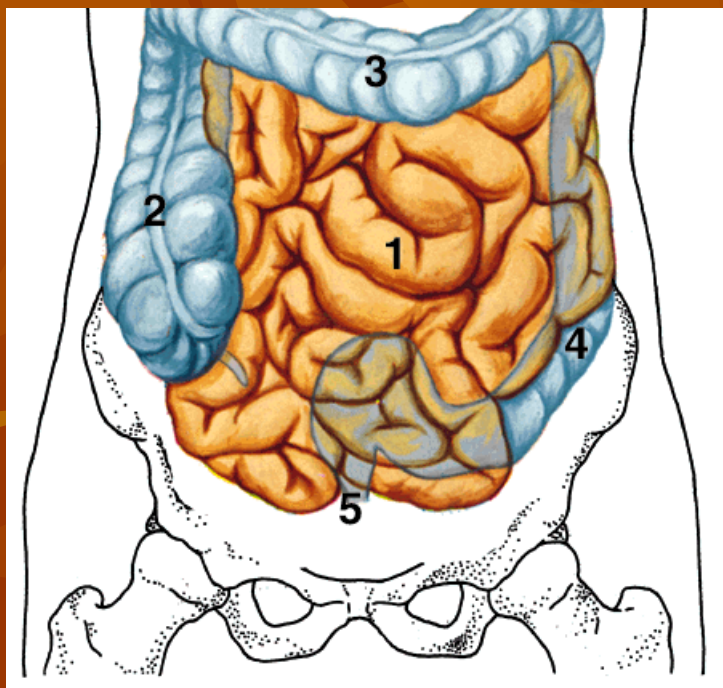


Acupuncture et péristaltisme gastro-intestinal

Bibliographie



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2- gera: 21/di/re

EFFECT OF REFLEXES OF SOMATIC AFFERENTS ON THE ADRENERGIC OUTFLOW TO THE STOMACH IN THE CAT. JANSSON G. *acta physiol scand.* 1969,77(1-2),17-22 (eng).

The adrenergic activity to the stomach in cats anesthetized with chloralose was modified by electric stimulation of somatic afferent nerves. Electric stimulation of "somatic pressor" afferents promptly elicited inhibitory responses of stomach contractions which contractions were in turn, dependent on cholinergic nervous activity. However, in the absence of such cholinergic activity, corresponding somatic afferent stimulation had only an insignificant effect on the stomach, despite a considerable myogenic activity, suggesting that the inhibitory adrenergic nervous mechanism preferentially operated by interfering with the cholinergic news activity. -Activation of "somatic depressor" afferents, on the other hand, supped the prevailing supply, if any, of adrenergic nervous activity to the stomach, which could result in augmentation of vagally induced gastric motor responses. Sitar effect were obtained Lo after spinal cord transection indicating that the "somatic depressor" afferents rude propriospinal reflex connections with the sympathetic outflow to the stomach. [10,01 /peristaltisme-eaa+chat-]

4- gera: 1299/di/ra

ESSAI DE MISE EN CONCORDANCE DE L'ACTION DE L'ACUPUNCTURE SUR LA MOTILITE DU TUBE DIGESTIF AVEC CE QUE CONSTATE LA PHYSIOLOGIE *. MALHERBE H. *acupuncture.* 1975,43,17-22 (fra).

[10,01 /peristaltisme-]

6- gera: 27/di/re

NEURAL MECHANISMS OF REFLEX FACILITATION AND INHIBITION OF GASTRIC MOTILITY TO STIMULATION OF VARIOUS SKIN AREAS IN RATS. KAMETANI H ET AL. *j physiol.* 1979,294,404-18 (eng). ref:0

1 . Experiments were performed on chloralose-urethane anaesthetized rats to determine the involvement of extrinsic gastric autonomic nerves in reflex facilitation and inhibition of gastric motility when mechanical nociceptive stimulation was delivered to either hind paw or abdominal skin, respectively. 2. After bilaterally sectioning the splanchnic nerves in vagal intact animals, the reflex facilitation of gastric motility produced by hind paw stimulation persisted, but the reflex inhibition previously produced by abdominal skin stimulation disappeared. 3. Hind paw stimulation increased efferent activity of the gastric branch of the vagus nerve, but stimulation of abdominal skin had little influence. 4. Bilateral vagotomy in splanchnic nerve intact animals did not influence the gastric reflex inhibition by abdominal skin stimulation, but either abolished gastric reflex facilitation produced by hind paw stimulation or reversed the reflex facilitation response to slight reflex inhibition. 5. Efferent activity of the gastric sympathetic nerve was greatly increased by abdominal skin stimulation, and was either slightly increased or not influenced by hind paw stimulation. 6. It was concluded that reflex increase of efferent a,ctivity of the gastric vagi was responsible for the gastric motility facilitation produced by hind paw stimulation, and also that reflexly increased efferent activity of the gastric sympathetic nerves resulted in gastric motility inhibition produced by abdominal skin stimulation. It is suggested that the involved vagal efferent fibres are facilitatory, while the implicated sympathetic efferents are inhibitory. 7. After spinal transection at the cervical level, the reflex facilitation of gastric motility previously produced by stimulation of a hind paw was completely abolished, or reversed to slight reflex inhibition, while reflex inhibition of gastric motility produced by stimulation of abdominal skin remained. It was concluded that the gastric reflex inhibition was a spinal reflex. 8 . Interaction between reflex facilitation and inhibition of gastric motility during simultaneous stimulation of both hind paws and abdominal skin was observed as partial cancellation of each effect by the other. However, sympathetic reflex inhibition of gastric motility seemed to be much stronger than the vagal reflex facilitatory effect. [10,01 /peristaltisme-]

8- gera: 11628/di/cg

INFLUENCE OF GURGLING SOUND IN THE HUMAN BODY BY NEEDLING ZUSANLI, YANGLINGQUAN AND CONTROL POINTS. HE ZHIMING ET AL. *advances in acupuncture and acupuncture anaesthesia,beijing.* 1980,68 (eng). ref:0 [10,01 /36e-34vb-specificite-peristaltisme-]

9- gera: 1298/di/ra

INFLUENCE DES BORBORYGMES EN PUNCTURANT ZUSANLI (36E), YANGLINGQUAN (34VB) ET LES POINTS DE CONTROLE. INSTITUT DE MTC DE SHANGHAI. *mensuel du medecin acupuncteur.* 1980,70,385-6 (fra). ref:0

[10,01 /36e-peristaltisme-]

10- gera: 34/di/re

ROLE OF SOMATIC AFFERENTS IN AUTONOMIC SYSTEM CONTROL OF THE INTESTINAL MOTILITY. KOIZUMI K ET AL. *brain research.* 1980,182,85-97 (eng). ref:0

(1) In anesthetized (chloralose-urethane) rats, strong mechanical stimuli which were applied to the abdominal skin always inhibited motility of the small intestine. This reflex is referred to as an 'inhibitory cutaneo-intestinal reflex'. Similar stimuli applied to the skin of the upper chest, neck, forepaws, or hindpaws, however, evoked the opposite effect, which is referred to as a 'facilitatory cutaneo-intestinal reflex'. (2) By recording the activity of efferent sympathetic nerves to the small intestine and by transecting intestinal sympathetic or parasympathetic nerves we found that the inhibitory cutaneo-intestinal reflex was largely due to an increase in intestinal sympathetic efferent activity, and that the facilitatory cutaneo-intestinal reflex was due to decrease in the intestinal sympathetic efferent nerve activity; both changes reflexly evoked. (3) The inhibitory cutaneo-intestinal reflex was shown to be a propriospinal reflex which was caused by excitation of group IV (unmyelinated) cutaneous afferent nerve fibers. On the other hand, the facilitatory cutaneo-intestinal reflex seemed to be mediated through supraspinal pathways, and was evoked by excitation of mainly group III (A-delta group) cutaneous afferent nerve fibers. (4) Interaction between the cutaneo-intestinal reflex and intestino-intestinal reflex was demonstrated. (5) The possibility of a dorsal root reflex contribution to cutaneo-intestinal reflex was eliminated. (6) Significance of the cutaneo-intestinal reflex in neural control of the gastro-intestinal tract was discussed. [10,01 /peristaltisme-eaa+rat-]

11- gera: 11855/di/ra

METHODES D'OBJECTIVATION DES EFFETS DE L'ACUPUNCTURE. MATCHERET EL ET AL. *revue française d'acupuncture.* 1980,21,47-56 (fra). ref:16

Etude sur 75 malades atteints d'ulcères gastro duodénaux et 15 volontaires sains. L'acupuncture aux points 36E, 6MC, 4GI et 21V, exerce une influence normalisante sur la sécrétion gastrique avec diminution basale du suc gastrique et diminution parallèle du contenu de l'acide chlorhydrique libre avant et après. L'acupuncture a un effet considérable sur le changement de la motilité de l'estomac dans le sens de l'augmentation. L'acupuncture au point 36E influe plus l'activité motrice alors que celle du point 6MC aboutit à des modifications plus prononcées de la sécrétion. Une période de latence est nécessaire à l'obtention des effets sur le péristaltisme gastrique : 8,5 mn pour 36E ; 3-4 mn pour 4GI ; 1-2 mn pour 21V ; ce qui témoignerait de l'existence d'un mécanisme neuro humoral, d'autant plus que cet effet acupunctural est inhibé par injection d'atropine. [10,05 /urss-peristaltisme-secretion-]

12- gera: 11626/di/cg

EFFECT AND FUNCTIONAL PATHWAY OF ACUPUNCTURE AT ZUSANLI UPON THE GASTROINTESTINAL FUNCTION. SHANGHAI SECOND MEDICAL COLLEGE. *advances in acupuncture and acupuncture anaesthesia,beijing.* 1980,304-5 (eng). ref:0

[10,01 /peristaltisme-36e-]

13- gera: 11796/di/ra

[A STUDY OF THE RELATIONS BETWEEN THE ACUPOINTS AND THE INTERNAL ORGANS USING

GASTRIC ELECTRICAL ACTIVITY AS INDICATOR]. LIU YINLI ET AL. shanghai journal of traditional chinese medicine. 1981,2,42 (chi*). ref:0

L'activité électrique gastrique est enregistrée. Une injection de pentagastrine entraîne une augmentation du rythme électrique de base et une augmentation d'amplitude du potentiel d'action. 1 heure après on étudie l'action de la puncture du 36E, on observe une diminution significative du rythme ($p < 0,05$), 25 minutes après la diminution reste significative ($p < 0,01$). La puncture du 55V n'entraîne pas de modification significative. Les points de l'estomac sont plus spécifiques que les points de la vessie sur le muscle antral. [10,05 /peristaltisme-36e-specificite-55v-]

14- gera: 90/di/ra

BLOCCO DELLA PERISTALSI E DELLA SECREZIONE GASTRICA CON AGOPUNTURA. PASOTTO. rivista italiana di agopuntura. 1981,42,71-2 (ita).

[10,05 /secretion-peristaltisme-ee-]

15- gera: 329/di/ra

[THE EFFECTS OF NEEDLING RABBIT "ZUSANLI" ON THE SMALL INTESTINE MOTILITY WITH DIFFERENT TWISTING STRENGTHES]. YU ZHISHUN ET AL. chinese acupuncture and moxibustion. 1981,1(1),34 (chi*). ref:0

La motilité de l'intestin grêle est étudiée durant la puncture du 36E chez le lapin avec différentes forces la rotation rapide (200/minutes, 4 à 6 cycles pour 5 minutes) réduit la motricité intestinale. La rotation faible (30 à 40/minute, 2 cycles pour 5 minutes), et la puncture simple sans manipulation augmente la motricité intestinale. Rotation faible et puncture simple sont considérées comme tonification et rotation forte est considérée comme dispersion. Chez quelques lapins, les résultats sont contradictoires. Cela montre que d'autres facteurs doivent être pris en compte. [5,03 /10,06-peristaltisme-td-36e-aaa+lapin-puncture-]

17- gera: 11620/di/ra

[POSSIBILITE DE L'ACUPUNCTURE DANS LE TRAITEMENT DES TROUBLES GASTRO-INTESTINAUX]. MATCHERET EL ET AL. rivista italiana di medicina orientale. 1983,3(2),19 (ita*).

Etude sur deux groupes (acupuncture et contrôle). 6MC + 36E + 4GI + 21V augmentent considérablement la fonction gastrique motrice et sécrétoire. [10,05 /peristaltisme-cta-secretion-]

18- gera: 11631/di/ra

[INFLUENCE DE LA STIMULATION DE LYMPHATIQUES, DE NERFS ET ARTERES ET DU SANG SUR LA MOTRICITE INTESTINALE DU LAPIN]. OUYANG ZIRONG ET AL. shanghai journal of acupuncture and moxibustion. 1983,4,14 (chi).

[10,06 /ea-lapin-peristaltisme-]

20- gera: 11837/di/ra

[THE MODULATED EFFECT OF ACUPUNCTURE ON GASTROELECTRICAL ACTIVITY]. XU GUANSUN ET AL. acupuncture research. 1983,8(1),1 (chi*).

Etude de l'action de 36E. La voie afferente principale les nerfs sont somatiques, mais les vaisseaux sanguins et leur innervation jouent également un rôle. Les structures cérébrales comme le noyau raphe, l'hypothalamus et le noyau caudé sont un élément important du double effet modulateur de l'acupuncture. [10,05 /25,02-peristaltisme-36e-]

21- gera: 21727/di/ra

[THE STUDY ON THE SPECIFICITY OF ZUSANLI POINTS OF STOMACH CHANNEL. THE EFFECT OF ACUPUNCTURE ON ELECTROGASTROGRAM IN HUMAN]. ZHOU YIPING ET AL. acupuncture research. 1983,8(2),125 (chi*). ref:0

L'électrogastrogramme est obtenu à partir d'électrodes fixées sur le corps et sur le pylore gastrique. L'action des points 36E, 25E, et 41VB, est immédiate dès le début de la manipulation acupuncturale, sur l'amplitude et la fréquence. Elle est dans le sens de l'augmentation pour le 36E et le 25E, dans le sens de la diminution pour le 41VB. Les points ont donc une relative

spécificité d'action sur la [10,05 motilité gastrique./25e-36e-peristaltisme-41vb-eea-specificite-]

22- gera: 2971/di/cg

AN EXPERIMENTAL MORPHOLOGICAL STUDY ON THE OBSERVATION OF RAT'S PERITONEAL MAST CELL UNDER ELECTRO-ACUPUNCTURE AT POINT "ZUSANLI". GAO SHAN ET AL. second national symposium on acupuncture and moxibustion,beijing. 1984,496 (eng).

