

In the acupuncture treatment of headache,
is differentiation necessary?

A study by Fletcher Kovich

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Abstract

Objective: To determine whether the acupuncture treatment of headache is more or less effective when a fixed prescription of acupoints is used for all patients, rather than varying the prescription for each patient based on whatever underlying syndromes they may have.

Methods: 10 trials were included in this study, treating a total of 462 patients (in the treatment groups). Half the trials did differentiate between underlying syndromes (the 'differentiated' group), and the other half used the same acupoint prescription for every patient (the 'non-differentiated' group). The effectiveness of the treatments in these two groups was compared.

Results: On average, the non-differentiated group produced significantly higher scores than the differentiated group. In the non-differentiated group, the average 'Cure' rate was 69.8% and the total effective rate was 95.37%. The corresponding figures for the differentiated group were 41.7% and 91.3%.

Conclusions: Based on the evidence presented in these trials, it is far more effective to not use differentiation when treating headache with acupuncture. Using the same, standard acupoint prescription for each patient, is more effective than attempting to vary the prescription dependant on whatever underlying syndromes each patient may or may not have.

Introduction

Note: In this study the terms 'headache' and 'migraine' have been used interchangeably. In TCM (Traditional Chinese Medicine) there is no real distinction between these two terms.

In the TCM treatment of headache, it is generally accepted that headache is caused by one, or more, of a number of possible causes. These causes are the underlying syndromes. Some examples are: Wind-Cold invasion, Liver-Yang rising, Liver-Fire, Liver-Qi Stagnation, Stomach-Heat, Retention of Food, Stasis of Blood, Qi Deficiency, Blood Deficiency, Kidney Deficiency¹. When a diagnosis is being made, the practitioner would usually select one of these as the underlying cause of the headache, and they would then select acupoints to address the underlying cause (as well as some acupoints to address any obstruction in the flow of Qi and Blood in the head). This process is known as 'differentiation'.

This study is going to question the need for this process by comparing the results of trials that have used differentiation with those that have not used it. It will also search for any evidence that might suggest a standard acupoint prescription that could be used for the treatment of headache.

Selection of trials

Initially a wide range of trials were obtained concerning the treatment of headache using acupuncture. These trials were gathered from various sources, including a thorough search of all the periodicals held in the library of the Southwest College of Oriental Medicine, and a variety of search methods on the internet, including use of the PubMed database (searching for 'acupuncture' and 'headache'), the British Medical Journal website, and many other online medical journals that specialize in acupuncture, TCM as a whole, or holistic healing in general. From these trials, the following criteria were used to determine whether or not trials were includable:

Trials were only included that treated 20 or more patients; used acupuncture as the sole treatment method (but allowed the addition of moxibustion or electro acupuncture, since these are routine techniques used in acupuncture treatments); trials which listed the acupoints used, and which indicated whether or not differentiation was used.

This meant the exclusion of some important trials simply because they gave no information about the acupoints that were used (for example: Vickers A, *Acupuncture for chronic headache in primary care: large, pragmatic, randomised trial*, BMJ 2004)

This selection procedure reduced the number of included trials to nine, five using differentiation and four not using differentiation:

DIFFERENTIATED TRIALS

- A. Observations on the Curative Effect of Acupuncture on 35 cases of Migraine (Dou Hai-zhong 2000)

¹ The Practice of Chinese Medicine, Giovanni Maciocia, Churchill Livingstone 1994

- B. Treatment of Vascular Migraine by Acupuncture in 20 cases (Feng Jian-guo et al 2001)
- C. Analysis on Therapeutic Effect of Acupuncture on Vascular Headache (Fu Li-pin 2001)
- D. Acupuncture treatment of 80 cases of angioneurotic headache (Guo Yunping et al 2000)
- E. Treatment of 30 cases of Migraine by combination of LU's compound Acupuncture Techniques and Auricular Application (Chen Chen et al 2001)

NON-DIFFERENTIATED TRIALS

- F. Treatment of Migraine by Acupuncture (Xue Mei-zhi 2001)
- G. Clinical effects of acupuncture in treating migraine (Sun Zhong-ren et al 2002)
- H. Observation on therapeutic effects of neurotic headache treated by acupuncture on "Dianxian" point (Qian Baoyan 2001)
- I. Observation of therapeutic effect of acupuncture on migraine (Liu Yue et al 2002)

In the text, these trials have been referred to using the letters A-I, as above.

Data extraction from the included trials

From the included trials, the following data was extracted:

If the trial's control group was treated by any method other than acupuncture, then the results for the control group was not included, since this study was not investigating the effectiveness of acupuncture; it was doing a trial by trial comparison of results, comparing differentiated treatments with non-differentiated treatments; the results of the control group was therefore of no relevance.

In order to assist in testing the trials for comparability, the following data was extracted: details of the average age of the patients; the average duration of their disease; the total numbers of women and men patients; the follow up period, where used; details of the treatment frequency; and of the total number of treatments given.

Where the data did not give average figures for the age and duration of disease, means were used instead; and if the sex distribution was not stated, it was assumed that there were equal numbers of men and women patients. These measures were used, since this data would give a more accurate picture than simply leaving the data empty would have done—when compiling the totals for the two groups: the differentiated and the non-differentiated trials.

In order to compile tables of the most frequently used acupoints in the treatment of headache, details were extracted of the acupoints used, and, where possible, the number of patients that were treated using each acupoint. In some instances, mainly in the differentiated trials, it was necessary to estimate the number of patients that some acupoints might have been used on. In the data, it has been indicated where the figures are estimated.

Summary of trials

This section summarizes each trial and gives the extracted data. Each trial's reasoning concerning the causes of headache and the selection of acupoints will be discussed later, in the section: *Why did the non-differentiated trials achieve better results*, on page 15.

