The Use of Electro-acupuncture for the treatment of Slow Transit Constipation

Cheetham Siu
Physiotherapist, KWH
MSc in Acupuncture (CUHK)
BSc in Physiotherapy (HKPU)
Constipation

• Prevalence
  – 6-23% in European countries (Stanghellini V 2000)
  – 13% in Hong Kong (Dept of Health 2009)
  – Increasing trend (Dept of Health 2009)
  – more common in women (Talley 1992)
Constipation

• **Causes of constipation**
  – Weakened/ impaired peristalsis of the intestine
    • Slow transit
  – Inadequate water/ too much fibre in food leading to hard faeces
  – Pelvic floor muscle in-coordination
  – Postural related
  – Psychological factors
    • a dirty toilet, depression
  – Drugs
    • morphine group pain killers, calcium tablets
  – Diseases
    • diabetic mellitus, hypothyroidism
Colorectal Collaborative Clinic

• Established in 2001

• Members
  – Colorectal surgeon
  – Nurse specialist
  – Dietitian
  – Physiotherapist
  – Radiographer

• Target patient
  – Constipation
  – Faecal incontinence
  – Haemorrhoid
  – Solitary ulcer syndrome
Colorectal Collaborative Clinic

• Since 2003
  – > 250 patients referred from surgical department to Colorectal Collaborative Clinic

• Since 2012
  – Body electro-acupuncture + Auricular acupuncture
  – → treat slow transit constipation
Assessment

• Anorectal Physiology (ARP)
  – Resting and squeeze pressures
  – Rectal-anal inhibitory reflex (RAIR)
  – Rectal compliance
Assessment

• Defaecation Proctography
  – Muscle co-ordination
  – Defaecation posture
  – Structural problem (rectocele)
Assessment

- Sitz Marker Test
  - Colonic transit time
  - Capsule contains 24 Sitz markers to swallow in Day 1, 2 & 3
  - X-Ray taken in Day 4 & 7
  - Norm: > 62 → slow transit (Chan 2004)
Assessment

- Sitz Marker Test
Assessment

• Pelvic floor assessment

• Defaecation posture

• Stool Chart

• Fiber and water intake
Flow of treatment

ARP, Defaecation Proctography, Sitz Marker Test

Slow transit cases refer to physio dept

Body electro-acupuncture + Auricular acupuncture

Post acupuncture ARP, Defaecation Proctography, Sitz Marker Test

Pre treatment Ax
Diet modification + Ax

Post acupuncture Ax
Dietatary re-Ax

Long term FU (post acupuncture 1 year)
Treatment

- Postural re-education
- Relaxation breathing
- Abdominal massage
- Interferential therapy

Body electro-acupuncture + auricular acupuncture since 2012
Body electro-acupuncture

• Acupuncture points
  – Upper limbs: LI 10, LI 4
  – Abdominal: ST 25, RN 12
  – Lower limbs: ST 36, ST 37

• 30 mins electrical stimulation

• 8 sessions (twice/week)
Auricular acupuncture

• Auricular acupuncture points
  – Large intestine (CO7)
  – Rectum (HX2)

• Magnetic seed

• Massage
  – 10 times/ set
  – 3 sets/ day
Outcome measures

• Fiber & Water Intake
• Frequency of defecation/ week
• Level of straining effort
• Straining time
• Sitz Marker Test
• Subjective improvement (NGRCS)
Result

- 11 patients completed the program
  - Mainly slow transit
  - No Pelvic floor muscle in-coordination/ Postural related

- Demographic data
  - Gender
    - Female: 8 (73%)
    - Male: 3 (27%)
  - Average age: 56.7 years old
    - Range: 22-74 years old
  - Average years of constipation: 8.4 years
    - Range: 1-31 years
Result

• Average fiber intake (no. of bowl)
  – Pre treatment: 3.2
  – Post treatment: 3.9
  – P-value: 0.072

• Average water intake (cups of water)
  – Pre treatment: 8.3
  – Post treatment: 7.8
  – P-value: 0.472
Result

• Average frequency of defecation/ week
  – Pre treatment: 2.9
  – Post treatment: 4.4
  – P-value: 0.062

• Average straining time (mins)
  – Pre treatment: 16.1
  – Post treatment: 9.1
  – P-value: 0.035

• Average level of straining effort
  – Pre treatment: 7.5
  – Post treatment: 4.4
  – P-value: 0.001
Result

• Sitz Marker Test (average no. of markers)
  – Day 4
    • Pre treatment: 62.0
    • Post treatment: 46.8
    • P-value: 0.042
  – Day 7
    • Pre treatment: 14.8
    • Post treatment: 5.8
    • P-value: 0.11
  – Total
    • Pre treatment: 76.8
    • Post treatment: 52.6
    • P-value: 0.027
Result

• Subjective improvement (NGRCS)
  – Min: 5
  – Max: 10
  – Average: 6.5
物理治療 + 穴位針灸
便便輕鬆

「BB」便便，其實「BB」便便，問題不但困擾嬰兒，不少工作壓力大又長時間處於不正常姿勢的人，都有這樣的經歷。廣華醫院結合的綜合便便治療中心成立約十年，協同治療師通過物理治療，配合改善飲食習慣及穴道按摩，治療病人。

【寶寶便便】

寶寶便便問題不少，便便次数過少或過多，都會令寶寶不舒服。物理治療中心的治療師透過穴位按摩，可以幫助改善寶寶的便便問題。治療師會選擇寶寶的穴位，如足三里、合谷等，並以輕柔的手法按摩，以達到改善便便問題的效果。

【成人便便】

成人便便問題也不少，便便經過長時間的壓迫，會令腸道肌肉變得緊張，影響便便的排出。物理治療中心的治療師透過穴位按摩，可以幫助改善成人便便問題。治療師會選擇成人的穴位，如天枢、大腸俞等，並以輕柔的手法按摩，以達到改善便便問題的效果。

物理治療中心同時提供其他治療服務，如運動治療、穴位按摩等，以幫助改善寶寶及成人的便便問題。物理治療中心的治療師會根據病人的需求，訂定個別化的治療計劃，以達到最好的治療效果。
Mechanism

• TCM (Chang 2012)
  – Slow transit constipation caused by deficient condition

  – Acupuncture
    • tonify the body’s energy field to induce energy circulation
    • push out the stools
Mechanism

• Western study
  – Alter the function opioid receptor and other neural pathways (Maciocia 1989; Li 1992; Jin 1996)
    • opioid receptor
      – inhibition of gastric emptying
      – increase in sphincter tone
      – induction of stationary motor patterns
      – blockade of peristalsis
Mechanism

• Western study
  – Regulate the tone of the smooth muscle of the gastrointestinal organ by stimulation of the auricular acupuncture application (Richards 1998)
  – Segmental stimulation to regulate ANS function (Jan 2010)
    • Regulate the parasympathetic/sympathetic nervous system function
    • C6, T12, L2, L4
    • Celiac ganglion, Superior mesenteric ganglion, Inferior mesenteric ganglion
Take home messages...

• Body electro-acupuncture + auricular acupuncture
  – positive effect on
    • Level of straining effort
    • Straining time
    • Sitz Marker Test

→ reduce the cost of management
  • Medication/ surgical treatment
  • Needle is not expensive

→ Reduce the side effect of medication
  • headache, nausea, diarrhea, vomiting, upset stomach
References


References


References