L'électroacupuncture au 36E élève la dégranulation des mastocytes péritonéaux. l'action du 36E est relativement spécifique et plus marquée que celle du 6MC. Les mastocytes libèrent un certain nombre de médiateurs (sérotonine, listamine, héparine). Il est possible que l'action de l'acupuncture, notamment sur le péristaltisme intestinal, passe par ces médiateurs. [23,02 /6mc-peristaltisme-specific-36e-aaa+rat-mastocyte-]

23- gera: 21608/di/cg

THE INFLUENCE OF ELECTROGASTROGRAM OF PATIENTS WITH STOMACH-SPLEEN ILLNESS BY PUNCTURING POINT ZUSANLI AND OTHERS. HE ZHIMIN ET AL. second national symposium on acupuncture and moxibustion and acupuncture anesthesia. 1984,529 (eng). ref:0

Etude comparée chez 79 patients avec pathologie de la Rate/Estomac (gastrite, colite..) de l'action sur l'électrogastrogramme de la puncture de 4 points : 36E, 34VB, point non méridien et non point d'acupuncture. Il existe une spécificité relative du 36E. [10,05 /specificite-36e-34vb-peristaltisme-]

24- gera: 5672/di/el

EXPERIMENTAL STUDY ON ACUPUNCTURE MANIPULATION OF TONIFICATION AND SEDATION. HE ZHIMING ET AL. selection from shanghai jam 82-84. 1984,93-4 (eng). ref:0

Etude des techniques de tonification et dispersion au 36E. 1) Sur les enregistrements pléthysmographiques de 457 cas d'ulcère gastroduodéal. 2) Sur les enregistrements de sons abdominaux. Il apparaît : 1) Que la tonification entraîne une vasodilatation et la dispersion, une vasoconstriction. 2) La dispersion entraîne une diminution des bruits abdominaux. [5,03 /10,05-td-peristaltisme-36e-]

25- gera: 21607/di/cg

EFFECTS OF MICROINJECTION OF NALOXONE INTO CAT MEDULLA OBLONGATA ON THE ANTRAL CONTRACTION INDUCED BY ELECTROACUPUNCTURE. LIN YINLI ET AL. second national symposium on acupuncture and moxibustion and acupuncture anesthesia. 1984,528 (eng). ref:0

La micro injection de morphine dans le plancher du IVème ventricule, montre à l'E.G.G., une augmentation immédiate de l'amplitude du péristaltisme antrale, chez le chat l'effet de l'électroacupuncture au Zusanli, montre une action absolument identique à celle de l'injection de morphine. Cette action est inhibée dès l'injection de naloxone au même niveau. La fréquence a plutôt tendance à baisser. [10,05 L'injection de soluté salin ne provoque aucun effet./chat-peristaltisme-aa-5,12-25,01-naloxone-25,10-]

27- gera: 2409/di/ra

L'ACUPUNCTURE DU POINT 36E PROVOQUE DES MOUVEMENTS DE L'ESTOMAC DANS DES CONDITIONS EXPERIMENTALES CHEZ LE CHIEN. STILL J. revue d'acupuncture veterinaire. 1984,21-22,9-19 (fra).

[L'acupuncture du point 36E provoque des mouvements de l'estomac dans des conditions expérimentales chez le chien]. L'acupuncture du point 36E augmente l'amplitude de la motilité gastrique de 54,4 %, chez le chien normal, alors que la puncture de deux points voisins non spécifiques la diminue. Le péristaltisme de l'estomac du chien est sous contrôle autonome, avec des pacemakers sur la grande courbure. Il existe une réponse mécanique aux ondes lentes avec la participation de réflexes muraux et des hormones centrales et duodénales. On distingue des réflexes inhibiteurs cholinergiques, adrénergiques, et noradrénergiques. La

gastrine et la sécrétine sont deux des hormones gastriques dont le rôle dans le péristaltisme n'est pas encore complètement compris. La plupart des réflexes contrôlant la vidange gastrique sont inhibiteurs. Le stimulus naturel connu qui augmente la motilité gastrique est la distension gastrique qui stimule les mécanorécepteurs gastriques. On fait valoir à l'action du 36E, ses relations nerveuses anatomiques : nerfs afférents à la zone stimulée du 36E, avec implication possible des vaisseaux sanguins et de leurs fibres nerveuses périsvasculaires. Le niveau supérieur des voies afférentes du 36E sont les racines spinales dorsales. La projection centrale comprend essentiellement le thalamus, la formation réticulée du tronc moyen et, à un moindre degré, le cortex. Dans notre expérience, avec les 12 chiens, on note un remarquable effet stimulant sur l'estomac de l'acupuncture au 36E. Ceci est encore plus évident lorsque les aiguilles sont manipulées (cf figures 2, 3 et 6). L'action de l'acupuncture dépend de la localisation exacte du point, d'une méthode correcte de stimulation. La piqûre et la manipulation sur les points hors localisation classique choisis au hasard, ont diminué l'amplitude de 42,8 % et augmenté la fréquence de 22,8 %. [10,05 /36e-chien-peristaltisme-ea-]

28- gera: 11870/di/ra

[A STUDY ON THE EFFECT OF ZUSANLI ACUPOINT OF ACUPUNCTURE ON ELECTROGASTROGRAM IN HUMAN]. WENG TAILAI. **chinese journal of integrated traditional and western medicine.** 1984,4(6),354-6 (chi*). ref:17
Etude de 52 adultes, 21 sujets sains et 31 cas d'ulcères gastro-duodénaux. Chez ces derniers on observe une modification du rythme électrique de base soit dans le sens d'une excitation (5 cas) soit dans le sens d'une inhibition (9 cas), mais les fréquences ne sont pas modifiées. [10,05 /36e-peristaltisme-]

29- gera: 21604/di/cg

DOUBLE MODULATED EFFECTS OF ACUPUNCTURE ON ELECTROGASTROGRAM (EGG) ON THE NORMAL AND PATIENTS WITH CERTAIN GASTRIC DISEASES. XU GUANSUN ET AL. **second national symposium on acupuncture and moxibustion and acupuncture anesthesia.** 1984,55 (eng).

L'étude de l'électrogastrogramme (EGG) chez 45 sujets normaux montre des signaux de base, variés : 6,7 % en augmentation, 84,4 % en diminution, 8,9 % de niveaux égaux, après acupuncture du 36E (Zusanli), par rapport à ceux enregistrés avant acupuncture. L'étude chez 91 sujets montre : * chez 12 ulcéreux gastriques et 15 ulcéreux duodénaux une valeur haute initiale des signaux en intensité et amplitude avant acupuncture. L'acupuncture du 36E normalise les signaux en l'abaissant. * Chez 22 gastrites superficielles et 19 cancers gastriques, à niveau bas initial, l'acupuncture du 36E normalise les signaux en les élevant. Sur 27 cas ayant à l'E.G.G., une amplitude élevée, l'acupuncture de différents points spécifiques, montre une diminution variable selon chaque point : 21V : 83,2 %, 12VC : 79,9 %, 36E : 72,8 %, 20V : 67,4 %, 21E : 51,3 %, 8E : 36,7 %, 34VB : 28,5 %. [10,05 /peristaltisme-]

30- gera: 23213/di/ra

THE EFFECT OF NEEDING RABBIT "ZUSANLI" ON THE SMALL INTESTINE MOBILITY WITH DIFFERENT TWISTING STRENGTHES. YU ZHISHUN ET AL. **second national symposium on acupuncture and moxibustion, beijing.** 1984,531 (eng). ref:0
[10,06 /ea-36e-peristaltisme-]

34- gera: 11895/di/ra

[ETUDE SUR LES INTERRELATIONS ENTRE LE 36E ET L'ELECTROGASTROGRAMME (EGC) ET LEURS VOIES]. WENG TAICAI ET AL. **chinese acupuncture and moxibustion.** 1985,5(4),27 (chi*).

Etude chez 52 patients et 50 lapins. La voie afférente est le nerf tibial antérieur et la voie éfférente la vague. Ces résultats concordent avec l'expérimentation de Lin Yinli effectuée chez le chat. [10,05 /ea-25,02-peristaltisme-lapin-36e-]

35- gera: 22457/di/ra

[ACUPUNCTURE CAN INFLUENCE MOTIVE FUNCTION OF THE STOMACH AND INTESTINE]. HE ZHIMING ET AL. **acupuncture research.** 1986,11(4),280-3 (chi*).

L'observation des ondes lentes sur l'électrogastrogramme de 38 patients montre soit des augmentations soit des diminutions des amplitudes. Cette augmentation ou cette diminution est en rapport avec la manipulation soit en tonification soit en dispersion du point 36E. L'action du 36E est comparée à celle du 34VB chez 79 patients. L'amplitude des ondes lentes augmente de façon significative avec le 36E, alors qu'il n'y a aucune signification statistique avec le 34VB, ce qui permet d'attribuer au 36E une certaine spécificité d'action. [10,05 /peristaltisme-10,07-]

36- gera: 22440/di/ra

[THE INFLUENCE OF ACUPUNCTURING ZUSANLI POINT WITH DIFFERENT HAND- SKILLS ON STOMACH MOTILITY AND STOMACH ELECTRICITY]. LIU ZHIMIN ET AL. **chinese acupuncture and moxibustion.** 1986,6(4),25-7 (chi*).

According to the principle of Heuer Answer, we have recorded stomach electricity in conscious rabbits with chronic experimental method, and observed the influence of acupuncture Zusanli point with different hand-skills on both of them. The result of this experience is as follows : 1.Reducing the frequency and wave amplitude, all the four kinds of hand-skills of acupuncture have a inhibitory influence on stomach motility. Their main influence on stomach electricity is reducing the frequency of the slow wave, this showed most obviously in rapid-turned group. 2.Different hand-skills has different degree inhibitory influences on stomach motility, the slow-turned hand-skill has more obvious influence on the frequency and wave amplitude of stomach motility, but the needle-remained hand-skill has less, this further shows that there is differentiation between hand-skills. [10,05 /aaa+lapin-5,03-36e-peristaltisme-]

37- gera: 19829/di/re

LOWER ESOPHAGEAL SPHINCTER AND ACUPUNCTURE : ELECTROMANOMETRIC EVALUATION IN ESOPHAGEAL ACHALASIA. NOSADINI A ET AL. **digestive surgery.** 1986,3(3),243-5 (eng).

The results of acupuncture in the treatment of gastrointestinal motility disorders indicate that variations in lower esophageal sphincter pressure during acupuncture may be evaluated by manometry. Twenty-two consecutive patients with esophageal achalasia were evaluated : 12 patients underwent acupuncture, and a statistically significant decrease in lower esophageal sphincter tone was observed as compared with the control group of 10 patients in whom sham-acupuncture was performed. A vagal reflex or the role of neurohumoral factors (prostaglandins, enkephalins, serotonin) may explain the fall in sphincter tone during acupuncture. [10,04 /peristaltisme-7mc-cta-5,10-ecr-comparaison-]

38- gera: 16726/di/ra

[EXPERIMENTAL OBSERVATIONS ON CLINICAL APPLICATION OF ELECTROGASTROGRAM (EGG) AND ITS RELATIONSHIP TO THE DIFFERENTIATION OF TRADITIONAL CHINESE MEDICINE (TCM) AND ACUPUNCTURE]. WENG TAILAI ET AL. **acupuncture research.** 1986,11(1),27 (chi*). ref:19

Observations comparées de 40 sujets normaux avec 104 sujets répartis dans des groupes ulcère gastrique, ulcère duodéal, duodénite, gastrite superficielle, atrophie gastrique et cancer gastrique, des variations de fréquence et d'amplitude sur un électrogastrogramme, avant dîner et après dîner : après dîner, l'amplitude de l'E.G.G., s'accroît de façon significative par rapport au groupe témoin, alors que la fréquence varie peu. Dans le groupe ulcère duodéal, chez 12 sujets chez qui l'on pratique la stimulation acupunctureale du Zusanli (36E), il y a pas de changement significatif au niveau de la fréquence, mais par contre, l'amplitude s'accroît de façon très significative et tend à diminuer après arrêt de l'acupuncture. Une relation entre les divers syndrômes classés selon la M.T.C. chez 89 patients avec douleur gastrique est effectuée entre l'amplitude à l'E.G.G. avec celle de sujet normal. Ainsi les cas de vide de rate-estomac avec

syndrome froid (50 cas), de vide de yin (5 cas) et de vide de rate-estomac avec syndrome froid par atteinte de l'estomac par qi du foie (6 cas), montrent une diminution de l'amplitude. Alors que les cas d'attaque de l'estomac simple par qi du foie (21 cas) et les cas d'accumulation de chaleur dans le foie et l'estomac montrent une augmentation de l'amplitude par rapport à l'amplitude des sujets normaux. [10,05 /peristaltisme-]

39- gera: 22458/di/ra

[THE OBSERVATION ON INFLUENCE OF POSTACUPUNCTURE EFFECT ON POST-OPERATIVE MOTILITY FUNCTION OF GASTROINTESTINAL TRACT WITH ELECTROGASTROGRAM AND ELECTROINTESTINOGRAM ON BODY SURFACE]. YANG ZHEN ET AL. **acupuncture research.** 1986,11(4),284-9 (chi*). ref:0 [10,05 /21,04-peristaltisme-]

40- gera: 22467/di/ra

[RECORD OF GASTROELECTROGRAM (GEG) FROM THE SURFACE OF THE BODY]. ZHANG WANWEN ET AL. **acupuncture research.** 1986,11(2),81-5 (chi*). [10,05 /peristaltisme-]

41- gera: 22456/di/ra

THE REGULATORY FUNCTION OF ACUPUNCTURE ON STOMACH. ZHOU LU. **acupuncture research.** 1986,11(4),274-9 (eng). [10,05 /secretion-peristaltisme-]

42- gera: 17912/di/el

EFFECT OF NEEDLING "ZUSANLI" ON GASTROINTESTINAL FUNCTION AND ANALYSIS OF ITS AFFERENT PATHWAY. ZHUANG DING ET AL. **in research on acupuncture, moxibustion and acupuncture anesthesia, beijing.** 1986,910-918 (eng). ref:3
1. This paper reports on the needling effect of "Zusanli" on gastrointestinal functions. The results reveal that needling of "Zusanli" may inhibit the hyperactivity of the stomach initiated by pentagastrin, both in secretion and motility, while in a normal stomach a potentiation of gastric motility is usually observed under such circumstances the spontaneous efferent discharges of the gastric and renal branches of the sympathetic nerve are modified accordingly under the influence of acupuncture, in which a relative point specificity is noted. 2. The afferent pathway carrying the needling effect of Zusanli on gastrointestinal tract involves may the somatic nerves. but the smooth muscle on the arterial wall and the perivascular vegetative nerves may also have a part in it. 3. A tentative hypothesis for point specificity and pathway of needling effect is suggested and discussed. [10,01 /36e-25,02-peristaltisme-specificite-]

43- gera: 31836/di/ra

[THE INFLUENCE OF HELIUM-NEON LASER ACUPUNCTURE TO THE ELECTROGASTROGRAM OF THE HUMAN BODY]. ZOU XIANGYIN ET AL. **liaoning journal of traditional chinese medicine.** 1986,10(5),35 (chi). ref:12 [10,05 /peristaltisme-5,14-]

44- gera: 21147/di/cg

EFFECT OF ACUPUNCTURE ON STOMACH MOTILITY IN RATS. CHEY WY ET AL. **in compilation of the abstracts of acupuncture and moxibustion papers, beijing.** 1987,172 (eng).