Trial A. Observations on the Curative Effect of Acupuncture on 35 cases of Migraine (Dou Hai-zhong 2000)

This trial set out to compare acupuncture treatment of migraine with a treatment using a mind-calming herbal capsule. 35 patients received acupuncture, and 28 (the control group) received the herbal capsule. For the purposes of this study, only the treatment group was of interest.

A group of 63 patients was randomized into the two groups, and the two groups were comparable as regards the average age, sex, and course of the disease. All the cases were suffering from migraine as defined by the 1992 *International Migraine Association* diagnostic criteria for migraine.

Differentiation was made between three different causes for headache, and the acupoints used in the treatments was varied as described in the following table.

Extracted data:

Cases	Recovery	Effective	Ineffective	Total effective rate	follow up	treatment frequency	number of treatments
35	42.8%	51.4%	5.7%	94.3%	6 month	1/day	14

Age (ave.)	Duration (ave.)	Women	Men
30.5	11.3	25	10

Acupoints used	number of patients used on
Fengchi GB.20, Shuaigu GB.8, Baihui DU.20	35
<i>for Upward attack of wind-phlegm:</i> Taichong LIV.3, Fenglong ST.40	12 (estimated)
<i>for obstruction of meridians by stagnant blood:</i> Sanyinjiao SP.6, plus Ashi acupoints	12 (estimated)
<i>for invasion of the exterior by external wind:</i> Hegu LI.4, Dazhui DU.14	11 (estimated)

Trial B. Treatment of Vascular Migraine by Acupuncture in 20 cases (Feng Jian-guo et al 2001)

This paper reported the treatment of 20 patients. The patient selection was comparable with the other trials included in this study, as regards the definition of migraine. Since this was a clinical report, rather than a trial, no control group was used.

Differentiation was made between three different factors. All patients were treated with the same basic acupoints, and one extra acupoint was added if one of these extra factors was present, as described in the following table.

Extracted data:

cases	cure	marked effects	improved	failed	total effective	follow up	treatment frequency	number of treatments
20	15%	40%	25%	20%	80%	none	2/week	between 3 and 20

Age (ave.)	Duration (ave.)	Women	Men
32.8	8.5	16	4

Acupoints used	number of patients used on
Fengchi GB.20, Hegu LI.4 plus scalp acupuncture on Vertigo-auditory area	20
<i>for forehead pain:</i> Yintang	7 (estimated)
<i>for occipital pain:</i> Houxi SI.3	7 (estimated)
<i>for weak constitution:</i> Zusanli ST.36	6 (estimated)

Trial C. Analysis on Therapeutic Effect of Acupuncture on Vascular Headache (Fu Li-pin 2001)

This trial treated 65 patients suffering from ‘vascular headache’. They were differentiated into two groups, depending on the underlying cause, one a deficiency, the other an excess, as follows:

- group A: Hyperactivity of Liver Yang
- group B: Hyperactivity of Fire due to Yin Deficiency

The definition of ‘vascular headache’ being used was not given. The data for the patient age, duration of disease, and distribution of sex, was given as total figures for both groups. The distribution of these factors between the two groups was not specified; however, for the purposes of this study, only the total figures for this particular trial have been used, therefore the makeup of the two groups was not relevant. Since the trial’s aim was to compare the acupuncture treatment of headache in the case of the above two syndromes, the use of a control group was not appropriate.

Extracted data:

Group	cases	marked effective	effective	ineffective	total effective	follow up	treatment frequency	number of treatments
A	36	41.7%	44.4%	13.9%	86.1%			
B	29	27.6%	62%	10.3%	89.7%			
total	65	35.4%	52.3%	12.3%	87.7%	none	1/day	40

Age (ave.)	Duration (ave.)	Women	Men
50.5	3.75	36	29

Acupoints used	number of patients used on
Fengchi GB.20, Baihui DU.20 Xuanlu GB.5	65
<i>for Hyperactivity of Liver Yang:</i> Xingjian LIV.2, Neiguan P.6, Sanyinjiao, SP.6	36
<i>for Hyperactivity of fire due to Yin deficiency:</i> Yingu KID.10, Zusanli ST.36, Taichong LIV.3	29

Trial D. Acupuncture treatment of 80 cases of angioneurotic headache (Guo Yunping et al 2000)

This paper reported the treatment of 80 patients. The patient selection was comparable with the other trials included in this study, as regards the definition of migraine. The average age and the average duration of disease were not given. Since this was a clinical report, rather than a trial, no control group was used.

Differentiation was made between two syndromes, and the acupoints use were varied accordingly, as described in the following data.

Extracted data:

cases	Cured	markedly effective	Effective	ineffective	total effective	follow up	treatment frequency	number of treatments
80	65%	17.5%	15%	2.5%	97.5%	6 month	1/day	14 max.

Age (mean)	Duration (mean)	Women	Men
42	18.5 years	44	36

Acupoints used	number of patients used on
Fengchi GB.20, Baihui DU.20, Neiguan PC.6, Hegu LI.4, (plus 1-2 Ashi points)	80
<i>for stagnation of Liver Qi:</i> Taichong LIV.3,	40 (estimated)
<i>for Deficiency of Kid yin:</i> Taixi KID.3	40 (estimated)

Trial E. Treatment of 30 cases of Migraine by combination of LU’s compound Acupuncture Techniques and Auricular Application (Chen Chen et al 2001)

This trial assessed the effects of using a particular needle manipulation technique (LU Sou-yan’s compound acupuncture technique), compared to treatment where no needle manipulation was used. Hence the results of the control group have not been included, since the group was not treated in a way that would be comparable to the treatment groups in other trials.

