscular tension, but disability to finish refined movement such as picking up coins)
Foot motor-sensory area

Locations:
starting from 1cm bilateral to midpoint of anterior-posterior midline draw two line 3 cm straight lines backward parallel to the anterior-posterior midline

Indications:
Contralateral lower limb pain, paralysis, numbness.
acute lumbar sprain;
enuresis, cerbro-cortical polyuria, nocturia;
prolapse of uterus.
Optic area

Locations:
1 cm evenly bilateral to the external occipital protuberance, draw 4 cm long lines upwards parallel to the anterior-posterior midline.

Indications:
Cerebro-cortical visual disorders
Balance area

**Locations:** 3.5 cm evenly bilateral to the external occipital protuberance, draw a 4 cm long lines downwards parallel to the anterior-posterior midline.

**Indications:**

Equilibrium disturbance caused by cerebellum disease.

(Incoordination; dystaxia; ataxia, disability to balance, dizziness, headache)
Stomach area

Locations:
Directly above pupil of eyes, draw 2 cm line upwards from the hairline,

Indications:
Stomach pain (gastritis, stomach ulcer) epigastric discomfort.
Thoracic Area

Location:
mid point between front-back midline and stomach area, draw a line of 2 cm upwards and downwards from the hair margin

Indications:
Chest pain, stuffiness of chest
Palpitation, coronary artery insufficiency
Asthma
Reproductive area

Location:
Draw a 2 cm straight line from the front angle (ST8) upward parallel to the anterior-posterior midline

Indications:
Dysfunctional uterine bleeding,
Pelvic inflammation;
Leukorrhagia
To treat prolapse of uterus with Foot motor sensory area
The Principle for selecting scalp area

- Selecting the stimulating area according to different diseases;
- Using the contra lateral stimulating area for the unilateral limbs diseases; the bilateral stimulating areas for bilateral limbs disorders.
- Internal-zang or whole body diseases, diseases cannot distinguish the position, bilateral sides could be selected.
- Accompany with other related stimulating area.
Needling Techniques

1. Posture:
   Sitting or lying position

2. Inserting needle:
   Clean local area,
   1-2cun, Gauge No.28-32.
   Swiftly insert the needle at a 30 degree angle to the scalp, gets to the lower layer of **cap-shaped aponeurosis**
   Then push the needle along the direction of stimulation to the needed depth.
3. Needle manipulation:
Only twirling **no thrusting**
Fix the needle at the same depth
Frequency: about 200/minute, continue 1-2 minute, keep the needle for 5-10 minutes, repeat stimulation 2-3 times.

4. E-stim:
Frequency: 200-300次/minute (high frequency)
Wave: refer to electro-acupuncture
Stimulating intensity: based on patient’s reaction
Taking off needle

Withdraw the needle slowly while twirling the needle; if there is no heavy sensation along the needle pull it out quickly.

Then press over the needle hole with a clean dry cotton ball for a moment to prevent bleeding

Treatment course

Once a day or every two days. (twice a week in America)
10 times as one treatment course.
Precautions

1. The stimulating intensity should be suitable; lying or sitting position should be taken to prevent needle fainting.
2. Strict sterilization should be carried out to prevent infection.
3. If the operator feels the needling resistance or the patient feels pain while pushing the needle, the needle should be withdrawn a little bit, then change the direction.
4. In case the patient has such a complication as high fever, acute inflammations or heart failure, scalp acupuncture is not advisable.
5. For patients with hemi-paralysis due to cerebral hemorrhage, wait until the bleeding stops and the condition is stable to use scalp acupuncture. But for case caused by cerebral thrombosis should use scalp acupuncture as early as possible.
Clinical Applications

- Mainly for Nervous Diseases, especially for cerebral diseases, like cerebral thrombosis, cerebral hemorrhage causing paralysis, numbness, aphasia
- Various nerve pain like trigeminal neuralgia, sciatic pain.
- Other common diseases, like lumbar-leg pain, Frozen shoulder, nocturnal urine.
Diseases of Nervous system

- Cerebrovascular Diseases
  Cerebral Thrombosis
  **Time:** The shorter the case history, the better the therapeutic result.
  **Location** of thrombosis and therapeutic effect
  **Severity** of limb paralysis and therapeutic effect
Cerebral Hemorrhage

2 types: hemorrhage of internal capsule (basal ganglia), hemorrhage of cortical branches of the cerebral artery.

Clinical course: applying scalp acupuncture at an earlier date after the patient’s condition becomes stable can produce a better therapeutic result

Location of bleeding:

Cerebral Embolism

Motor area, sensory area, foot motor & sensory area
Diseases of Peripheral Nerves

Facial paralysis (Bell’s Palsy): lower 2/5 of motor area

Herpes zoster: Sensory area, foot motor & sensory area

Neuralgia Sciatica: upper 2/5 of sensory area, foot motor & sensory area

Headache

Top headache: upper 2/5 of sensory area

Frontal and temple headache: lower 2/5 of the sensory area

Hypertension

Upper half of the vascular dilation & constriction area (both sides)
International Standard Scalp Acupuncture
History and Characters

1984 Tokyo WHO

Principle:
1. Define the channel in different area,
2. select points on the channel,
3. combining ancient threading techniques

Name:
MS (Micro-system and Scalp points) + Number; Chinese Pinyin and Chinese
Frontal Head Area

- **MS1 (e-zhong-xian) Middle line of forehead**

  **Location:** on the front head, 1 cun (3cm) long line from Du24, straight down along the meridian

  **Indication:** Headache, dizziness, red swollen and pain of the eyes, epilepsy; mental disorder

  **Needling Method:** needling downward subcutaneously, manipulate the needle swiftly
MS2 (E-pang-Xian-I) Lateral line 1 of forehead
Thoracic area