L'électrogastrogramme de 80 rats anesthésiés, est étudié avant et après action acupuncturale au 20V et sur deux points quelconques placés sur les hanches et l'abdomen. La stimulation du 20V fait augmenter de façon significative les contractions enregistrées à partir d'un ballonnet inséré dans l'antra gastrique. Les autres points n'ont aucun effet significatif. L'injection de naloxone n'affecte pas l'effet acupunctural, alors que celle d'atropine le bloque. La vagotomie bilatérale effectuée dans un groupe de rats, entraîne une décroissance immédiate de la contractilité ; dans ce groupe l'action acupuncturale au 20V, ne provoque aucune augmentation de la contractilité. En conséquence, l'effet

acupunctural sur la contractilité gastrique, passerait par une voie de neurotransmission par le système vagal et non par le système des récepteurs endorphiniques. [10,05 /ea-peristaltisme-rat-]

45- gera: 27578/di/cg

APPROACH OF RELATION BETWEEN ACUPOINT AND VISCERAL IN THEORY OF MERIDIAN WITH INDEX OF ELECTRO-GASTROGRAM IN SHEEP. DIAO RENJIE ET AL. **international conference on veterinary acupuncture, beijing.** 1987,23. (eng). [10,05 /24,04-peristaltisme-]

46- gera: 20706/di/ra

[OBSERVATION OF ELECTROGASTROGRAM AT CHEN SHI AND YOU SHI BEFORE AND AFTER MEAL ON 36 HEALTHY PERSONS]. FU QIANG ET AL. **chinese journal of integrated traditional and western medicine.** 1987,7(11),665 (chi*). [10,05 /3,01-peristaltisme-]

47- gera: 27599/di/cg

EFFECT OF ACUPUNCTURE ON CONTRACTILE ACTIVITY OF THE CAECUM IN COW. HARA S ET AL. **international conference on veterinary acupuncture, beijing.** 1987,50-1 (eng). [10,06 /24,04-peristaltisme-]

48- gera: 21149/di/cg

THE EFFECTS OF ACUPUNCTURE ZUSANLI POINT ON GASTRO-INTESTINAL MOTILITY AND ANALYSIS OF THE POINT SPECIALITY AND ITS EFFERENT. JIANG SONGLIN ET AL. **in compilation of the abstracts of acupuncture and moxibustion papers, beijing.** 1987,175 (eng).

88 lapins sont opérés pour l'étude et soumis une semaine plus tard, à l'action acupuncturale du 36E sur la motilité gastrique. L'enregistrement de l'électrogastrogramme montre une inhibition de la fréquence de 30 % après acupuncture, et de 41 % après électroacupuncture, ainsi qu'une inhibition en amplitude de 45 % après acupuncture et de 57 % après électroacupuncture. L'étude comparée du Zhongdu (6F) et du Neiguan (6MC) avec le 36E, ne montre pas à travers le test du X2, une action plus spécifique du 36E par rapport aux deux premiers points. L'injection de drogue médicamenteuse en intraveineuse après acupuncture montre que les alpha bloquants et les nerfs à conduction adrénergique interviennent dans l'inhibition induite par l'acupuncture en bloquant son action, que les bêta bloquants n'ont aucune action, et que la réserpine fait disparaître l'effet d'inhibition acupunctural. [10,05 /36e-specificite-6mc-6f-peristaltisme-25,02-eaa+l-]

49- gera: 2871/di/re

EFFECT OF ELECTRIC ACUPUNCTURE (EAP) ON GASTRIC MOTILITY IN RATS. JIANG YG ET AL. **gastroenterology.** 1987,92(5),1454 (eng).

Acupuncture (AP) treatment has been used for certain stomach disorders in Chinese Traditional Medicine practice. In this study, we have investigated the effect of EAP on the stomach motility and the mechanism involved. In 80 urethane anesthetized rats, gastric motility was recorded with a rubber balloon (air volume 0.2 ml) on a polygraph via a statham pressure transducer (Model P23 Db). AP point used in this study was Pishu located at 5-6 mm lateral to the lower borders of both spinous processes of T11 vertebra with the depth of 45 mm. Electric stimulation of 6 V, and 5 Hz was applied for 20 min via the needles inserted bilaterally. EAP at Pishu resulted in significant increase in mean contraction frequency and amplitude compared with the period before EAP. The changes were not apparent when EAP was applied to gluteal region or abdominal wall. Naloxone failed to block the response to Pishu EAP whereas atropine or vagotomy completely abolished the response. The study strongly suggests that cholinergic tone is important to convey signal from Pishu point to the stomach to stimulate motility in rats. [10,05 /eaa+rat-peristaltisme-]

50- gera: 24329/di/ra

EFFECT OF TUINA ON MOTILITY OF GALLBLADDER. LI QIWEN ET AL. **international conference on tcm and pharmacology,shanghai.** 1987,635-6 (eng). [10,11 /acupression-peristaltisme-]

51- gera: 25128/di/cg
EXPERIMENTAL STUDIES ON THE EFFECTS OF THE ACUPUNCTURE MANIPULATION UPON GASTROINTESTINAL MOTILITY AND ELECTRICITY. LIU ZHIMIN ET AL. **selections from article abstracts on acupuncture and moxibustion, beijing.** 1987,439 (eng). ref:0 [10,01 /peristaltisme-5,03-]

52- gera: 30963/di/ra
[INFLUENCE OF ACUPUNCTURE UPON MOVEMENT OF STOMACH AND GASTRIC ELECTRICITY AFTER BLOCKING OF ALPHA, BETA AND OPIUM RECEPTORS]. LIU ZHIMIN ET AL. **shanghai journal of acupuncture and moxibustion.** 1987,2,31 (chi). ref:0 [10,05 /peristaltisme-]

53- gera: 25279/di/cg
A STUDY ON THE EFFECT OF ACUPUNCTURE ON DOG'S INTERDIGESTIVE MYOELECTRIC COMPLEX. QIN LIANGAI ET AL. **selections from article abstracts on acupuncture and moxibustion, beijing.** 1987,598 (eng). [10,05 /peristaltisme-21v-4rte-aaa+chien-]

54- gera: 27670/di/cg
EFFECTS OF ELECTRO-ACUPUNCTURE OF "ZUSANLI" OR STIMULATION OF PERIAQUEDUCTAL GRAY ON COLONIC MYOELECTRICAL ACTIVITY IN RABBITS. SUN ZHIMIN ET AL. **international conference on veterinary acupuncture, beijing.** 1987,142-3 (eng). ref:0 [10,06 /peristaltisme-aaa+lavin-36e-substance grise-]

55- gera: 24652/di/ra
RESEARCH ON INFORMATION SYSTEM FOR GASTROINTESTINAL (GI) ELECTRICAL ACTIVITY. WANG JIANHUA ET AL. **international conference on tcm and pharmacology,shanghai.** 1987,1111-2 (eng). [10,05 /peristaltisme-]

56- gera: 27631/di/cg
STUDIES ON SALIVA SECRETION AND RUMEN PERISTALSIS BY SHEEP BY LASER IRRADIATION. WANG RENHE T AL. **international conference on veterinary acupuncture, beijing.** 1987,15-18,89. (eng). ref:0 L'irradiation au lasers du point Jiao Chao élève la secretion salivaire chez le mouton et la chèvre. [24,06 /5,14-peristaltisme-10,01-salive-19,03-]

57- gera: 20702/di/ra
[OBSERVATION ON CONFORMITY RATE BETWEEN ELECTROGASTROGRAM AND GASTROSCOPIC DIAGNOSIS AND RELATIONSHIP BETWEEN SYNDROME *]. WENG TAILAI ET AL. **chinese journal of integrated traditional and western medicine.** 1987,7(11),655 (chi*). [10,05 /peristaltisme-4,07-]

58- gera: 21957/di/cg
EXPERIMENTAL OBSERVATIONS ON CLINICAL APPLICATION OF ELECTROGASTROGRAM (EGG) AND ITS RELATIONSHIP TO THE DIFFERENTIATION OF TRADIT*. WENG TAILAI ET AL. **selections from article abstracts on acupuncture and moxibustion, beijing.** 1987,107 (eng). [10,05 /peristaltisme-]

59- gera: 25278/di/cg
EXPERIMENTAL OBSERVATION ON SOME CHARACTERISTICS OF BASIC ELECTRICAL RHYTHM (BER) OF RABBITS AND THE EFFECT AND PATHWAYS OF *. WENG TAILAI ET AL. **selections from article abstracts on acupuncture and moxibustion, beijing.** 1987,597 (eng). [10,05 /ea-peristaltisme-lavin-]

60- gera: 20142/di/ra
[ROLES OF THE CAUDAL BRAIN STEM IN THE MODULATION AND INHIBITION OF THE GASTRIC MOTILITY BY ACUPUNCTURE "RENZHONG"]. YIKUAN X ET AL. **acupuncture research.** 1987,12(3),202-6 (chi*). ref:0 La stimulation du raphé nuclei médullaire fait croître la contractilité antrale, la stimulation de la partie ventro latérale médullaire, ainsi que la mise en jeu par acupuncture du "Renzhong" 26VG, crée une inhibition en fréquence et en amplitude de cette contractilité, selon une voie noradrénergique. La modulation de la motilité gastrique par une voie descendante monoaminergique se ferait selon un [10,05 équilibre des systèmes sympathique-para sympathique./peristaltisme-26vg-]

61- gera: 30954/di/ra
[INFLUENCE OF PRESSING EAR POINTS WITH UPON GASTRIC FUNCTION]. YUN MIN ET AL. **shanghai journal of acupuncture and moxibustion.** 1987,2,4 (chi). [10,05 /acupression-peristaltisme-5,10-]

62- gera: 24390/di/ra
INFLUENCE OF NEEDLING DIFFERENT ACUPOINTS ON CONTRACTIVE FUNCTION OF GALL BLADDER. ZHANG JIANQIU. **international conference on tcm and pharmacology,shanghai.** 1987,780-1 (eng). [10,11 /peristaltisme-specificite-]

64- gera: 20329/di/ra
[THE EFFECT OF ACUPUNCTURE "RENZHONG" ON GASTRIC ANTRAL MOTILITY AND ITS RELATION TO PERIPHERAL 5-HYDROXYTRYPTAMINE (5-HT)]. ZHOU LU ET AL. **acupuncture research.** 1987,12(2),130-8 (chi*). It is well known that acupuncture is effective in human for treatment of gut motility disorders. Its mechanism remains unknown. The purpose of this study was to observe the regulatory function of gastric motility by acupuncture and its relation to peripheral 5-hydroxytryptamine (5-HT). Twenty-five dogs anesthetized with chloralose were prepared with strain gauge in the antrum to record contractile activity we have observed the effect of acupuncture "Renzhong" on antral motility, changes 5-HT content in whole blood and fluorohistochemical changes or 5-HT in tue enterochromaffin cells (EC cell) of antral mucosa. The results suggest that after acupuncture on the "Renzhong" point markedly inhibited gastric antral motor activity. During the inhibition of antral contraction caused by acupuncture "Renzhong" 5-HT in whole blood decreases significantly. The amount of fluorescent EC cell and the fluorescent intensity of 5-HT in the EC cells were both markedly increased compared with that of 5-HT in the EC cells of control dogs. This result may be related to the increased storage and decreased release of 5-HT in EC cell during the [10,05 acupuncture. Inhibition of gastric contraction by acupuncture seeks that 5-HT involved./26vg-peristaltisme-5ht-25,11-]

65- gera: 24502/di/ra
[THE EFFECT OF MOXIBUSTION ON THE SMALL INTESTINE MOBILITY]. CHEN YANHONG ET AL. **chinese acupuncture and moxibustion.** 1988,8(5),40 (chi*). Experiments were performed in mouse, charcoal meal was gavaged into stomach. The percentage of the distance travelled by the charcoal meal from pylorus to caecum within 20 minutes, against the total length of intestine was used as the index of propulsive motility of intestine. In different conditions, the effects of moxibustion at "Shen-Jue" point on the intestine propulsive motility were observed. The result indicated that the propulsive motility of intestine was always inhibited by the moxibustion, and catecholamines might play an important role in the effects of moxibustion. [10,06 /ig-10,07-8vc-peristaltisme-5,09-]

69- gera: 23739/dn/re
[EFFECT OF PHONOPUNCTURE ON GASTRIC MOTOR FUNCTION IN PATIENTS WITH DUODENAL ULCER]. SHAGINIAN KS. **voprosy kurortologii, fizioterapii i lechbenoi fizicheskoi kultury.** 1988,1,30-2 (rus*).

[10,05 /peristalisme-ulcere-]

70- gera: 53599/di/ra

[THE EFFECT OF ACUPUNCTURE ON GASTRO-ELECTRICITY IN CAT'S ZUSANLI (St 36) AND ITS NEUROMECHANISM]. WAN DAMING ET AL. **shanghai journal of acupuncture and moxibustion.** 1988,4,19-22 (chi).

[10,05 /36e-peristaltisme-chat-ea-]

71- gera: 23608/di/ra

NEW DEVELOPMENT IN STUDY AND APPLICATION OF ELECTROGASTROENTEROGRAPHY. WANG XINGFAN. **acupuncture research.** 1988,13(1),65-70 (eng).

There has been big development in electrogastroenterography for recent ten years. This article will underscore the following points : 1. On study of acupuncture, it appears that there is a doubtly modulation action induced by needling some points and a relative specificity in the action of the points on gastric and intestinal electrical activity. 2. Some people observed the relation of TCM differentiation of syndromes with EGG and found that the amplitude of EGG with cases of Xu type as well cold type was lower than that of the normal subjects, but with heat type the mean amplitude was higher than that of the normal subjects. 3. For instruments detecting gastric and intestinal electrical activity, the filter is very important. To meet practical requirements, we apply low-pass filter with source, digital filter of FIR and adaptive filter to the extraction of electrogastrographic signals. 4. Signal analysis consists of time domain analysis and frequency domain analysis. EGG features are extracted and detected by correlation function and coherent averaging technique. For obtaining spectrum of EGG, computer spectrum analysis using Fast Fourier Transform (FFT) and the autoregressive (AR) spectral estimation technique are presented. [10,05 /4,07-specificite-peristaltisme-]

73- gera: 25329/di/ra

[DOUBLE PHASIC MODULATORY EFFECTS OF AURICULAR POINT ELECTROACUPUNCTURE ON GASTROINTESTINAL ELECTRIC ACTIVITY IN RABBITS]. XU GUANSUN ET AL. **chinese journal of integrated traditional and western medicine.** 1988,8(11),646 (chi*). ref:51

The present investigation was undertaken with electrophysiological methods to evaluate the effects of ear-acupuncture on gastrointestinal tract. 24 rabbits weight 1.7-2.2kg were used. By applying dipolar leads of platinum, gastrointestinal electric activity on corpus, antrum, duodenum and colon were simultaneously recorded in animals. Ear-acupuncture effects were observed respectively with electric or manual acupuncture. Results: (1) Most of the rabbits' gastrointestinal electric activities (64.71-94.12%) display excitatory or inhibitory effects. The inhibitory effect was dominative, for example, the motility index (frequency x amplitude/3 min) on corpus, antrum, duodenum and colon was excitatory for 29.41-41.18%. and inhibitory 41.18-60.25%. The other subjects, after needling ear-point, were a few change or unchange on gastrointestinal activity. Their differences were significant (P<0.05-0.01). (2) The acupuncture effects were different in each individual and each segments of digestive tract. It was suggested that the modulatory effects of ear-acupuncture on functional activity of digestive tract were selected according to different functional conditions and physiologic segments. Furthermore, effects of electric and manual needles, acupoint and nonacupoint were some different, too. It seems that acupunctural effects possess quantitative and qualitative differences in excitation and specificity of acupoint. [10,05 /5,10-peristaltisme-eaa+lapinspecificite-]

74- gera: 23344/di/ra

[THE REGULATORY FUNCTION OF ACUPUNCTURE ON GASTRIC MOTILITY AND IT'S RELATION TO GASTRIN PEPTIDE]. ZHOU LU. **acupuncture research.** 1988,13(2),130-4 (chi*).