The patient selection was comparable with the other trials included in this study, as regards the definition of migraine. The average age, the average duration, and the distribution of sex were not given. Therefore figures in accordance with the policy stated in the section: *Data extraction from the included trials*, on page 4, have been used.

Some differentiation was made, between Wind-damp headache and Shaoyang headache, but not all the extra acupoints used have been reported.

Extracted data:

Cases	Cure	Improvement	Ineffective	Total effective rate	follow up	treatment frequency	number of treatments
30	10%	76.7%	13.3%	86.7%	6 month	1/day	14

Age (mean)	Duration (mean)	Women	Men
37	3 years	15 (assumed)	15 (assumed)

Acupoints used	patients used on
Taiyang, Yintang, Hanyan GB.4, Touwei ST.8, Shuaigu GB.8, Fengchi GB.20, Waiguan SJ.5, Yanglingquan GB.34 moxa seeds were placed on ear points after each treatment	30
<i>for Wind-damp headache:</i> Taichong LIV.3, Taixi KI.3	15 (estimated)

Trial F. Treatment of Migraine by Acupuncture (Xue Mei-zhi 2001)

The aim of this trial was to determine whether the use of two distal acupoints (GB.34 and ST.40), as well as the more usual local acupoints, had any extra benefit in the treatment of headache. The control group were treated with local acupoints only, whilst the treatment group were treated with local acupoints plus the two distal acupoints mentioned above. For the purposes of this study, both groups could be counted as treatment groups, which produced two sets of results in the *combined results* table on page 12: Trial F, treatment group, and Trial F, control group.

The patient selection was comparable with the other trials included in this study, as regards the definition of migraine. The average age and the average duration of disease were not given.

In both groups, no differentiation was made, all the patients in each group receiving treatment with the same acupoints. However, the treatment group's treatment also included the use of ashi acupoints (as groups in some other trials have also done). Though this would have individualized the treatment for each patient, this technique does not constitute differentiation. The use of ashi acupoints is a standard technique routinely used in acupuncture treatments, and is separate from any notion of syndrome differentiation.

A note on the validity of Trial F

As regards this trial demonstrating its stated objective, as it claimed to have done, the trial was greatly flawed, for the following reasons:

The difference in the results between the two groups was not credible. The trial was intended to favour the treatment group, since the control group all received a fixed prescription of acupoints, but the treatment group also received ashi acupoints, which meant that the treatment was individualized and would have therefore been more effective.

Also, if the two groups were treated by the same practitioner, then the practitioner would have been expecting a worse result with the control group and a better result with the treatment group, and this would have almost certainly influenced the results.

In spite of all this, the control group still achieved impressive results, despite there being absolutely no individualization or differentiation in the treatment, the abstention from using ashi acupoints, which is a standard part of many treatments, and also the practitioner possibly having a negative attitude concerning the effectiveness of the treatment (which alone, may account for the small difference in the results).

Also, different local acupoints were used in each group. Therefore, the trial could not claim to have proved the effectiveness of adding the two stated distal acupoints to the treatment of the treatment group. Yet the trial claimed to have proved this.

For all these reasons, the trial was greatly flawed as regards proving its stated objective, but the trial did inadvertently strongly support the argument that differentiation is not necessary in the treatment of headache. The control group was treated with the same five local acupoints on all patients; it was possible that the practitioner had a negative attitude towards the treatment; and the use of local ashi acupoints was avoided, which is a standard technique that would normally be used in such treatments and would improve the effectiveness of the treatments; yet despite all this, the results were better than three out of five of the trials that *did* use differentiation and were conducted conscientiously and without the same limitations being placed on the treatment. This trial inadvertently strongly supports the idea that differentiation is not important in the treatment of headache.

Extracted data:

group	cases	cured	improve	ineffective	total effective	follow up	treatment frequency	number of treatments
treatment	45	91.1%	8.9%	0	100%	none	1/day	14
control	42	76.2%	14.3%	9.5%	90.5%	none	1/day	14

Group	Age	Duration (mean)	Women	Men
Treatment	not given	6.5	26	19
Control	not given	4.5	22	20

Acupoints used	number of patients used on
Yanglingquan GB.34, Fenglong ST.40, Fengchi GB.20, Shuaigu GB.8, +ashi acupoints	45
<i>control group:</i>	
Fengchi GB.20, Shuaigu GB.8, Taiyang, Toulinqi GB.15, Luoque BL.8	42

With both groups, electro acupuncture was also used.

Trial G. Clinical effects of acupuncture in treating migraine (Sun Zhong-ren et al 2002)

This trial compared the acupuncture treatment of migraine with drug treatment.

The patient selection was comparable with the other trials included in this study, as regards the definition of migraine. A control group was used, which was treated with medication only. The patients were randomized into the two groups. For the purposes of this study, only the treatment group was of interest.

In the treatment group, no differentiation of any sort was made, all the patients being treated with the same acupoints, regardless of any underlying syndromes that may have been present.

Extracted data:

cases	marked effectiveness	effective	fail	total effective	follow up	treatment frequency	number of treatments
32	31.2%	43.8%	9.4%	90.6%	none	1/day	10+

Age (ave.)	Duration (mean)	Women	Men
36.3	6.5	22	10

Acupoints used	number of patients used on
Fengchi GB.20, Yangbai GB.14, Shuaigu GB.8, Taiyang, Waiguan SJ.5, Zhongzhu SJ.3, Zulinqi GB.41, Fubai GB.10	32

Trial H. Observation on therapeutic effects of neurotic headache treated by acupuncture on “Dianxian” point (Qian Baoyan 2001)

This trial aimed to compare the acupuncture treatment of headache with drug treatment. The acupuncture treatment included an extra acupoint (“Dianxian”), and the purpose of the trial was to demonstrate the effectiveness of the acupuncture treatment when the treatment included this specific acupoint. 101 Patients were randomly divided into a treatment group and a control group, the treatment group consisting of 59 patients. The control group received drug treatment only, and for the purposes of this study this group was of no interest.