Location

on the front head, 1 cun (3 cm) long from BL3, straight down along the meridian

Indication

Lung system disorders: allergic asthma, bronchitis;
Heart System disorders: angina pectoris, heart diseases. Palpitation, flustered

Needling Method

needling from BL3 downward subcutaneously, manipulate the needle swiftly
MS3 (E-pang-Xian-II) Lateral line 2 of forehead [Stomach area, Liver & Gallbladder Area]

Location
on the front head, 1 cun (3 cm) long from GB15, straight down along the meridian

Indication
Digestive disorders: acute & chronic gastritis, gastroduodenal ulcer; gastrointestinal ulcer. diarrhea or constipation, dysentery.
Liver & Gallbladder disorders: Hepatitis, cholecystitis

Needling Method
needling from GB15 downward subcutaneously, manipulate the needle swiftly
**MS4** (E-pang-Xian-III) Lateral line 3 of forehead

**Location**
on the front head, 1 cun (3 cm) long from the point 0.75 cun medial to ST8 straight down. Between GB and ST channels

**Indications**
Reproductive system disorders: 
- **female**: Dysfunction uterine bleeding, Prolapse of uterus, dysmenorrhea, Amenorrhea, irregular menstruation
- **Male**: Impotence, Spermatorrhea; Seminal emission, premature ejaculation

**Urine system disorders**: acute cystitis (urinary frequency, urgency of urination), polyuria.

**Needling Method**
needling from the upper border of this line downward subcutaneously, manipulate the needle swiftly
Vertex area

**MS5 (Dingzhongxian)**

**Location**
From Du20 to Du21 along the midline of head

**Indications**
**Local:** headache, dizziness, hypertension

**Mental disorders:** faint, syncope, asphyxia; mania; epilepsy, aphasia from apoplexy, insomnia

**Lumbar and leg pain, numbness, or paralysis**

**Two lower orifices disorders:** cerebral-cortical polyuria, nocturia (infant), prolapse of anus

**Needling Method:** inserting needle from Du20, needling to DU21 subcutaneous, manipulate the needle swiftly
**MS6** (Dingnieqianxiexian) Anterior oblique line of vertex temporal [motor area]

**Location**

From *qian shenchong* (anterior point of *sishenchong*) obliquely to GB6, divided into 5 parts.

**Indications; Needling Method**

Same as motor area

**MS7** (DingnieHouxiexian) Posterior oblique line of vertex temporal [Sensory area]

**Location**

From Du20 obliquely to GB7, divided into 5 parts.

**Indications; Needling Method**

Same as sensory area
MS8 (Dingpanyixian) Lateral line 1 of vertex
Location
1.5cun lateral to middle line of vertex, 1.5 cun long from BL7 backward along the meridian

Indications
Local: headache, dizziness, tinnitus, blurred vision
Lumbar & leg disorders: paralysis, numbness, pain

Needling Method
From BL7 needling posterior 1.5 cun subcutaneously, manipulate the needle quickly
MS9 (DingpanEr xian) Lateral line 2 of vertex

Location

2.25 cun long lateral to middle line of vertex, 1.5 cun long from GB17 backward along the meridian

Indications

Local: headache, dizziness, migraine
Shoulder, arm & hand disorders: paralysis, numbness, pain

Needling Method

From GBL7 needling posterior 1.5 cun subcutaneously, manipulate the needle quickly
Temporal Area

- MS10 (Nie Qian xian) Anterior temporal line
- Location
  From GB4 to GB6
- Indications
  Head & facial disorders: migraine, outer canthus pain, tinnitus, epilepsy, motor aphonia, peripheral facial paralysis; oral cavity disorders (gingivitis, tonsillitis); Throat disorders
- Needling Method
  Inserting from GB4 needling to GB6 subcutaneously, manipulate the needle quickly
MS11 (Nie Hou xian) Posterior temporal line

Location
From GB8 to GB7

Indications
Head & facial disorders: migraine, tinnitus, deafness

Needling Method
Inserting from GB8 needling to GB7 subcutaneously, manipulate the needle quickly
Occipital area

■ MS12 (Zhenshangzhengzhongxian)

Location

From Du18 to Du17

Indications

Local: Occipital headache, dizziness, blurred vision, stiff neck
Mental disorders: Epilepsy, mania-depression
Eyes disorders: 角膜炎keratitis、结膜炎conjunctivitis
足癣 tinea pedis; athlete’s foot; hongkong foot

Needling Method

Inserting from DU18 needling to DU17 subcutaneously, manipulate the needle quickly
**MS13 (Zhenshanchangpang xian) Upper-lateral line of occiput**

**Visual area**

**Location**
0.5 cun lateral and parallel to upper-middle line of occiput, 4cm from down to up

**Indications**
All Kinds of Eye disorders: cerebral-cortical visual disturbance, cataract; near sighted, myopia; farsightedness, hyperopia; Glaucoma

**Needling Method**
Inserting from the lower border of the limb upward subcutaneously, manipulate the needle quickly.
MS14 (Zhen Xia pang xian) Lower-lateral line of occiput  [Balance area]

Location
2 cun long from BL9 straight down

Indications
equilibrium disorder caused by cerebellum disease; balance disturbance caused by cerebellum disease, incoordination; dystaxia; ataxia
dysfunction of brain stem: numbness and paralysis of the limbs; Head and nape pain, dizziness

Needling Method
Inserting from the upper border of the line downward 4cm subcutaneously, manipulate the needle quickly