[10,05 /25,11-eaa+chien-26vg-gastrine-peristaltisme-]

75- gera: 23349/di/ra

A STRAIN GAUGE FOR MEASURING GASTROINTESTINAL MOTILITY IN ANIMALS. ZHOU LU ET AL. **acupuncture research.** 1988,13(2),154-9 (chi*).

The strain gauge employs a silicon crystal semiconductor. Strain gauges are useful for measuring gastric and intestinal motility in anesthetized and conscious animals. [10,01 /ea-peristaltisme-]

76- gera: 27035/di/ra

AN OBSERVATION OF THE EFFECTS OF ELECTRO-ACUPUNCTURE ON ANTRAL ELECTRIC ACTIVITY IN CONSCIOUS RABBIT AND ELECTRO-ACUPUNCTURE ON THE RESTORATION OF THIS ELECTRIC ACTIVITY IN DRUG ANAESTHETIZED ANIMAL. CHEN YONGYUE ET AL. **acupuncture research.** 1989,14(1-2),123-124 (eng).

The present paper used two kinds of antral electric activity: burst of spikes and slow wave, as indicator of antral mechanical contraction studied the effect of electro-acupuncture Zusanli point on the movement function of stomach in rabbit. (1) In conscious rabbit, electro-acupuncture "Zusanli" point could decrease both the frequency of the burst activity and the amplitude of slow wave as in their higher level, and increase them when they are in lower level, but no effect was found at their moderate condition. Meanwhile, electro-acupuncture "Jizong" point did not show any effect on antral electric activity. (2) In curarized conscious rabbit with artificial ventilation, inhibitory effect was found on the frequencies of burst activity and slow wave during and after electro-acupuncture "Zusanli" point with constant density. (3) Sodium pentobarbital abolished the burst activity. Electro-acupuncture Zusanli point could markedly shorten the restoration interval of the first burst of spikes and promote the recovery percentage of burst activity. These results indicate that electro-acupuncture "Zusanli" point shows Modulative effect on gastric electric activity and promotes the restoration of gastric motility from drug anaesthesia. [10,05 /specificite-36e-eaa+lapinspecificite-]

77- gera: 81266/di/ra

ACTION DE TROIS POINTS D'ACUPUNCTURE SUR LA MOTRICITE GASTRIQUE ETUDIEE PAR ELECTROGASTROGRAPHIE. CORVISIER R ET AL. **meridiens.** 1989,87,59-73 (fra*). ref:0

Une étude électrogastroentérographique sur polygraphe Halvar, a permis, à partir d'enregistrements sur 15 sujets normaux, de prouver l'efficacité de trois points d'acupuncture : le 9 rate (Yinling Quan), le 36 Estomac (Sanli), le 44 Estomac (Neiting), sur l'amplitude des ondes gastriques mesurées en microvolts. Ce groupe de 15 sujets normaux a été comparé à un groupe de 10 sujets normaux, où des aiguilles ont été posées exactement dans les mêmes conditions d'enregistrement, mais à distance des points traditionnels efficaces. La variation d'amplitude des ondes gastriques après la pose des aiguilles actives (9Rte-36E-44E) est hautement significative par rapport au groupe témoin (points non efficaces traditionnellement). Cette comparaison a été faite à l'aide du test de Student pour séries appariées, et l'amplitude calculée après la 10ème minute de la pose de chaque aiguille. Le résultat intéressant ouvre une voie d'étude moderne des textes anciens. [10,05 /9rte-peristaltisme-44e-36e-]

82- gera: 80292/di/ra

[EFFECT AND NERVOUS MECHANISM OF ACUPUNCTURE ON GASTROELECTRICAL PROPAGATION VELOCITY]. ZHANG HUI ET AL. **acupuncture research.** 1989,14(3),360-63 (chi*). ref:0

20 fasting cats were used to investigate the propagation of Gastroelectrical Propagation Velocity (GPV) and the effect and nervous mechanism of acupuncture on it. The results are as follows : 1. GPV can be described as $V=b_0-b_1x_1 + b_2x_2$. b_0 , b_1 and b_2 : regression coefficient. x_1 : frequency of slow-wave. 2. GPV is changeable on normal condition, and it can be affected by stimulation of vagi or splanchnic nerve and by administration of pentagatrin i.v. or atropin i.v. with some change of not only x_1 , x_2 , but also b_0 , b_1 , b_2 . 3. Manual acupuncture and electrical acupuncture can affect GPV

differently. 4. After vagotomy, the effect of manual acupuncture GPV was changed. All results suggest that GPV can be affected by acupuncture with complex mechanism including the change of propagation resistance and of propagation refractory period. [10,05 /25,02-peristaltisme-*aaa+chat-*]

83- gera: 27036/di/ra

OBSERVATION OF GASTRIC ELECTRIC ACTIVITY INDUCED BY NTS STIMULATION AND THE EFFECT OF ELECTRO-ACUPUNCTURE IN RABBIT (résumé). ZHANG NENG ET AL. **acupuncture research.** 1989,14(1-2),124-125 (eng). ref:10

In 27 curarized conscious rabbits with artificial positive ventilation, the authors studied the effects of electric stimulation of Nucleus Tractus solitarius (NTS) area on the antral electrical activity of stomach and the effect of electro-acupuncture of "Zusanli" points. Electrical stimulation of NTS area could induce significant change in antral electric activity, mainly excitatory and with certain after-effect. The induced excitatory electric activity disappeared both by the section of bilateral vagus nerves or atropinization of the animal. This result indicated that the peripheral cholinergic fibers involved in this response. It was found that the inhibitory response electric activity by stimulating NTS area persisted after bilateral neck vagotomy or injection of propranolol. Electro-acupuncture of Zusanli points decreased the induced excitatory antral electric activity response. TI paper puts forward that NTS is one of the structures in brain stem gastric electric activity. [10,05 /25,02-peristaltisme-*aaa+lapi-*n]

87- gera: 80890/di/ra

[EFFECT OF ACUPUNCTURE ON HUMAN INTESTINAL PERISTALTISM]. X. **journal of the japan society of acupuncture.** 1990,40(1),39. (jap).

[10,01 /peristaltisme-]

88- gera: 80962/di/ra

[EFFECT OF ACUPUNCTURE AND MOXIBUSTION STIMULATION ON INTESTINAL PERISTALTISM]. X. **journal of the japan society of acupuncture.** 1990,40(1),127. (jap).

[10,01 /peristaltisme-]

89- gera: 81262/di/ra

[THE ESTABLISHMENT OF EXPERIMENT MODEL OF GASTRIC DYSRHYTHMIA AND STUDY OF ITS MECHANISM IN RABBITS]. YANG JUNYOU ET AL. **acupuncture research.** 1990,15(2),150-56 (chi*).

In fasting and anaesthetic rabbits, the experimental model of gastric dysrhythmia could be produced by electric stimulation of inferior phrenicus vagus and splanchnic nerve for innervation of corpus and antrum, or by left gastric artery infusion of ADR, Ach and glucagon at a steady velocity. The results were as follows : (1). Electrical stimulation of inferior phrenicus vagus at low frequency and intensity could increase the frequency and amplitude of basic electric rhythm (BER) or slow wave ($P < 0.01$), and might induce tachygastric and tachyarrhythmia. Electrical stimulation of splanchnic nerve could increase the frequency and amplitude of BER ($P < 0.05$), and might induce bradygastric. (2). Bradygastric could be elicited by left gastric artery infusion of ADR (400 μ g/kg/h). The frequency and amplitude of BER induced were decreased. Tachyarrhythmia could be elicited by infusion of Ach (400 μ g/kg/h). The frequency and amplitude of BER induced were increased. Dysrhythmia of BER could be elicited by infusion of glucagon (400 μ g/kg/h). (3). Electroacupuncture of "Zusanli" acupoint may exhibit double modulated effects on experimental model of gastric dysrhythmia. Different types of gastric dysrhythmia including tachygastric, bradygastric and tachyarrhythmia could be approached to the normal gastric myoelectric activity. It is revealed that such effects of electroacupuncture may be mediated via autonomic nerve and peripheral special receptors. [10,05 /*aaa+lapi-*n-36e-peristaltisme-]

91- gera: 82272/di/cg

THE REGULATOR FUNCTION OF ACUPUNCTURE ON STOMACH. (abstract). ZHOU LU ET AL. **2eme congres**

mondial d'acupuncture et moxibustion, paris. 1990,176. (eng).

The effect of acupuncture on gastric function were studied in dogs and human. 1/ The effect of acupuncture on gastric secretion in dogs acupuncture at Zusanli (ST36), Pishu (BL20) and Neiguan (PC6) produced significant increases in gastric secretion of bicarbonate and a marked decrease in gastric acid secretion. These changes in gastric secretion were completely blocked by atropine or lidocaine. The fact indicated that gastric secretion involves a somatic efferent-visceral reflex mechanism in which a cholinergic nerve plays a role. 2/ The effect of acupuncture on gastric motility in dogs acupuncture at Renzhong (GV-26) produced inhibition of gastric motor activity. An effect markedly reduced after lesioning of the lateral reticular nucleus (NRL) of the ventrolateral medulla. During the inhibition of antral contraction caused by Renzhong, gastrin in plasma decreases significantly. The fluorohistochemical changes of gastrin in G-cell of mucous membrane removed from dogs after acupuncture, were observed. Both the number of fluorescent G-cells, and the intensity of fluorescence of the stomach wall were increased in dogs under the acupuncture. These results suggest an increased storage and/or decreased release of Gastrin in G-cells during the acupuncture. 3/ Treatment of patients with peptic ulcer by acupuncture. Peptic ulcer (gastric or duodenal) is a common disease. In order to observe the therapeutic effect of acupuncture, were treated by needling of Zusanli, Zhongwan (CV12), Gongsun (SP4) and Neiguan. Good results were obtained. After treatment of acupuncture, clinical symptoms disappeared and the gastric acid decreased. Observation by gastroscopy showed that the curative rate of ulcer was 90 %. Electrogastrogram (EGG) in peptic ulcer patients were recorded by surface electrode with the BSR- 1 model EGG. Acupuncture might restore EGG to approach the normal level. Besides, acupuncture could increase the content of prostaglandin E (PGE) and decrease the content of gastrin in plasma. Therefore : acupuncture should be regarded as of great importance in the treatment of peptic ulcer. [10,05 /26vg-peristaltisme-36e-secretion-6mc-25,02-20v-]

95- gera: 82844/di/ra

DEPRESSION OF GASTRIC CONTRACTION BY STIMULATION OF BL-19 (WEIYU) ACUPOINTS IN DOGS. KUDO T ET AL. **american journal of acupuncture.** 1991,19(3),241-5 (eng).

The effects of electroacupuncture stimulation on the electrogastrogram (EGM) were investigated in acupoints ST-36 (Zusanli), BL-19 (Weiyu [vet.]) and LI-10 (Chiensanli [vet.]) in dogs. The frequencies of basic electrical rhythm at 30, 45 and 60 minutes after electroacupuncture stimulation in the BL-19 group, and at 60 minutes in the LI-10 and control groups were lower than those before stimulation. The duration of burst of action potentials (AP) at 0 and 30 minutes after stimulation in the BL-19 group was shorter than before stimulation. Just after stimulation, the duration of AP burst in the BL-19 group was shorter than in the LI-10 group. The EGM seemed to indicate that electrical stimulation of BL-19 acupoints inhibited gastric motility. [10,05 /*aaa+chien-*19v-24,02-10gi-peristaltisme-36e-]

96- gera: 64013/di/ra

[THE REGULATING EFFECT OF ELECTROACUPUNCTURE ON GASTROENTERIC ELECTRIC ACTIVITY IN GUINEA PIGS OF PERIPHERAL VOMITING]. LEN JINAPING ET AL. **acupuncture research.** 1991,16(1),69 (chi*). ref:13

Acute experiments were performed on 20 guinea pigs. The animals were divided at random into four groups of five each : the non-acupuncture group for control and three electroacupunctured groups (EA-1, EA-2, EA-3). Four pairs of platinum-wire electrodes were implanted under serosa of the antrum and corpus, duodenum, jejunum. The gastroenteric electric activity (GEA) was recorded in conscious and fasting state. Needling was applied at position 1cm below the knee, corresponding to Zusanli (St 36). The peripheral vomiting model was established by infusion of CuSo₄ into the stomach. Observation was made with regard to latency of vomiting induced by infusion of CuSo₄, duration of the symptom, number of fits in the first five minutes after the attack began, and the variation of amplitude and frequency of GEA. The

results were as follows. (1) The GEA of normal guinea pigs showed regular cyclic changes. After latency of 3.7 seconds following the infusion, symptom of vomiting began appear. The GEA returned to normal after latency of 60 minutes. (2) During vomiting, the GEA was characterized by a series of spikes that were seen more obviously in the antrum and corpus; during serious fits of vomiting, duodenum and jejunum were involved. The GEA showed disordered and quicker rhythm with higher amplitude and frequency. (3) EA could not affect the latency of the peripheral vomiting, but it could shorten the duration of the symptom. Results of group EA-2 ($p < 0.001$) showed EA could reduce the number of fits during the first five minutes; results of group EA-1 ($p < 0.01$) showed that EA could lower the amplitude and frequency of the GEA ($p < 0.05$) that rose during vomiting. This indicates that EA has certain regulating effect on the GEA of peripheral vomiting. The mechanism of EA on anti-emesis was primarily discussed. [10,03 /36e-aaa+cobaye-peristaltisme-5,12-]

97- gera: 64711/di/ra

[ADJUSTING EFFECT OF MOXIBUSTION ON GASTROINTESTINAL FUNCTION BASED ON CHANGES OF ELECTROGASTROGRAM AFTER MOXIBUSTION ON GONGSHUN POINT]. LI HUIXIAN. *liaoning journal of traditional chinese medicine*. 1991,18(11),32 (chi). ref:6 [10,01 /5,09-4rte-peristaltisme-]

99- gera: 66045/di/ra

[EFFECT OF ELECTRICAL STIMULATION UPON EAR POINT ON THE CONTRACTIVE FUNCTION OF GALLBLADDER]. SUN QINGWEI ET AL. *shanghai journal of acupuncture and moxibustion*. 1991,3,10 (chi). [10,11 /5,10-5,12-peristaltisme-]

101- gera: 82987/di/ra

EXPERIMENTAL OBSERVATION ON THE CORRELATION BETWEEN ELECTROGASTROGRAM AND NEEDLING TO "DEQI". WENG TAILAI ET AL. *chinese journal of acupuncture and moxibustion*. 1991,4(1),62-7 (eng). This article presented acupuncture at Zusanli in 17 patients of stomachache. The study revealed the remarkable rising of the amplitude of slow potential of stomach resulted from the "arrival of Qi". The amplitude during the acupuncture manipulation was notably different from that of pre- post acupuncture treatment, however the frequency remained unchanged. When the intensity and radiating direction of needling sensation were different they produced different reaction on the slow potential of stomach. This study has provided experimental evidence for the essence of the "arrival of Qi" in acupuncture. [10,05 /peristaltisme-36e-deqi-]

102- gera: 29279/di/ra

[EFFECTS OF ACUPUNCTURE AND MOXIBUSTION ON INTESTINAL PERISTALSIS (REPORT 2). INVESTIGATION OF STIMULATION POINTS. X. *journal of the japan society of acupuncture*. 1991,41(1),119. (jap). ref:0 [10,01 /5,09-peristaltisme-]

103- gera: 29280/di/ra

[EFFECT OF ACUPUNCTURE AND MOXIBUSTION ON INTESTINAL PERISTALSIS IN MICE (REPORT 2). INVESTIGATION DURING ACCELERATION AND DECELERATION OF INTESTINAL PERISTALSIS. X. *journal of the japan society of acupuncture*. 1991,41(1),120. (jap). [10,01 /5,09-peristaltisme-aaa+souris-]

104- gera: 65466/di/ra

[A STUDY ON THE EFFECT OF DIFFERENT ACUPUNCTURE MANIPULATIONS ON ELECTROGASTROGRAM]. XIN WEN-TANG. *shanxi journal of traditional chinese medicine*. 1991,7(4),33 (chi). [10,05 /peristaltisme-5,03-]

107- gera: 62321/ra/ra

[EFFECT OF ACUPUNCTURE ON GASTRIC PERISTALTIC WAVES OBSERVED BY ULTRASONOGRAPHY B]. ZHAO LEI. *shanghai journal of acupuncture and moxibustion*. 1991,1,13-4 (chi).