The patient selection was comparable with the other trials included in this study, as regards the definition of migraine. However, no figures were given regarding the duration of the disease.

No differentiation was made, all the patients receiving the same treatment regardless of whatever underlying syndromes may or may not have been present.

Extracted data:

cases	cured	markedly effective	effective	ineffective	cured & markedly effective	total effective	follow up	treatment frequency	number of treatments
59	64.4%	27.1%	8.5%	0	91.5%	100%	3 mo	1/day	10+

Age (ave.)	Duration (ave.)	Women	Men
33.6		33	26

Acupoints used	number of patients used on
“Dianxian”, Shuaigu GB.8, Xingjian LIV.2, Lieque LU.7 electro acupuncture was used on the head acupoints	59

Trial I. Observation of therapeutic effect of acupuncture on migraine (Liu Yue et al 2002)

This trial compared the acupuncture treatment of migraine with drug treatment.

The patient selection was comparable with the other trials included in this study, as regards the definition of migraine. A control group was used, which was treated with medication only. The patients were randomized into the two groups. For the purposes of this study, only the treatment group was of interest.

In the treatment group, no differentiation of any sort was made, all the patients being treated with the same acupoints.

Extracted data:

Cases	cure	improvement	failure	total effective	follow up	treatment frequency	number of treatments
54	76%	16.7%	7.4%	92.6%	6 month	1/day	10+

Age (ave.)	Duration (mean)	Women	Men
32.4	8.5	34	20

Acupoints used	number of patients used on
Touwei ST.8, Sizhukong SJ.23, Shuaigu GB.8, Taiyang, Baihui DU.20, Fengchi GB.20, Hegu LI.4, Lieque LU.7	54

2 ml of Staunton vine (a Chinese herb) was injected into either Taiyang or GB.20, on alternate treatments.

It could be claimed that this procedure should have precluded this trial from being compared to pure acupuncture trials. But it had been included for a number of reasons:

Other trials have been included which have used procedures beyond pure acupuncture, such as moxa seeds on ear acupoints, the use of electro acupuncture, and scalp acupuncture. These supplementary procedures were allowed because they are routine techniques that an acupuncturist might use.

On the other hand, some trials have been excluded from this study because they used Chinese herbal remedies, as well as acupuncture. In these cases, they were excluded because the herbal remedies were being used to address the underlying organ syndromes, and it was felt that this meant that the treatment in those trials could not be reasonably compared to trials that only used acupuncture.

However, Staunton vine, though a herb, was being used in this trial to “unblock the meridians and activate the collaterals,” and was not being used to address any underlying organ syndrome. It was therefore felt that this procedure was more akin to the other supplementary procedures that have been mentioned above (moxa seeds, and

so on), than to the use of herbal remedies in the more usual sense. For all these reasons, it was decided to allow this trial to be included in this study.

Combined results

The data from all the trials is presented in the following table, presented in two groups, first the differentiated trials, then the non-differentiated trials. The percent figures in the ‘Totals’ rows are calculated by taking a weighted average of the percent figures in each of the columns.

Trial	Cases	Cure	Marked effective	Ineffective	Total effective rate	Age (ave.) (italics=mean)	Duration (ave.) (italics=mean)	Women	Men	Follow up	Treatment frequency	Number of treatments	Publication source
DIFFERENTIATED													
A	35	42.8%	51.4%	5.7%	94.3%	30.5	11.3	25	10	6 month	1/day	14	A
B	20	15.0%	40.0%	20.0%	80.0%	32.8	8.5	16	4	none	2/week	various	A
C	65	35.4%	52.3%	12.3%	87.7%	50.5	3.8	36	29	none	1/day	40	A
D	80	65.0%	17.5%	2.5%	97.5%	42.0	18.5	44	36	6 month	1/day	14 max	B
E	30	10.0%	76.7%	13.3%	86.7%	37.0	3.0	15	15	6 month	1/day	14	A
Totals	230	41.7%	42.2%	8.7%	91.3%	38.6	9.0	136	94				
NON-DIFFERENTIATED													
F, treatment	45	91.1%	8.9%	0.0%	100.0%		6.5	26	19	none	1/day	14	A
F, control	42	76.2%	14.3%	9.5%	90.5%		4.5	22	20	none	1/day	14	A
G	32	31.2%	43.8%	9.4%	90.6%	36.3	6.5	22	10	none	1/day	10	A
H	59	64.4%	27.1%	0.0%	100.0%	33.6		33	26	3 month	1/day	10 +	C
I	54	76.0%	16.7%	7.4%	92.6%	32.4	8.5	34	20	6 month	1/day	10 +	A
Totals	232	69.8%	21.1%	4.7%	95.3%	34.1	6.5	137	95				

Publication sources

- A *TCM Shanghai Journal of Acupuncture and Moxibustion*
- B *World Journal of Acupuncture-Moxibustion*
- C *The International journal of Acupuncture*

Table 1

Discussion of combined results

For the non-differentiated trials, the weighted average score for 'Cure' was 69.8%, and the weighted average score for 'Total effective rate' was 95.3%. This compares to scores of 41.7% and 91.3% respectively for the differentiated trials. This showed the non-differentiated treatments to be significantly more effective than the differentiated treatments. This was a surprising result, as it seemed to contradict the reasoning behind the practice of differentiating between the different causative syndromes in the TCM treatment of headache. The results seemed to indicate that if no differentiation was made, and all patients were treated with the same standard acupoint prescription, then the treatment would be more effective.