[10,05 /peristaltisme-]

108- gera: 37473/di/re

THE EFFECT OF ACUPUNCTURE ON GASTROINTESTINAL FUNCTION AND DISORDERS. LI Y ET AL. *american journal of gastroenterology*. 1992,87(10),1372-81 (eng).

Acupuncture has been used empirically in clinical practice in China for several millennia and has recently drawn interest as a mode of anesthesia. Despite extensive investigation, the exact mechanisms of its analgesic action are unknown, but are thought to involve endogenous opioid peptides. Only recently have studies attempted to evaluate the effect of acupuncture on gastrointestinal function and disease. A review of studies from both the Chinese and Western literature supports the efficacy of acupuncture in the regulation of gastrointestinal motor activity and secretion through opioid and other neural pathways. However, no firm conclusion can be drawn about the effectiveness of acupuncture in the treatment of specific gastrointestinal disorders because of the lack of properly randomized controlled trials. [10,01 /secretion-peristaltisme-rg-]

111- gera: 37298/di/re

ELECTRICAL ACUSTIMULATION RELIEVES VECTION-INDUCED MOTION SICKNESS. SENQI HU S ET AL. *gastroenterology*. 1992,102(6),1854-8 (eng).

The aim of this study was to examine the effects of electrical acustimulation on gastric myoelectric activity and severity of symptoms of motion sickness. In experiment 1, 16 Chinese subjects received electrical acustimulation in one of two sessions. In experiment 2, 45 white and black American subjects were randomly divided into three groups : acustimulation, sham acustimulation, and control. Each subject sat in an optokinetic drum for 15 minutes baseline and 15 minutes of drum rotation. Subjects' electrogastrograms and subjective symptoms of motion sickness were obtained. In experiment 1, the mean symptom score and tachyarrhythmia during acustimulation sessions were significantly lower than during no-acustimulation sessions. In experiment 2, the mean symptom score of the acustimulation group was significantly lower than that of the sham-stimulation group and the control group; tachyarrhythmia in the acustimulation group was significantly less than that of the control group but not the sham-stimulation group. In conclusion, electrical acustimulation reduces the severity of symptoms of motion sickness and appears to decrease gastric tachyarrhythmia. [10,03 /6mc-transport-peristaltisme-5,12-cta-]

113- gera: 36085/di/ra

[EFFECT OF ACUPUNCTURE AND MOXIBUSTION ON INTESTINAL PERISTALSIS (3RD REPORT) -CASE OF LOW FREQUENCY ELECTRO ACUPUNCTURE-]. X. *journal of the japan society of acupuncture*. 1992,42(1),18. (jap). ref:12 [10,06 /5,12-peristaltisme-]

114- gera: 36199/di/ra

[EFFECTS OF ACUPUNCTURE ON HUMAN ELECTROGASTROGRAPHIC STUDY]. X. *journal of the japan society of acupuncture*. 1992,42(1),132. (jap). [10,05 /peristaltisme-]

115- gera: 44834/di/ra

[EFFECT OF MOXIBUSTION ON GASTROINTESTINAL ELECTRIC ACTIVITY IN RABBITS THROUGH ZUSANLI (ST36) AND ITS MECHANISM]. XU GUAN SUN ET AL. *acupuncture research*. 1992,17(4),276 (chi). [10,01 /36e-5,09-peristaltisme-aaa+lapi-]

118- gera: 48801/di/ra

ELECTROACUPUNCTURE REVERSED THE INHIBITION OF INTESTINAL PERISTALSIS INDUCED BY INTRATHECAL INJECTION OF MORPHINE IN RABBITS. DAI-JIA-LE ET AL. *chinese medical journal*. 1993,106(3),220-4 (eng). Morphine elicits a series of adverse effects including the inhibition of intestinal motility in addition to the therapeutic benefit of alleviating postoperative pain. To ascertain the role

of electroacupuncture (EA) in diminishing those detrimental effects on recovery, we imitated the clinical procedures in rabbits. Morphine was given via a preimplanted cannula within spinal subarachnoid space, while the duodenal motility, respiration rate and arterial pressure were simultaneously recorded. It was found that morphine (6 mg / rabbit, IT) markedly suppressed duodenal peristalsis, decreased respiration rate through-out 90 min observation. When EA was administered together with morphine, peristalsis of the duodenum was much less inhibited ($P < 0.05$, vs morphine alone group), but no significant improvement of respiratory depression was noticed ($P > 0.05$), Nor obvious change of arterial pressure in both groups. The results strongly recommend extensive application of EA in postoperative care, so as to decrease both the required dosage of morphine and the subsequent occurrence of postoperative ileus, while attaining sufficient analgesia. [10,08 /6rte-peristaltisme-21,04-36e-aaa+lapi-]

119- gera: 48645/di/ra

[EFFECT OF ELECTRICAL ACUPUNCTURE ON ELECTRICITY OF STOMACH OF RABBIT]. GE BAOHE. *journal of shandong college of traditional chinese medicine.* 1993,17(6),56 (chi*).

Cold and hot electrical acupuncture was operated on rabbits with low and high stomach function from drugs and electrogastrogram was used to determine the effects. The results proved that the hot electrical acupuncture has dual regulation to electricity of stomach with low or high function but cold electrical acupuncture has not the same function. The author suggests that hot electrical acupuncture is better for patients with abnormal function of stomach. [10,05 /aaa+lapi-5,12-peristaltisme-]

121- gera: 4315/di/cg

EXPERIMENTAL STUDY OF EFFECTS OF ACUPUNCTURE AND MOXIBUSTION ON INTESTINAL MOTILITY IN CONSCIOUS RATS. IWA M ET AL. *third world conference on acupuncture.* 1993,172. (eng).

[10,06 /peristaltisme-5,09-aaa+rat-]

122- gera: 4335/di/cg

EXPERIMENTAL STUDY OF EFFECTS OF ACUPUNCTURE AND MOXIBUSTION ON INTESTINAL MOTILITY IN MICE. IWA M ET AL. *third world conference on acupuncture.* 1993,173. (eng). ref:0

[10,06 /5,09-peristaltisme-aaa+souris-]

123- gera: 5741/di/cg

MECHANISM OF THE REFLEX INHIBITION AND EXCITATION OF GASTRIC MOTILITY ELICITED BY ACUPUNCTURE-LIKE STIMULATION IN ANESTHETIZED RATS. KASHIWAGI H. *third world conference on acupuncture.* 1993,251. (eng). ref:0

[10,05 /25,02-peristaltisme-aaa+rat-]

124- gera: 46952/di/ra

[INFLUENCE OF ACUPUNCTURE WITH LIFTING AND THRUSTING MANIPULATIONS FOR REINFORCING AND REDUCING ON GASTRIC ELECTRICAL ACTIVITIES]. LI WANYAO ET AL. *chinese acupuncture and moxibustion.* 1993,13(3),29 (chi*). ref:0

In the present study, the effect of acupuncture with lifting and thrusting manipulations on frequency spectrum of gastric electrical activities was investigated. By means of gastroscopie gastroduodenal ulcer or gastroduodenal inflammation was diagnosed in 32 cases. The illness was due to deficiency of the spleen and stagnation of the Liver-qi according to differentiation of symptoms and signs. The gastroenteric electrical activities were observed and analysed with a microcomputer. The patients were divided into three groups, each of which received one of the following three needling maneuvers : retaining needling, reinforcing and reducing methods. Zusanli point (ST36) on the right side of the body was punctured. The results showed that the mean value of the predominant frequency in the gastric spectrum was elevated by retaining needling and slightly reduced with reinforcing or reducing maneuver. It was shown that the amplitude of

predominant frequency in electrical gastric activity was elevated with retaining needling method, while lowered with reinforcing maneuver. The difference between the two groups was statistically significant ($P < 0.05$). It is suggested that the influences of different needling maneuvers on gastric movement vary remarkably. [10,05 /36e-peristaltisme-td-]

125- gera: 2118/di/ra

THE CLINICAL AND EXPERIMENTAL OBSERVATION ON THE EFFECT OF AURICULAR ELECTRO-ACUPUNCTURE ON THE GASTROGRAM OF HUMAN BODY. LI XINHONG ET AL. *world journal of acupuncture-moxibustion.* 1993,3(4),24-7 (eng).

119 patients with gastroduodenal diseases were observed, clinically and experimentally, on the effect of electro-acupuncture at the auricular acupoint "Gastric area" on gastrogram, and the effect was compared with that of Heart area and Ear tip points. There was a significant difference in the amplitudes and frequencies of gastrogram of patients between pre- and post-acupuncture ($P < 0.01$), with good diphasic regulation; the effect of acupuncturing at "Gastric area" is the most significant as compared with that at "Heart" and "Ear tip". The experiment demonstrates that there is a relationship between the "Gastric area" and stomach, and indicates that there is relative specificity, of "Gastric Area" to stomach. This provides the experimental foundation for the auricular acupoint therapy in clinic. [10,05 /specificite-peristaltisme-]

126- gera: 46588/di/ra

[STUDY ON EFFECT OF ELECTROACUPUNCTURE AT ZUSANLI (ST36) POINT IN REGULATING THE PYLORUS PERISTALTIC FUNCTION]. QIAN LI-WEI ET AL. *chinese journal of integrated traditional and western medicine.* 1993,13(6),336 (chi*). ref:8

The effect of electroacupuncture at Zusanli (ST36) point in regulating the human pylorus sphincter pressure was investigated in this study by means of endoscopic manometry. The result showed : After electrostimulating Zusanli point, the amplitude of the low wave of pylorus sphincter pressure were raised and the amplitude of the high wave was reduced significantly while the amplitude of the middle wave did not reveal significant change, compared with the results of the controls and the non-acupuncture point group. It is indicated that Zusanli point may have dual effect on the regulation of the pylorus peristaltic function, which expressed itself as enhancing the hypofunction and weakening the hyperfunction of pylorus peristaltis. [10,05 /specificite-peristaltisme-36e-5,12-cta-]

127- gera: 45092/di/re

NEURAL MECHANISMS OF THE REFLEX INHIBITION AND EXCITATION OF GASTRIC MOTILITY ELICITED BY ACUPUNCTURE-LIKE STIMULATION IN ANESTHETIZED RATS. SATO A ET AL. *neuroscience research.* 1993,18(1),53-62 (eng).

The effects of acupuncture-like stimulation of the various segmental areas on gastric motility were examined in anesthetized rats. An acupuncture needle (diameter 340 microns) was inserted into the skin and underlying muscles at a depth of 4-5 mm and was twisted right and left once every second for 60 s. Gastric motility in the pyloric region was measured with the balloon method. Gastric motility was inhibited by acupuncture-like stimulation applied to the abdomen and lower chest region, and was often excited when the limbs were stimulated, in all cases in which stimuli were delivered to the skin and muscles, the skin alone, and the underlying muscles alone. The inhibitory gastric response to abdominal stimulation was accompanied by an increase in the activity of the gastric sympathetic efferent nerve and was abolished by severance of either the sympathetic nerve branches to the stomach or the lower thoracic spinal nerves. The abdominal stimulation enhanced the activity of the lower thoracic spinal afferent nerves. The excitatory gastric response to hindpaw stimulation was accompanied by an increase in the activity of the gastric vagal efferent nerve and was abolished by severance of either the bilateral vagi or the femoral and sciatic nerves. The hindpaw stimulation enhanced the activity of the femoral and sciatic afferent nerves. In the spinalized animals, the inhibitory gastric response elicited by abdominal

stimulation was present, and the hindpaw stimulation did not produce any gastric response. We conclude that the inhibitory gastric response elicited by acupuncture-like stimulation of the abdomen is a reflex response. Its afferent nerve pathway is composed of abdominal cutaneous and muscle afferent nerves, the efferent nerve pathway is the gastric sympathetic nerve, and its reflex center is within the spinal cord. The excitatory gastric response elicited by acupuncture-like stimulation of a hindpaw is also a reflex response. Its afferent nerve pathway is composed of hindpaw cutaneous and muscle afferent nerves, the efferent nerve pathway is the gastric vagal efferent nerve, and its reflex center requires the presence of the brain. Furthermore, the excitatory and the inhibitory gastric reflex responses were not influenced by i. v. administration of naloxone (0. 4-4 mg/kg), suggesting that endogenous opioids are not involved in the present reflexes. [10,05 /peristaltisme-25,02-mu-shu du dos-*aaa*+rat-]

128- gera: 48274/nd/ra
[PRELIMINARY DISCUSSION ON CHINESE MATERIA MEDICA OF GASTRIC MOTILITY]. SHA JIANFEI. *acta medica sinica*. 1993,8(6),5 (chi). ref:21
 [10,05 /peristaltisme-]

129- gera: 48298/di/ra
[EXPERIMENT OF SHANGYANG ACUPOINT IMPORTING SOUND WAVE TO STIMULATE THE MOVEMENT EFFECT OF COLON]. SUN PINGSHENG ET AL. *liaoning journal of traditional chinese medicine*. 1993,20(12),30 (chi).
 [10,06 /peristaltisme-1gi-]

130- gera: 15089/di/ra
ANALISIS DEL EFECTO DE LA PRESION EN PUNTOS DE AURICULOPUNTURA SOBRE LA FUNCION MOTORA DE LA VESICULA BILIAR. XINLIAN L ET AL. *revista de la medicina tradicional china*. 1993,3(4),42. (esp).
 [10,11 /5,10-peristaltisme-acupression-]

131- gera: 47378/di/ra
[EFFECT OF ASTRAGALUS MEMBRANACEUS ON MYOELECTRIC ACTIVITY OF SMALL INTESTINE]. YANG DE-ZHI ET AL. *chinese journal of integrated traditional and western medicine*. 1993,13(10),616 (chi*). ref:0
 Astragalus membranaceus (AM) is one of the important Chinese medicinal herbs which are widely used and well known for its invigoration of vital energy. In the present experiment, the cycle duration of interdigestive myoelectric complex (IDMEC) and the durations of every phase were observed electrophysiologically before and after the 25% concentrated solution (1 ml/kg) was instilled into the empty stomach of the healthy, awakened dog. Signals of IDMEC were recorded by microcomputer. No significant change was found in duodenum in each criteria except for phase which became slightly longer ($P < 0. 05$). While in jejunum the shortening of phase I and the prolonging of phase II were both significant ($P < 0. 01$) and the cycle duration was also extended ($P < 0. 05$) as well as increase of action potential on phase II and within the cycle ($P < 0. 05$), with phase III and IV remained unchanged ($P > 0. 05$). These results indicated that AM could strengthen the movement and muscle tonus in intestine (esp. in jejunum) and might serve as the scientific evidences to elucidate the effects of AM on the movements in digestive tracts. [10,06 /peristaltisme-]

132- gera: 47648/di/ra
[EFFECT OF BAOHE TANG FOR ELECTROGASTROGRAM PARAMETER]. ZHENG SHIBI ET AL. *fujian journal of traditional chinese medicine*. 1993,24(4),18 (chi).
 [10,05 /peristaltisme-]

133- gera: 53736/di/ra
[INFLUENCE OF ELECTRO-STIMULATION AT AURICULO-STOMACH POINT IN ELECTROGASTROGRAM OF PEPTIC ULCER PATIENTS]. CAI GUO-WEI ET AL. *chinese journal of integrated traditional and western medicine*. 1994,14(11),656 (chi*).
 Through observation on electrogastrogramm (EGG) with electro-stimulation at Auriculo-Stomach and Auriculo-Heart

points and in 60 gastric and duodenal ulcer patients without any treatment as control. Results showed that after electro-stimulation at Stomach point the EGG amplitude of ulcer patients' gastric antrum and corpus was reduced ($P < 0. 01$). But there was no such effect in that at Heart point and in the control ($P > 0. 05$). There were also no effects of three methods on the EGG frequency of ulcer patients' gastric antrum and corpus ($P < 0. 05$). It proves that electro-stimulation at Stomach point has some therapeutic effect to ulcer patients. [10,05 /5,10-peristaltisme-specificite-]

134- gera: 45172/nd/re
ROLLING REVIEW : DISORDERS OF GASTROINTESTINAL MOTILITY. THERAPEUTIC POTENTIALS AND LIMITATIONS. GWEE KA ET AL. *aliment pharmacol ther*. 1994,8(1),105-18 (eng).
 [10,01 /peristaltisme-]

135- gera: 48930/di/ra
EFFECTS OF ACUPUNCTURE AND MOXIBUSTION ON INTESTINAL MOTILITY IN MICE. IWA M ET AL. *american journal of chinese medicine*. 1994,22(2),119-25 (eng). ref:129

To study the effects of acupuncture and moxibustion on intestinal motility, the distance of intra-intestinal movement of a carbon solution injected into the stomach of a mouse was evaluated. Intestinal motility was also evaluated using several drugs to accelerate or reduce intestinal motility. Our results indicate that intestinal peristalsis was accelerated significantly by acupuncture at the abdomen, but suppressed by moxibustion. The intestinal peristalsis acceleration by vagostigmin was reduced significantly by both acupuncture and moxibustion, while the reduction of intestinal peristalsis by atropine was accelerated significantly. However, no remarkable changes of intestinal peristalsis were observed with treatment by acupuncture and moxibustion after reduction by epinephrine. [10,06 /*aaa*+souris-5,09-peristaltisme-]

136- gera: 49328/di/ra
[PRELIMINARY OBSERVATION ON RELATIONSHIP AMONG TONGUE PICTURES, TASTES AND ELECTROGASTROGRAMS - ANALYSIS OF 225 CASES]. JIA YANG ET AL. *shanghai journal of traditional chinese medicine*. 1994,8,10 (chi). ref:11
 [4,02 /peristaltisme-gout-]

137- gera: 17546/di/ra
EFFECTS DE LA ACUPUNTURA SOBRE LA ACTIVIDAD MIOELECTRICA DEL ESFINTER DE ODDI EN HUMANOS. JINLONG L ET AL. *revista de la medicina tradicional china*. 1994,4(1),45. (esp).
 [10,11 /peristaltisme-]

138- gera: 53851/di/ra
[REGULATIVE EFFECTS OF ELECTROACUPUNCTURE ON GASTRIC HYPERFUNCTION INDUCED BY ELECTROSTIMULATION OF THE LATERAL HYPOTHALAMUS AREA OF RABBITS]. MA CHENG ET AL. *acupuncture research*. 1994,19(2),42-6 (chi*). ref:0
 This paper reported our observation of the action of acupuncture on the change of gastric function induced by the excitation of the lateral hypothalamus area (LHA, the feeding center), and research on the mechanism of the acupuncture to inhibiting excessive appetite and reducing hunger in obese people. Electroacupuncture at Zusanli (ST 36) or Neiting (ST 44) could inhibit the hyperactivity of the stomach induced by stimulation of LHA ($P < 0. 05$, $P < 0. 01$). The electroacupuncture effect on LHA remained statistically significant ($P < 0. 05$, $P < 0. 01$) 0. 5-2. 5 hours after acupuncturing. The alpha-receptor blocking agent phentolamine (1mg/kg) was not distinctly affected ($P > 0. 05$) on the inhibition of electroacupuncturing Zusanli (ST 36) to restrain the hyperactivity of the stomach induced by stimulation on LHA; But beta-receptor blocking agent propranolol (0. 3mg/kg) could obviously inhibit the effect of electroacupuncturing Zusanli (ST 36) to restrain hyperactivity of stomach triggered by excitation of the LHA. The result shows that electroacupuncture obviously inhibits gastric

hyperfunction caused by excitation of the LHA, for as long as over 3 hours, thus indicating the participation of the humoral factors. Since the electroacupuncture at Zusanli (ST 36) only inhibits gastric hyperfunction caused by excitation of the LHA, it is suggested that the electroacupuncture has an anticholinergic effect through the gastric beta receptor, therefore it inhibits the appetite, relieves hunger and reduces body weight in obese people. [9,08 /eaa+lapin-potentialisation-25,05-5,12-44e-peristaltisme-36e-]

139- gera: 56045/di/ra

EFFECT OF ELECTRONEEDLING OF ZUSANLI ON KINETIC FUNCTION OF HUMAN PYLORUS. QIAN LI-WEI ET AL. **international journal of clinical acupuncture.** 1994,5(2),139-44 (eng). [10,05 /peristaltisme-36e-]

140- gera: 48141/di/ra

[STUDY ON GASTROELECTRIC ACTIVITY AND GASTRIC MOTILITY IN EXPERIMENTAL SPLEEN DEFICIENCY RATS]. QU RUI-YAO ET AL. **chinese journal of integrated traditional and western medicine.** 1994,14(3),156 (chi*). ref:0

Using electrode and highly sensitive strain sensor to record alterations of gastroelectric activity and gastric motility, during experimental Spleen Deficiency (SD) rats was conducted. As compared with control, frequency of slow wave (time/3 min) did not obviously change (11.71 ± 0.71 and 12.50 ± 0.55 , $P < 0.05$), but amplitude (mV) of which reduced significantly (0.14 ± 0.05 and 0.37 ± 0.04 , $P < 0.01$), while that of fast wave also decreased. In self-recovered group, the amplitude of slow wave recovered slightly (0.22 ± 0.08 and 0.37 ± 0.04 , $P > 0.005$). After treatment with modified Sijunzi Tang, the gastric activities of SD rats elevated to levels of control ($P > 0.05$), but gastric motility remained weak in SD group. Although the motility of self-recovered group improved to a certain degree, however, the main indices had no significant difference from SD group ($P > 0.05$). It suggested that there were significant changes of gastric activity in SD and Chinese herbs could improve the syndrome apparently. [10,05 /peristaltisme-ea+rat-vid+rtte-]

141- gera: 48102/di/ra

[EFFECTS OF DINGDUWAN ON ELECTRIC ACTIVITIES OF GASTROINTESTINAL SMOOTH MUSCLE AND EFFECT OF GASTROINTESTINAL MOTILITY]. SUN SONG-SAN ET AL. **chinese journal of integrated traditional and western medicine.** 1994,14(7),424 (chi*).

Dingduwan (DDW) is a Chinese herbal medicine. Method of modified synchronous recording was used to study the electric activities of gastrointestinal (GI) smooth muscle and the effect of GI motility treated by DDW. A dosage of 3.5 g/kg for ingestion in rats markedly increased the average amplitude of GI slow wave, the total amplitude of GI motion, the rate of GI slow wave and intestinal motion ($P < 0.05$), but it had no significant effects on the frequency of gastroelectric slow wave and gastric motility ($P < 0.05$). DDW in the dosage of 5.2 g/kg for ingestion markedly promoted the recovery of intestinal intussusception in mice ($P > 0.05$). The results showed that DDW markedly increased the intestinal electricity and motility more than that of stomach. [10,06 /eap+souris-peristaltisme-]

142- gera: 49940/nd/re

PHARMACOLOGICAL PROFILE OF GASTRIC MUCOSAL PROTECTION BY MARMIN AND NOBILETIN FROM A TRADITIONAL HERBAL MEDICINE, AURANTII FRUCTUS IMMATURUS. TAKASE H ET AL. **jpn j pharmacol.** 1994,66(1),139-47 (eng).

We studied the effects of marmin and nobiletin on the experimental acute gastric lesions, gastric transmucosal potential difference (PD) and gastric motor activity in rats and the contractions of isolated guinea pig ileum. Oral administration of marmin and nobiletin inhibited both the appearance of ethanol-induced gastric hemorrhagic lesions dose-dependently in a dose range of 10-50 mg/kg, with ED50 values for marmin and nobiletin being 17.2 and 8.0 mg/kg, respectively. However, marmin and nobiletin had minimal effects on aspirin-induced gastric lesions at a dose of 50

mg/kg, respectively. Marmin and nobiletin had no significant influence on the basal PD. Intragastrical administration of marmin and nobiletin at a dose of 25 mg/kg significantly prevented the PD reduction induced by ethanol. Both marmin and nobiletin given intragastrically at 25 mg/kg significantly inhibited gastric motor activity measured as intraluminal pressure recordings. Marmin and nobiletin exhibited concentration-dependent relaxations of contractions induced by acetylcholine, transmural electrical stimulation and histamine in isolated guinea pig ileum, respectively. These findings suggest that the anti-ulcer effects of marmin and nobiletin are ascribed primarily to the maintenance of the mucosal barrier integrity and inhibition of gastric motor activity and secondarily due to the prevention of the effects of endogenous acetylcholine and histamine. [10,05 /peristaltisme-eap+rat-]

143- gera: 53845/di/ra

[INFLUENCE OF STRESS ON GASTROENTERIC ELECTRIC ACTIVITY AND MODULATED EFFECT OF ACUPUNCTURE ON IT IN RATS]. XU GUANSUN ET AL. **acupuncture research.** 1994,19(2),72-4 (chi).

Experiments were performed in SD rats. Three pairs of bipolar electrode were implanted surgically on the antrum, ascending and descending colon of rats. The stress model was induced by restraint cold immersion (4 degrees C Water, 30-40 min.). The modulating effect of Zusanli ST36 acupuncture on gastroenteric electric activity was investigated. The inhibitory effects of gastro-colon electric activity were obviously displayed in stress rats, such as the frequency and amplitude of slow wave were reduced, rhythmic disorder, degree of dispersion was enlarged, fast wave was decreased and the IDMEC phase III was prolonged or disturbed. Acupuncture of Zusanli could effectively reduce the inhibition effect of gastro-colon electric activity induced by stress in rats. [10,05 /eap+rat-peristaltisme-36e-]

144- gera: 53730/di/ra

[EFFECTS OF PAEONIA-GLYCYRRHIZA DECOCTION ON CHANGES INDUCED BY CISPLATIN IN RATS]. XU JI-DE ET AL. **chinese journal of integrated traditional and western medicine.** 1994,14(11),673 (chi*).

In order to study the effects of Paeonia-Glycyrrhiza decoction (PGD) on the changes induced by cisplatin in rats, platinum-wire bipolar electrodes were inserted into the serosal membrane of the small intestine and migrating myoelectric complex (MMC) was used as index. After intravenous injection of cisplatin at doses of 4 mg/kg, the duration of the MMC cycles was significantly shorter than that of normal MMC cycles ($P < 0.05$) while the duration of phase III was remarkably prolonged comparing with that of normal phase III ($P < 0.01$) with latent period of 53.2 ± 20.4 minutes. Taking PGD orally, cisplatin no longer induced the changes of MMC. The results suggest that PGD has marked adjusting effects on the changes of MMC induced by cisplatin. This might be one of the causes of PGD in relieving diarrhea induced by cisplatin in rats. [10,06 /chimiotherapie-peristaltisme-]

145- gera: 49979/di/ra

[EFFECTS OF DACHENGGI DECOCTION ON GUT HORMONES AND INTESTINAL MOVEMENT AFTER CHOLECYSTECTOMY]. YOU SHENG-YI ET AL. **chinese journal of integrated traditional and western medicine.** 1994,14(9),5224 (chi*).

In order to elucidate the mechanism of postoperative intestinal dysfunction and the effects of Dachengqi Decoction (DCQD) on it, somatostatin (SS), gastrin (GAS), vasoactive intestinal polypeptide (VIP), substance P (SP), motilin (MOT) and atrial natriuretic peptide (ANP) were determined, frequency and spectrum of peristaltic sound were simultaneously analyzed in 31 subjects undergoing cholecystectomy, the value of pre-, post-operation and post-medication were compared. Plasma SS and MOT decreased postoperatively ($P < 0.05$), DCQD elevated SS and MOT to higher level than preoperation, VIP, SP increased for half fold ($P < 0.05$). Gurgling sound diminished after operation, whereas DCQD normalized it. Peak frequency (Fmax) of gurgling ranging from 234.4 to 468.2 Hz preoperatively, mean frequency (FA) was 341.8 ± 30.9 Hz postoperatively. FA reduced to 322.3 ± 79.4 , DCQD elevated

it to 374.2 ± 57.1 Hz. The result suggested that intestinal motility was disturbed after cholecystectomy, bowel was in dystonic status, accompanying with decreased plasma MOT, DCQD promoted intestinal peristalsis and enhanced its tonus. The influence of gut peptides might be one of the important pathway that DCQD works. [10,06/peristaltisme-secretion-]

146- gera: 49731/di/ra

[STUDIES ON GASTRIC MOTILITY IN PATIENTS WITH SPLEEN-DEFICIENCY SYMPTOMS]. ZHANG BING ET AL. *chinese journal of integrated traditional and western medicine*. 1994,14(6),346 (chi*).

By using a method for synchronously-detecting gastric myoelectric activity and intraluminal pressure and a radioimmunoassay of plasmic motilin, gastric motility, plasmic level of motilin and their relationship in 12 normal individuals and in the patients with a variety of Spleen-Deficiency (SD) Syndromes, i. e. 12 SD with Cold type (H type), 7 SD with Stomach-Yin-Deficiency type(I type), 38 SD with Heat type (R type) and 6 SD with Liver-Qi-Stagnation type (U Type) were investigated. The results showed: degree of myoelectric dysrhythmia and rate of electro-mechanical decouple in all patients (except for I type) were much higher than those in the normals ($P < 0.01$ or $P < 0.05$); both mean frequency and amplitude of contraction in the patients were decreased; percentage of contractive action in the patients (except for I type) was lower than that in the normals ($P < 0.05$); plasmic level of motilin in the patients (except for I type) had a tendency to increase and had a linear correlation to degree of myoelectric dysrhythmia ($r = 0.33$, $P < 0.01$). It was suggested that some significant disorders of gastric motility exist in different SD patients and there might be an intrinsic cause effect relationship among increased plasmic motilin, myoelectric dysrhythmia and abnormal mechanical motion. The similar changes suggested that there is pathophysiological mechanism of SD syndrome. Furthermore, this synchronously-detecting method was useful to discover intrinsic relationship between gastric myoelectric activity and mechanical motion. [10,05/vide+yin+e-stase+qi+f-vide+rte-peristaltisme-]

147- gera: 85111/di/ra

THE INFLUENCE OF ACUPUNCTURE "LIANGQIU" ACUPOINT ON THE PERISTALSIS FORWARD FUNCTION OF INTESTINE OF MOUSE (abstract). ZHAO LIANZHU ET AL. *acupuncture research*. 1994,3-4,113-4 (eng).