First, the figures in Table 1 will be examined, to test whether or not the trials were comparable between the two groups, and then the trials will be closely examined, to attempt to discover any explanations that might account for the above results.

Comparison of the trials in the two groups

This section examines each aspect of the trials, to test whether or not the differentiated and non-differentiated groups were comparable.

Number of patients treated

The totals for the number of cases treated in the two groups are comparable, being 230 and 232.

Trial design

Was the general design of the trials in both groups comparable?

All the trials, except two, consisted of a treatment and control group (trials B and D had no control group); mostly the control groups were treated using drugs or herbs (except in trials C, E, and F where the control group also received acupuncture treatment, since the trials were designed to compare two different treatment methods). In the trials that used a control group, the cases were randomized into the two groups, except in Trial C, where cases were divided into the two groups according to the underlying syndrome that they had; but with this trial, the combined results of both groups were used and this was treated as the outcome of the trial. Therefore, for the purposes of this study, Trial C should be considered as not having a control group.

In summary, only trials A, G, H, and I could be considered to be similar in design, as regards their control groups. Three of these trials belonged to the non-differentiated group, and only one to the differentiated group. Had this factor produced a bias in favour of the non-differentiated group? For this to be the case, it would imply that an acupuncture trial that used a control group consisting of drug or herb treatment would produce a result for the treatment group that was more effective than the result produced with a trial that did not use such a control group.

Is this credible? One argument is that, with acupuncture treatment, the attitude of the practitioner and his belief in the effectiveness of the treatment will tend to strongly influence the outcome of the treatment, even more so than with the placebo effect that is present in conventional medical treatments, since, with acupuncture treatment, the energetic interaction between the practitioner and patient is usually a part of the treatment. If this argument is accepted, then it is quite possible that if the practitioner was aware that his treatments were being compared to a purely drug-based treatment, and he believed that his treatment would be more effective than the control group treatment, then this could have a further enhancing effect on his treatments that would not otherwise be there.

But do the figures show any evidence for this argument?

Examining the 'Cure' and 'Total effective rate' columns in Table 1, there seems to be no evidence that these particular trials (A, G, H, and I) were consistently more effective than the other trials. Therefore there does not seem to be any bias that might have resulted from the differences in the control-group design aspect of the trials.

Treatment frequency

All the trials (except Trial B) had a treatment frequency of one treatment per day, and the trials tended to consist of a similar number of treatments, between 10 to 14 (except Trial C, which administered a total of 40 treatments; interestingly this did not seem to produce results that were significantly more effective than the other trials). Therefore, in this respect, the trials were broadly comparable.

Follow up period

As regards a follow up period, three trials in the differentiated group had a 6 month follow up, but only two trials in the non-differentiated group had a follow up, one a 6 month, and the other only a 3 month follow up.

When a trial uses a follow up period, this may tend to produce lower figures for the effectiveness of the treatment, since the definitions used for ‘Cure’, and sometimes for ‘Marked effective,’ specify that the effects should be maintained throughout the follow up period. Hence any deterioration in the effects that the treatment achieved, would lower the score for effectiveness.

In the trials that used a follow up, was there any evidence that these trials had lower scores than the trials that did not use a follow up?

In the differentiated group, the ‘follow up’ trials tended to be the highest scoring trials. In the non-differentiated group, similarly the ‘follow up’ trials did not tend to score lower than the ‘non-follow up’ trials.

To compare the trials regardless of differentiation, they have been regrouped into two groups dependent on whether they used a follow up period or not. The results are shown in Table 2:

Trial	Cases	Cure	Marked effective	Ineffective	Total effective rate	Follow up
DIFFERENTIATED						
A	35	42.8%	51.4%	5.7%	94.3%	6 month
H	59	64.4%	27.1%	0.0%	100.0%	3 month
I	54	76.0%	16.7%	7.4%	92.6%	6 month
D	80	65.0%	17.5%	2.5%	97.5%	6 month
E	30	10.0%	76.7%	13.3%	86.7%	6 month
Totals	258	57.8%	31.0%	4.6%	95.4%	
NON-DIFFERENTIATED						
F, treatment	45	91.1%	8.9%	0.0%	100.0%	none
F, control	42	76.2%	14.3%	9.5%	90.5%	none
G	32	31.2%	43.8%	9.4%	90.6%	none
B	20	15.0%	40.0%	20.0%	80.0%	none
C	65	35.4%	52.3%	12.3%	87.7%	none
Totals	204	53.2%	32.4%	9.3%	90.7%	

Table 2

In the ‘Totals’ rows, the weighted average scores for the trials that used a follow up period were significantly higher than the scores for the trials that did not use a follow up. This is an unexpected result. For the purposes of this study, this shows that though the non-differentiated group in Table 1 consisted of less trials that used a follow up, this did not produce a bias in favour of the non-differentiated group, and that its higher average scores were therefore not due to this factor.

Patient age, sex, and duration of disease

The totals for these factors were as follows:

Group	Age	Duration	Women	Men
Differentiated	38.6	9	136	94
Non-differentiated	34.1	6.5	137	95

Table 3

The totals for the numbers of women and men were comparable between the two groups.

There was a small difference in the figures for the average age between the two groups, the differentiated being slightly older. Older patients are usually more difficult to treat, and this factor would be likely to produce lower

scores for the effectiveness of the trials in the Differentiated group. However, two of the figures in the Differentiated group are mean, rather than average figures, and all the figures in the Non-differentiated group are averages. The use of mean figures may have produced a higher value than the use of averages might have done, since only a single very old person would result in a high value for the mean, and this factor alone may account for the small difference in the total figures.