[10,06/peristaltisme-eaa+souris-]

148- gera: 34653/di/ra

[INFLUENCE OF STIMULATING ZUSANLI WITH MOXIBUSTION OF DIFFERENT QUALITY AND QUANTITY ON GASTROINTESTINAL MOTOR FUNCTION OF RESERPINISED RATS]. LIU NONGYI ET AL. *acupuncture research*. 1995,20(1),48 (chi*). ref:0

This article is focused on the observation of changes in body temperature, body weight, cholinesterase activity in blood, and gastrointestinal motility of reserpinized rats treated by stimulating Zusanli (ST36) with moxibustion of different quality. (mugwort floss or pipe tobacco) and quantity (strong stimulation or weak stimulation). The experiment shows that better results are achieved with moxibustion not by burning tobacco; the result of strong stimulation with moxa-sticks is better than that of weak stimulation with the same material. Strong stimulation with moxa-sticks can obviously increase the activity of cholinesterase ($P < 0.05$), inhibit hyperactive gastrointestinal motility ($P < 0.05$), maintain normal body temperature ($P < 0.05$), and prevent body weight loss. All these show that therapeutic results of moxibustion are closely related to the quality and quantity of moxibustion. [10,01/peristaltisme-36e-eaa+rat-vid+qi+rte-5,09-]

149- gera: 54443/di/re

P6 ACUPRESSURE REDUCES SYMPTOMS OF VECTION-INDUCED MOTION SICKNESS. SENQI HU ET AL. *aviation, space, and environmental medicine*. 1995,66(7),631-4 (eng).

PURPOSE: The purpose of the study was to examine the effectiveness of P6 acupressure on nausea associated with visually-induced motion sickness. **METHOD:** There were 64

subjects randomly divided into 4 groups: P6 acupressure, dummy-point acupressure, sham P6 acupressure, and control. Each subject sat in an optokinetic drum for a 12-min baseline and 12-min drum rotation period. Subjects' electrogastrograms (EGG's) and subjective symptoms of motion sickness were obtained. **RESULTS:** The results indicated that the subjects in the P6 acupressure group reported significantly less nausea [$F(3,60) = 8.16$, $p < 0.0001$] during drum rotation period than those in the dummy-point acupressure, sham acupressure, and control groups. The scores for symptoms of motion sickness of the P6 acupressure group were significantly lower than those in the sham acupressure and control groups [$F(3,60) = 3.49$, $p < 0.02$]. Also, the subjects in the P6 acupressure group showed significantly less abnormal gastric myoelectric activity, tachyarrhythmia, than those in the sham acupressure and control groups [$F(3,60) = 2.78$, $p < 0.04$]. However, the subjects in the dummy-point acupressure group did not report significantly fewer symptoms and show less tachyarrhythmia than those in the sham acupressure and control groups. **CONCLUSION:** We conclude that P6 acupressure reduces the severity of symptoms of visually-induced motion sickness and gastric tachyarrhythmia. [10,03/6mc-eaa-placebo-peristaltisme-transport-]

150- gera: 22137/di/ra

[INHIBITION OF ABDOMINAL ACUPUNCTURE STIMULATION ON ELECTROGASTROGRAPHIC (EGG) STUDY]. X. *journal of the japan society of acupuncture*.

1995,45(1),112. (jap). ref:25

[10,05/peristaltisme-]

151- gera: 23531/di/ra

[APPLICATION OF CHINESE TRADITIONAL DRUGS WITH POTENTIAL OF STOMACH MOTILITY]. XIAOLIN T ET AL. *journal of tcm*. 1995,36(8),463 (chi). ref:0

[10,05/peristaltisme-]

152- gera: 54294/di/ra

[DYNAMIC OBSERVATION ON THE CHANGES IN CAPACITY OF GASTRIC ANTRUM UNDER NEEDLING DIFFERENT ACUPOINTS OF FOOT YANGMING MERIDIAN IN HUMAN BODY]. YAN JIE ET AL. *acupuncture research*.

1995,20(1),60-5 (chi).

[10,05/specificite-peristaltisme-]

153- gera: 72660/di/ra

(EFFECT OF SHASHEN MAIDONGG DECOCTION ON GASTRIC MOTILITY IN VITRO). FENG WEI-HONG ET AL. *chinese journal of integrated and western medicine*. 1996,16(3),164 (chi*).

Effect of Shashen Maidong Decoction (SSMDD) on the gastric motility of mice and rats was observed in viva. Results showed that the gastric phenol red excretion rate of mice could be reduced markedly by SSMDD given in various dosages (23g kg-l d-l, 9g kg-l d-l or 23g kg-l d-l for 5 days successively), $P < 0.05$. By administration of 9g kg-l d-l or 23g kg-l d-l could antagonise the acceleration of gastric emptying induced by neostigmine in mice ($P < 0.05$, $P < 0.01$). 7 g/kg of SSMDD by gastrogavage could inhibit the frequency and amplitude of contraction of fundic longitudinal muscle using strain gauge transducer in rats, but the effect was not obvious on that of antral circular muscle. By water-ballon method, it was observed that SSMDD 3.5 g/kg or 7 g/kg intraduodenal perfusion could slow down the frequency and decrease the amplitude of gastric peristalsis, 7g/kg could inhibit significantly the gastric hyper-motility induced by subcutaneous injection of indometacin (40mg/kg), but had no obvious effect on the gastric hypermotility induced by intramuscular injection of reserpine (0.4mg kg-l · d-1x4d). [10,05/peristaltisme-eap-rat-]

154- gera: 87207/co/re

ELECTRICAL STIMULATION OF ACUPUNCTURE POINTS ENHANCES GASTRIC MYOELECTRICAL ACTIVITY IN HUMANS. LIN X ET AL. *am j gastroenterol*. 1997,92(9),1527-30 (eng).

OBJECTIVE: Acupuncture is known to enhance gastric motility. Electrical acustimulation has been shown to reduce gastric tachyarrhythmia in vection-induced motion sickness. The

aim of this study was to investigate the effect of electrical stimulation of acupuncture points on gastric myoelectrical activity in healthy humans. **METHODS:** Nine healthy native Chinese were studied. Gastric myoelectrical activity was recorded using surface electrogastrography (EGG). The EGG recording was made in the fasting state, in a study period during which acupuncture points were electrically stimulated continuously, and in a recovery period after stimulation. The percentage of regular slow waves was assessed by computing the percentage of 2 to 4 cycles per minute slow waves in the EGG. **RESULTS:** Electrical stimulation significantly increased the percentage of regular slow waves, which was sustained in the recovery period. The increase of the regular slow wave activity resulted from the normalization of arrhythmia. **CONCLUSION:** Electrical stimulation of acupuncture points may enhance the regularity of gastric myoelectrical activity and may be an option for treatment of gastric dysrhythmia. [10,05 /peristaltisme-]

155- gera: 56572/di/ra

[INFLUENCE OF STIMULATING ZUSANLI (ST36) WITH DIFFERENT QUALITY, QUANTITY OF MOXA AND THE TYPE OF MOXIBUSTION ON ELECTRO-GASTROACTIVITY OF RABBITS]. LIU NONGYU ET AL. **acupuncture research.** 1997,22(3),173 (chi*). [10,05 /peristaltisme-]

156- gera: 56567/di/ra

[THE EFFECT OF MOXIBUSTION AT ZUSANLI POINT ON THE ALTERATION OF RABBIT'S INTESTINE ELECTRICITY CAUSED BY PITUITRIN]. ZHOU MEIQI. **acupuncture research.** 1997,22(3),164 (chi*). [10,06 /peristaltisme-]

157- gera: 59826/di/ra

OBSERVATION ON FREQUENCY SPECTRUM OF ELECTROGASTROGRAM (EGG) IN ACUPUNCTURE TREATMENT OF FUNCTIONAL DYSPEPSIA. CHEN R ET AL. **journal of traditional chinese medicine.** 1998,18(3),184-7 (eng). [10,03 /peristaltisme-]

158- gera: 59135/nd/ra

EFFECT OF TRAGUS CLIPS ON GASTRIC PERISTALSIS: A PILOT STUDY. CHOY DS ET AL. **j altern complement med.** 1998,4(4),399-403 (eng). ref:

In the past 22 years we have used the "hunger point" on the tragus of the ear to induce aversion to cigarette smoking and inhibit appetite for weight reduction with varying degrees of success. This has generally been accomplished by inserting press needles into the tragus of both ears. Because these needles gradually lose effect over a 5 to 7 day period, they have had to be changed every 5 to 7 days. To obviate this need, earclips (Aculite; IOpeners, Cranston, RI) were devised to be worn on the tragus. Previous work using press needles on the tragus induced slowing of gastric peristalsis, thought to be mediated by inhibition of a branch of the vagus nerve that innervates the tragus. The present study measured the duration of single gastric peristaltic waves before and after wearing the earclips for two cycles. There was a marked prolongation of gastric peristalsis time (GPT) when the earclips were applied, a return to baseline times when the clips were off, and a second, but less dramatic prolongation when the clips were on, $p = 0.01$. We conclude that the earclips were effective in delaying gastric peristalsis, and may have value in reducing appetite in association with weight loss programs. [10,05 /peristaltisme-5,10-acupression-]

159- gera: 72729/di/ra

EFFECT OF MOXIBUSTION IN THE ACUPOINTS B-27 (XIAOCHANGSHU), VC-4 (GUANYUAN), B-21 (WEISHU) AND VC-12 (ZHONGWAN) IN XIAOCHANG (INTESTINO DELGADO). FUKUYAMA JUNJI MILLER ET AL. **revista paulista de acupuntura.** 1998,4(2),68-4 (por*). ref:

The objective of this work is to study the effect of the moxibustion in the acupoints Shu-Mo corresponding to Wei (stomach) and to Xiaochang (small intestine) in gastrointestinal motility. Material- 68 female EPM-I/Wistar rats were used,

weight ranging from 195 to 230 grams; pasty substance made of powdered coal (28.57%), powdered Arabic gum (28.57%), and filtered water (42.85%), and moxa in stick. **Methods -** The animals were kept on a 24 hour fast, randomly distributed in 4 groups of 17 female rats each, submitted the administration of 1.5 ml of the pasty substance of coal, with previous superficial anesthesia of sulfuric ether, and submitted to the following procedures. **CONTROL GROUP (I):** The female rats were returned to the cage. **MOXA GROUP (II):** The female rats were kept under anesthesia with sulfuric ether, the acupoints B-21 (Weishu), B-27 (Xiaochangshu), VC-12 (Zhongwan) and VC-4 (Guanyuan) were located and the moxibustion technique was performed for 5 minutes under narcosis. At the end of moxibustion the female rats were returned to the cage. **SHAM GROUP (III):** non-acupoints were located (bilateral anterior axillary area) and the moxibustion technique was performed for 5 minutes, under narcosis. **ETHER GROUP (IV):** The female rats were kept under anesthesia with sulfuric ether for 5 minutes. At the end of the scheduled time, they were returned to the cage. All animals in the 4 groups were sacrificed with sulfuric ether in the twentieth minute of the experiment. Surgical removal of the small intestine and clamping of the distal portion reached by the coal were performed, and the progression distance of coal since the pylorus and the total length of the small intestine were measured. **Results -** Kruskal-Wallis points variance analysis and the multi comparison test showed that groups CONTROL and MOXA did not present much difference, and had an absolute progression of coal that was significantly longer than SHAM and ETHER groups. As to the length of the small intestine, no significant value among the groups was found. Variance analysis of Kruskal-Wallis points showed as regards the percent ratio (coal progression/length of small intestine), that the CONTROL and MOXA groups did not vary significantly and that they exhibited a significantly higher percent than the values observed in the SHAM and ETHER GROUPS. [10,16 /4vc-27v-21v-peristaltisme-5,09-]

160- gera: 67222/di/ra

[THE EFFECTS OF COMPLEXING THE CA²⁺ AT ZUSANLI UPON INHIBITING THE MOTION OF STOMACH OF THE NORMAL RABBITS BY ACUPUNCTURE AT ZUSANLI]. GUO YI ET AL. **acupuncture research.** 1998,23(2),146 (chi*). ref:23

This experiment was carried out on the rabbit. The motional signal of the stomach was led with semiconductor sensor, the amplitude and frequency were used as indices. The results showed that acupuncture at Zusanli could inhibit the motion of stomach of normal rabbit. However, the efficiency of acupuncture at Zusanli disappeared after the Ca²⁺ at Zusanli was complexed by EDTA. It demonstrates that the Ca²⁺ is one of the factors that contribute to the acupuncture effect and it is the important biochemical foundation of the function of the channels and collaterals. [10,05 /ca-peristaltisme-rat-eaa-36e-]

161- gera: 67246/di/ra

[STUDY ON TREATMENT OF EXPERIMENTAL CHOLEDOCHOLITHIASIS AND COLIC TREATED BY ELECTROACUPUNCTURE AT AURICULO-AND BODY-POINTS IN RABBITS]. HAN JING ET AL. **chinese acupuncture and moxibustion.** 1998,18(11),685 (chi*). ref:3

Experimental pathological model of choledocholithiasis and colic was developed in rabbits and treated with electroacupuncture at auriculo-point GanDan area and body-point Danshu (Bl 19). Changes of pressure in various parts of biliary tract, electric activity of Oddi's Sphincter and electric discharge of phrenic nerve (as pain index) were observed. Results showed that electroacupuncture could inhibit the increase of the pressure in the biliary tract under the pathological state, promote rhythmic electric discharge of Oddi's Sphincter, and inhibit the increase of electric discharge of the phrenic nerve. It is showed that electroacupuncture has the function of relieving biliary colic and the function is superior to that of atropine. [10,11 /19v-lapin-eaa-peristaltisme-5,10-5,12-]

162- gera: 66578/di/ra

[EFFECTS OF YUNQITANG ON BOTH ESOPHAGEAL MUCOSAL MORPHOLOGY AND ESOPHAGEAL MOTILITY

IN REFLUX ESOPHAGITIS PATIENTS]. HAO YANING ET AL. **chinese journal of integrated traditional and western medicine.** 1998,18(6),345 (chi*).