There is a larger difference in the totals for the duration of disease. The Differentiated group has a significantly higher value. Again, a disease of longer duration would tend to be harder to heal than one of shorter duration, and this would produce a considerable disadvantage for the Differentiated group. However, the method for calculating the figures in the two groups were not equivalent. The Non-differentiated group consisted of four mean values, and the Differentiated consists of three average and two mean values. Group D in the Differentiated group had a particularly high value of 18.5 years. This was a high value for the duration of disease when compared to the range of durations in the other trials, and this value could be accounted for by a single, "rogue" patient with an uncommonly persistent disease. Indeed the trial stated that its patient with the longest duration of disease had a duration figure of 36 years. If the mean value for Trial D were ignored, the total value for the Differentiated group would be reduced to 5.3 years. Again, it can be seen that this single anomaly (that of only one patient with a disproportionately long-standing disease) may have been enough to account for the difference in the totals between the two groups.

In conclusion, the two groups were comparable as far as the total numbers of men and women patients. As regards the figures for the average/mean ages and duration of disease, the method of mixing mean and average figures is non satisfactory, and the totals were therefore not reliable. However, bearing in mind the above explanations, there is no evidence that the two groups were *not* comparable as regards the age of patients and the duration of disease.

Source of trials

Another possible area for concern was the source of the trials.

As shown in the 'Publication source' column, seven of the trials were published in the same periodical, and the other two trials were published in other publications. Ordinarily this would be a cause for concern, since the publishers of the periodical may only select for publication trials that favour their own particular views. In the case of this study, it is suggested that this possible source for bias was not applicable, for the following reasons:

Both groups had four trials that were published by this same periodical, and therefore no single group had a greater number of trials from the same source. This ruled out any bias for one side of the argument which that periodical may have had. Further, since the objective of this study (to compare differentiated and non-differentiated treatments) was not an objective in any of the trials that were used, then this also ruled out any bias in favour of one side or the other on the part of any of the trials' authors. And lastly, having an equal number of trials in both groups from the same source, and this source being the main source, this also suggested that the design of the trials would tend to be similar in both groups, and that the way the treatments were carried out was also likely to have been similar in both groups. For all these reasons, it is suggested that the fact that the majority of the trials were published by the same periodical was a strength, rather than a weakness, as far as this particular study is concerned.

SUMMARY

In all the above factors that have been looked at, there is no evidence of any bias in favour of one group or the other. Therefore, for the purpose of this particular study (that is, when testing for the effectiveness of differentiated over non-differentiated treatments, or vice versa), the trials in the two groups were comparable. This suggests that the higher average scores for the non-differentiated group in Table 1 were due to the fact that the treatments did not use differentiation, and to no other factor.

Why did the non-differentiated trials achieve better results

Each trial's author's reasoning behind their treatments will now be examined, and the reasoning used in the differentiated and the non-differentiated trials will be compared. The aim is to identify any overlap, and to search for any explanation that might account for this study's unexpected results.

DIFFERENTIATED TRIALS

Trial A

In this trial, the author makes the following observations:

- According to TCM, a migraine may be caused by any of the following: Wind, Fire, Phlegm, stagnation of Blood or Qi.

- The disease manifests itself along the path of the Liver and Gallbladder meridians, on the region where these meridians pass through the head.
- The function of the following organs may also play a part: Liver, Gallbladder, Spleen, Kidney.
- Its main pathogenesis is the transformation of Liver Yang into Wind, obstruction of the meridians by stagnant Phlegm, and hence blockage of those meridians.

The acupoints used were chosen to address the above issues.

Trial B

In this clinical report, the differentiation used was between the following factors: whether the pain was on the forehead, the occiput, or whether the patient had a weak constitution.

The report's author did not state his reasoning behind the cause for headache (though he was clearly following TCM ideas on the various causes), but merely stated the treatment objectives, which were to:

- calm Yang and extinguish Wind (using Fengchi GB.20)
- smooth Qi in the Yangming meridian (using Hegu LI.4)
- regulate Qi in the Gallbladder meridian (scalp acupuncture on Vertigo-auditory area)
- clear head and eyes and drain Fire (using Yintang), for pain in forehead
- suppress Yang and clear Heart-Fire (using Houxi SI.3), for occipital pain
- nourish Spleen and Stomach (using Zusanli ST.36), for weak constitution

Trial C

In this trial, all the patients treated were identified as either having Hyperactivity of Liver Yang, or Hyperactivity of Fire due to Yin deficiency. It was not stated whether only patients with either of these two syndromes were selected (and all other patients excluded), or whether the patients were first selected simply because they were suffering from 'vascular headache' and were then each identified as having one of the above syndromes. The important point, from this study's points of view, is whether or not the trial's author was stating that all migraines are caused by either one of the above two syndromes and by no other cause. In the 'Discussion' section of this trial, the author did seem to be of this opinion, and he stated that headache and dizziness in general are due to the dysfunction of the Liver, and result from:

- the up-stirring of Liver based on deficiency of Liver-Yin and Kidney-Yin, or to:
- hyperactivity of Fire due to Yin deficiency (derived from the lack of nourishment of Liver by Kidney).

The therapeutic principle used in the trial was stated as:

for hyperactivity of the Liver-Yang:

- Calm the Liver and suppress Yang hyperactivity of the Liver (using Sanyinjiao SP.6, Neiguan PC.6, and Xinjian LR.2)

for hyperactivity of Fire due to Yin deficiency:

- Replenish vital essence and supplement Blood to reduce pathogenic Fire (using Yingu KI.10, Zusanli ST.36, and Taichong LR.3)

Trial D

The author of this trial states that: according to TCM, headache often results from stagnation of Liver Qi, and deficiency of Kidney Yin, and the trial accordingly differentiates between two underlying causes for headache: Stagnation of Liver Qi, and Deficiency of Kid Yin.

He gives the further detailed TCM explanation behind the reasoning used in this trial's treatments:

The head is the confluence site of all Yang, and the Liver Meridian goes up to the vertex of the head. If the Liver is out of function in regulation of Qi flow, the accumulated Qi will transform into Fire to harass the head to induce headache. If the resultant Fire injures Yin... or if the Kidney Water is consumed seriously, the Kidney will fail to nourish the Liver and the Liver Yang will fall into hyperactivity.

Treatment principles used were:

- clear the accumulated Heat in the Gallbladder channel and expell Wind (using Fengchi GB.20)
- calm the Liver to restrict exuberant yang (using Baihui DU.20)
- relieve the depressed Liver, regulate Qi, promote circulation of Blood, tranquilize the mind (using Neiguan PC.6)
- relieve spasm, tranquilize the mind and relieve pain (using Hegu LI.4)
- lower Liver Fire and suppress the reversed Wind Yang (using Taichong LR.3)
- reinforce the Kidney, enrich the essence and restrict the excited Liver Yang (using Taixi KI.3)

He states that all the above acupoints used together can regulate meridian Qi, dredge meridians and relieve pain.

Trial E

In this trial, the author stated that, in TCM, headaches were mostly of the following types: Wind-damp headache and Shaoyang headache. It was not clear whether or not the author was referring to the patients seen at his own clinic, so that in other clinics the patients may have headaches of types other than Wind-damp and Shaoyang. A 'Shaoyang' headache could be understood to mean any headache involving Liver dysfunction, or any headache manifesting on the Gallbladder channel on the head; therefore it is possible that the author was talking about the classification of headaches in general, and not just of the typical headaches that were seen in his clinic.

The treatment principles used were:

- stop pain, using local acupoints on the head (Taiyang, Yintang, Hanyan GB.4, and Shuaigu GB.8)
- regulate the Qi in the Yangming and Shaoyang meridians (Touwei ST.8)
- harmonize the Qi in the Shaoyang meridians (Waiguan SJ.5, Fengchi GB.20, Yanglingquan GB.34)

NON-DIFFERENTIATED TRIALS

Trial F, treatment group

This trial's author stated that, in TCM theory, migraine was mainly caused by wind-fire in the Liver meridian, and it usually also involved blood stasis and stagnation of Qi. He gave the following quotes from two separate ancient texts: "*Headache is mainly caused by phlegm, and severe headache caused by excessive fire,*" and: "*Fenglong (ST.40) can treat severe headache.*"

The treatment principles used were:

- Dredge the meridian Qi of Shaoyang and remove fire from the Liver and Gallbladder (Yanglingquan GB.34)
- Resolve Phlegm and remove Dampness (Fenglong ST.40)
- Eliminate Wind and clear stagnation of Qi and Blood (Fengchi GB.20, Shuaigu GB.8, ashi acupoints)

Trial F, control group

The control group were treated using the same underlying theory: that migraine was mainly caused by wind-fire in the Liver meridian, and it usually also involved blood stasis and stagnation of Qi. However the treatment was restricted to using local acupoints only, and various other restrictions were applied, as detailed in the section: *A note on the validity of Trial F*, on page 8. However, despite all this, the trial still achieved impressive results using the following same acupoint prescription for every patient:

- Fengchi GB.20
- Shuaigu GB.8
- Taiyang
- Toulingqi GB.15
- Luoque BL.8

Trial G

This trial's author's explanation for his choice of acupoints was as follows:

Migraine is characterized by recurrent pain in one or both sides of the head. Therefore, the acupoints of the Shaoyang meridians are primarily selected, for Yang meridians reach the head and Shaoyang meridians distribute over the side of the head.

The following acupoints were thus selected:

Local acupoints of the gallbladder meridian of the foot Shaoyang were used, including: Fengchi (GB.20), Yangbai (GB.14), Shuaigu (GB.8), Fubai (GB.10) and extra point Taiyang; as well as distal acupoints of the Shaoyang meridian, including Zhongzhu (SJ.3) and Zulinqi (GB.41). Waiguan (SJ.5) is one of the eight confluent points communicating with the Yang Linking Vessel at the outer canthus.

The author stated that all these acupoints together function to dredge the meridians and collaterals, regulate Qi and Blood, ease pain and eventually to harmonize the internal organs to heal migraine.

Trial H

This trial's author stated that, according to TCM, headache was the result of stagnation of Qi and blood, obstruction of the channels and collaterals; or pathogenic Wind attacking upwards to obstruct the collaterals.

Therefore, the treatment principles used were to:

- Dredge the channels and activate the collaterals
- Dispel wind and promote Blood circulation

This was achieved with the following acupoints:

Lieque (LU.7) is a major point for treating pain in the head and neck.

Shuaigu (GB.8) is on the Gallbladder channel of Foot-Shaoyang; migraine also pertains to the Gallbladder channel, so this acupoint was selected as a local acupoint, and combined with Xingjian (LIV.2) which is the Ying-Spring point of the Liver channel, to disperse the stagnated Qi of the Liver and Gallbladder, and regulate the emotions.

The "Dianxian" acupoint is an empirical *extra* acupoint. It was discovered by the author's colleagues in 1970. It was initially used in the treatment of epilepsy, but was then also found to be beneficial in the treatment of migraine. It is located one cun medial and superior to GB.20, at the end of the trapezius muscle. The author did not give a TCM explanation for its effectiveness, but perhaps this can be explained by its close proximity to GB.20 (which is a major acupoint for treating all types of headache), and the fact that it lies on, or very close to, the Bladder channel, in the region of BL.10, which is another acupoint that is sometimes used in the treatment of headache.