Objective: To probe into the significance of Nitric Oxide (NO) in ischemic cerebral damage and effect of ligustrazine on it. Methods: The NO contents in cerebrospinal fluid (CSF) and plasma of 20 controls and 62 patients with arteriosclerotic thrombotic cerebral infarction (ligustrazine group and common treatment group) were determined with Griess method before and after treatment. Results: The NO content in CSF before treatment was higher in severe type, it was higher than that in moderate type, and than that in mild type, again higher than that in control group (all $P < 0.05$) and was positively correlated with the size of infarction ($P < 0.01$). There was no significant difference between the plasma NO content of patients and that of control group ($P > 0.05$), but there was a trend that plasma NO content decreased as the patient's condition worsened. After treatment, the curative effect and plasma NO content of ligustrazine group were both markedly higher than those of common treatment group ($P < 0.05$). There were no significant differences between CSF NO contents of the two groups, respectively, and that of control group ($P > 0.05$). Conclusions: Excessive NO produced in brain tissue and insufficient plasma NO participate the course of ischemic brain damage. Ligustrazine could increase the contents of plasma NO selectively. [10,04/peristaltisme-f0]

163- gera: 68032/di/ra

ACUPUNCTURE: THE WAY TO A MAN'S HEART IS THROUGH HIS STOMACH. ABSTRACT. HUNT RH. **akupunktur.** 1998,26(4),254-5 (eng). ref:10 [10,01/peristaltine-]

164- gera: 75789/di/ra

[CLINICAL AND EXPERIMENTAL STUDY ON USING CASSIA ANGSTIFOLIA EXTRACT AS ENEMA AFTER ABDOMINAL OPERATION]. WANG MIN ET AL. **chinese journal of integrated traditional and western medicine.** 1998,18(9),540 (chi*).

Objective: To investigate the curative effect and mechanism of using Cassia angustifolia extract (CAE) in treating gastrointestinal tract dysfunction after abdominal operations. Methods: Enema administration of CAE (Clyster method) was used. Results: The result of 130 patients was very effective in reducing the rate of gastrointestinal decompression, accelerating the restitution of borborygmi and the time of exhaustion. Animal experiment showed the CAE function is very obvious in enhancing the bowel movement of rats ($P < 0.05$). It can enhance peristalsis and contraction amplitude of vibration in the isolated ileum of rats ($P < 0.05$). It can push on the charcoal powder in intestinal tract of mice obviously ($P < 0.05$). Conclusion: CAE could regulate disordered function of gastrointestinal tract after abdominal operations. [21,04/peristaltisme-eap-]

165- gera: 57847/di/ra

EFFECTS OF DIFFERENT MANIPULATIONS OF ACUPUNCTURE ON ELECTRICAL ACTIVITY OF STOMACH IN HUMANS. XING WENTANG. **journal of traditional chinese medicine.** 1998,18(1),39-42 (eng).

The author observed effects of 4 different acupuncture manipulations (lifting-thrusting, twisting-twirling, uniform reinforcing-reducing, and needling with sensation propagating along channels) on electrical activity of the stomach, using amplitude and frequency of human electrogastrogram (EGG) as the indexes. The experiment proved that both the twisting-twirling and the uniform reinforcing-reducing methods inhibited electrical activity of the stomach to reduce the frequency of EGG ($P < 0.05$), and at the same time the uniform reinforcing-reducing method decreased the amplitude ($P < 0.001$); while both the lifting-thrusting method and the manipulation for needling sensation propagating along channels excited electrical activity of the stomach to raise the amplitude of EGG ($P < 0.01$), and the lifting-thrusting method increased the frequency ($P < 0.001$). Accordingly, the lifting-thrusting method or the manipulation for needling sensation propagating along channels is suitable for chronic superficial gastritis, chronic atrophic gastritis, carcinoma of stomach with lower frequency and amplitude of EGG; whereas the uniform reinforcing-

reducing or twisting-twirling method is good for patients with gastric and duodenal ulcer and hyperhydrochloria with higher frequency and amplitude of EGG. [10,05/td-psc-peristaltisme-]

166- gera: 74369/di/ra

[INFLUENCE OF ACUPUNCTURING SIBAI AND NEITING POINTS OF THE FOOT YANGMING CHANNEL ON PERISTALSIS OF STOMACH]. CHANG XIAORONG ET AL. **journal of tcm.** 1999,40(4),217 (chi). ref:0 [10,05/2e-peristaltisme-44e-]

167- gera: 72410/di/ra

OBSERVATIE VAN FREQUENTIESPECTRUM VAN ELECTROGASTROSPASM (EGG) BIJ ACUPUNCTUUR-BEHANDELING VAN FUNCTIONELE DYSPEPSIE. CHEN RIXIN. **tian dao.** 1999,42,22 (ned). [Traduction de Journal of TCM, 1998, 18(3)]. [10,01/peristaltisme-]

168- gera: 58920/di/ra

[EXPERIMENTAL STUDY ON HE WEI ORAL LIQUID TO THE BACTERIOSTASIS OF HELICOBACTER PYLORI]. CHEN ZHIYUN ET AL. **journal of zhejiang college of tcm.** 1999,23(2),22 (chi*).

Aim: Our research was to study the influence of Hewei oral liquid on gastrointestinal motor function. Methods: the gastricemptying test, the intestine pushing test in mice and extracorporeal duodenal motor test of rabbit were carried out to observe the influence of Hewei oral liquid on gastricemptying, intestine pushing test in normal mice, spontaneous intestine activity of extracorporeal duodenal motor test constriction and restraining of intestine induced by drugs in rabbit, Results: Hewei oral liquid could promote gastricemptying and intestine motor in mice, it could also invigorate extracorporeal duodenal motor of rabbit, it could not only curb the excitation of intestine motor, which was induced by Acetylcholine, Histamine and Bacl2, but also invigorate the repression of intestine motor, which was induced by Adrenalin. Conclusion: Hewei oral liquid could promote gastrointestinal normal motor of experimental animals and regulate bidirectionally abnormal motor of experimental animals. [10,05/peristaltisme-f0-souris-lapin-eap-]

169- gera: 59067/di/re

ACUPUNCTURE FOR GASTROINTESTINAL AND HEPATOBILIARY DISORDERS. DIEHL DL. **journal of alternative and complementary medicine.** 1999,5(1),27-45 (eng). ref:

Acupuncture has been used for various gastrointestinal (GI) conditions. Voluminous data support the effect of acupuncture on the physiology of the GI tract, including acid secretion, motility, neurohormonal changes, and changes in sensory thresholds. Much of the neuroanatomic pathway of these effects has been identified in animal models. A large body of clinical evidence supports the effectiveness of acupuncture for suppressing nausea associated with chemotherapy, postoperative state, and pregnancy. Prospective randomized controlled trials have also shown the efficacy of acupuncture for analgesia for endoscopic procedures, including colonoscopy and upper endoscopy. Acupuncture has also been used for a variety of other conditions including postoperative ileus, achalasia, peptic ulcer disease, functional bowel diseases (including irritable bowel syndrome and nonulcer dyspepsia), diarrhea, constipation, inflammatory bowel disease, expulsion of gallstones and biliary ascariasis, and pain associated with pancreatitis. Although there are few prospective randomized clinical studies, the well-documented physiological basis of acupuncture effects on the GI tract, and the extensive history of successful clinical use of acupuncture, makes this a promising modality that warrants further investigation. [10,01/10,16-11,10-rg-secretion-peristaltisme-10,03-10,05-10,06-]

170- gera: 72711/di/ra

EFFECT OF ELECTROACUPUNCTURE ON CANINE PYLORIC PRESSURE AND ITS RELATION TO SOMATOSTATIN AND NITRIC OXIDE. HUANG YUXIN ET

AL. **word journal of acupuncture-moxibustion.** 1999,9(4),43-6 (eng). ref:3P

Purpose of the present study: To explore the effect of electroacupuncture (EA) on canine pyloric pressure and its relation to somatostatin (SS) of blood plasma and nitric oxide (NO). Methods: An intra-gastric pressure detector and radioimmunoassay (RIA) and biochemical assay are used to determine changes of pyloric pressure and frequency, contents of SS and NO of blood plasma after EA stimulation of different acupoints. Results: Following EA of Zusanli (ST 36), the total pressure, basic pressure and systolic frequency of the sphincter muscle of pylorus lowered, plasma SS content decreased and NO content increased. After EA of Shangjuxu (ST 37), the total pressure, basic pressure and systolic frequency of the sphincter muscle of pylorus decreased, plasma NO content increased but changes of these indexes are less obvious than those of EA of Zusanli (ST 36). These indexes in other groups had no any apparent changes. Conclusion: EA could lower pyloric pressure and systolic frequency of the pyloric sphincter muscle, which may be the important pathway of EA in regulating functional activities of the stomach and intestines. The effect of EA is associated with the contents of some plasma biological substances affecting pyloric pressure and the action of meridians and acupoints is of .specificity to a certain degree. [10,05 /chien-5,12-36e-eaa-specificite-peristaltisme-37e-]

171- gera: 74388/di/ra

[THERAPEUTIC EFFECTS OF WEICHANGKANG ON ABNORMAL COLON ELECTRICITY IN RATS WITH EXPERIMENTAL COLON ULCERS]. LIAN ZHICHENG ET AL. journal of tcm. 1999,40(3),176 (chi). ref:8
[10,06 /peristaltisme-eap-rat-]

172- gera: 59742/di/ra

[INFLUENCE OF WEI FU CHUN TO FUNCTIONAL MALDIGESTION AND ELECTROGASTROGRAPH]. PAN FENG. zhejiang journal of tcm. 1999,34(8),359 (chi).
[10,03 /f0-peristaltisme-]

173- gera: 58986/di/ra

[PROGRESS OF CLINICAL AND BASIC STUDY OF ACUPUNCTURE IN TREATING GASTROINTESTINAL MOTILITY DYSFUNCTIONAL DISEASES]. PANG HAIYAN. chinese journal of integrated traditional and western medicine. 1999,19(3),188 (chi). ref:
[10,06 /rg-peristaltisme-]

174- gera: 59106/di/re

EFFECTS OF ELECTROACUPUNCTURE ON GASTRIC MIGRATING MYOELECTRICAL COMPLEX IN DOGS. QIAN L ET AL. digestive diseases and sciences. 1999,44(1),56-62 (eng). ref:

The aim of this study was to investigate the characteristics of the gastric slow wave during different phases of the migrating myoelectrical complex (MMC) and the effect of electroacupuncture on the MMC. The experiment was performed in eight hound dogs implanted with one pair of bipolar serosal electrodes 2 cm proximal to the pylorus. Gastric myoelectrical activity was recorded for three complete cycles of the MMC in two sessions, one with electroacupuncture at points ST36 and PC6 and the other at sham points. The acupuncture was performed for 30 min in phase I of the second cycle of the MMC. Spectral analysis was performed to compute the frequency and power (amplitude) of the gastric slow wave, whereas blind visual analysis was applied to compute the appearance of spike potentials and the length of each phase of the MMC. It was found that there was a significant difference in the frequency and power of the gastric slow wave during different phases of the MMC ($P < 0.05$). Phase I was characterized with the highest frequency and lowest power of the gastric slow wave, whereas phase III exhibited the highest power in the slow wave. It was also found that in comparison with the sham points, electroacupuncture at the acupoints increased the number of spike bursts. This increase was not significant during the MMC cycle with electroacupuncture (34.4 ± 4.1 vs $27.5 \pm 2.5\%$, $P > 0.05$) but became significant during the cycle after electroacupuncture

($39.8 \pm 3.3\%$ vs $27.5 \pm 2.5\%$, $P < 0.0005$). Similarly, during the MMC cycle after electroacupuncture at the acupoints, there was a significant decrease in the length of phase I (14.8 ± 2.2 vs 46.9 ± 6.1 min, $P < 0.003$) and a significant increase in the length of phase II (75.6 ± 9.9 vs 30.6 ± 4.1 min, $P < 0.003$) and phase III (25.8 ± 0.6 vs 22.1 ± 0.7 min, $P < 0.003$). A similar increase was observed during the MMC cycle with electroacupuncture but was not statistically significant. In conclusion, the gastric slow wave has the highest power during phase III of the MMC, indicating that the antral contraction is characterized not only by the appearance of spikes, but also by the increased power of the slow wave. Electroacupuncture at acupoints of ST36 and PC6 enhances the gastric MMC by reducing the length of phase I and increasing the length of phases II and III. [10,05 /5,12-36e-6mc-chien-eaa-peristaltisme-]

176- gera: 72276/di/ra

RECIPROCAL ACTIONS OF ACUPOINTS ON GASTROINTESTINAL PERISTALSIS DURING ELECTROACUPUNCTURE IN MICE. XU FANGMING ET AL. journal of tcm. 1999,19(2),141-4 (eng).

Orthogonal design was used to observe the gastrointestinal peristalsis in normal and atropine-treated mice after electroacupuncture was applied, singly or in combination, at Neiguan (P 6), Pishu (UB 20) and Zusanli (St 36). The results showed that: 1) electroacupuncture has no significant effect on the gastrointestinal peristalsis in normal mice; 2) Pishu (UB 20) was significantly antagonistic to Zusanli (St 36) in normal mice; 3) the decreased gastrointestinal peristalsis in atropine-treated mice was markedly promoted by electroacupuncture at Zusanli (St 36); and 4) Neiguan (P 6) was significantly antagonistic to Pishu (UB 20) in atropine-treated mice. The results indicated that the reciprocal actions among acupoints should be taken into consideration for point prescription. [10,01 /souris-5,12-eaa-specificite-peristaltisme-]

177- gera: 73999/di/ra

[THE INFLUENCE OF ACUPUNCTURE ON BILIARY TRACT CONTRACTION IN ACUTE CHOLECYSTITIS PATIENTS]. CHEN YAN-NAN ET AL. shanghai journal of acupuncture and moxibustion. 2000,19(4),12 (chi). ref:4

Purpose : To observe the influence of acupuncture on biliary tract contraction in acute cholecystitis patients under realtime ultrasonic examination. Methods : 60 patients were divided into acupuncture group and fat meal group. 30 cases for each. Then the size and emptying rate of cholecyst and change in the inside diameter of choledochus were observed. Results : The size and emptying rate of cholecyst were significantly better in acupuncture group and fat meal group than in control group ($P < 0.05$), but best in acupuncture group before and after acupuncture and fat meal ($P < 0.05$, $P < 0.01$). Conclusion Acupuncture can enhance the biliary tract contraction and promote the recovery from cholecystitis. [10,11 /peristaltisme-]

180- gera: 72221/di/ra

EFFECT OF ELECTROACUPUNCTURE ON CANINE PYLORIC PRESSURE AND ITS RELATION WITH BRAIN-GUT PEPTIDE LEVEL IN THE GASTRIC MUCOSAL TISSUES. HUANG YUXIN ET AL. word journal of acupuncture-moxibustion. 2000,10(1),40 (eng). ref:6

Aim of the study: To observe the effect of electroacupuncture (EA) on canine pyloric pressure and its relation with contents of motilin (MTL), somatostatin (SS) and nitric oxide synthase (NOS) in the gastric mucosal tissues. Methods: The total and basic pressure of the pyloric sphincter, and the frequency of the high-pressure waves were measured by using a gastrotonometer ; and the contents of MTL, SS and NOS in tissues of the gastric body and gastric antrum mucosa were detected by using radioimmunoassay (RIA) and biochemical methods in 20 dogs. Results: After EA of Zusanli (ST 36), the total and basic pressure of the pyloric sphincter, and the frequency of the highpressure waves, the content of SS in the gastric body mucosa, MTL and SS in the gastric antrum mucosa all decreased significantly ($P < 0.05$) and the level of NOS increased clearly ($P < 0.05$). While after EA of Xiajuxu (ST 39), all the indexes had not any striking changes except significant decrease of SS content in the gastric body mucosa ($P < 0.05$). Conclusions: EA has a significant modulating

action on gastrointestinal functional activities by lowering canine pyloric pressure and contracted frequency, which is also related with its influence on contents of some brain-gut

peptides (BGP) and is of specificity in meridians and acupoints. [10,05 /peristaltisme-]

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