Trial I

This trial's author gave the following reasoning for the effectiveness of his treatment:

In TCM, migraine comes into the category of "headache," or "Brain Wind". The head is a house of clear Yang and three Yang meridians all run to the head and face. The Liver Meridian of Foot-Jueyin meets with the Governor Vessel at the vertex, and the essential Qi of the six Zang and five Fu organs all ascends to the head. Therefore, headache can take place due to pathological changes in the meridians and internal organs.

Therefore, the treatment principle adopted was to:

- Expel wind, unblock the collaterals, relieve spasm and stop pain.

The following acupoints were used:

Fengchi (GB 20), an intersecting acupoint of the Gallbladder meridian and the Yang Linking Vessel, was selected to expel wind.

Baihui (DU.20), located at the vertex, is a converging site of three Yang meridians; the combination of these two acupoints can disperse wind, dredge the collaterals, benefit marrow and fulfill essence.

Adding Taiyang (Extra), intensified the effect of dredging the collaterals and stopping pain.

Touwei (ST.8) and Sizhukong (SJ.23) punctured towards Shuaigu (GB.8) was used to balance the Liver, extinguish Wind, stop spasm and pain.

The combination Hegu (LI 4) and Lieque (LU 7) were used to expel wind and unblock the collaterals. These points are also important acupoints for headache.

Stauntonvine was used to unblock the meridians, activate the collaterals, relieve spasm and stop pain.

Comparison of the reasoning used in the differentiated and the non-differentiated trials

Using the data in the above section (*Why did the non-differentiated trials achieve better results*, page 15), the following table was compiled, which summarizes the pathogenic factors that each trial’s reasoning recognises as playing a part in causing headache, and hence indicating the treatment principles that each trial would have adopted:

Trial	Wind/ Yang	Fire	Damp/ Phlegm	Stagnant Qi	Stagnant Blood	obstruction in Gallbladder Channel	obstruction in Yangming	Liver dysfunction	Spleen dysfunction	Kidney dysfunction
Differentiated trials										
A	X	X	X	X	X	X		X	X	X
B	X	X		X		X	X		X	
C	X	X						X		X
D	X	X		X	X	X		X		X
E	X		X			X	X			
totals	5	4	2	3	2	4	2	3	2	3
Non-differentiated trials										
F, treatment	X	X	X	X	X	X				
F, control	X	X	X	X	X	X				
G				X	X	X				
H	X			X	X	X		X		
I	X			X	X	X		X		
totals	4	2	2	5	5	5	0	2	0	0

Table 4

In Table 4, **both groups** have a preponderance of trials that recognized the presence of the following pathogenic factors:

- Wind or exuberant Yang
- obstruction in the Gallbladder channel
- stagnation of Qi

In the **non-differentiated group**, all the trials recognized the presence of the following factor:

- stagnation of Blood

In the **differentiated group**, the majority of trials also recognized the presence of the following factors:

- Fire
- Liver pathology
- Kidney pathology

In summary (discounting all scores of 2 or below in Table 4), the non-differentiated trials tended to emphasize the treatment of Wind or exuberant Yang, stagnation of both Qi and Blood, and obstruction in the Gallbladder channel.

The differentiated trials also tended to emphasize the treatment of Wind or exuberant Yang, stagnation of Qi, and obstruction in the Gallbladder channel (but not the treatment of Blood stagnation). And the majority of the trials also treated Liver pathology, Kidney pathology, and Fire.

Overall, it could be said that the main difference in approach is that the majority of the differentiated trials

emphasized the treatment of Liver pathology and Kidney pathology, whereas the non-differentiated trials tended not to treat organ pathology, and concentrated on treating Wind or exuberant Yang, stagnation of Qi and Blood, and obstruction in the Gallbladder channel. To varying degrees, the differentiated trials also treated these factors, but the *resources* were split between treating these factors and treating organ pathology (here 'resources' is defined as: 'the amount of healing energy that is available to use within each patient at the time of each treatment').

Could the non-differentiated approach also tackle the issues raised by the differentiated approach?

The previous section raises the following questions. Were the pathogenic factors that the differentiated trials were concerned about, really present? (And by this, it is meant present in all headaches, including those treated by the non-differentiated trials.) And if they *were* present, this must mean that the approach used by the non-differentiated trials inadvertently tackled those pathogenic factors. Is this possible?

To put this question another way: by using acupoints to clear Qi and Blood stagnation in the head, to expel Wind (or exuberant Yang) from the head, and to clear any blockages in the Gallbladder channel, might this approach also have the effect of regulating the Liver and Kidney?

Some practitioners would recognise that once the Qi and Blood are flowing freely in the channels that pass over the head (particularly the Gallbladder channel), and the pain of a headache has thus gone, then it is possible that the Liver Qi will also return to flowing freely (as with so many things in TCM, there is a reciprocal arrangement between the cause and the effect, and the effect and the cause). Of course, some practitioners would disagree with this possibility.

Is there any indication in the main acupoint textbooks to support this notion?

To investigate this, Table 5 (on page 21) was compiled, which lists the most frequently used acupoints in the trials that were included in this study, and then the actions of the highest scoring acupoints were studied.

Table 5 shows that, for the non-differentiated group, only two acupoints were used frequently. Shuaigu GB.8 was used by all five trials, and Fengchi GB.20 was used by four trials.

In the combined totals for all the trials, these same two acupoints were the most frequently used. Fengchi GB.20 being used in eight out of ten trials, and Shuaigu GB.8 being used in seven out of ten trials.

Since these two acupoints were the most frequently used across all the trials, and were the only two acupoints that had been used in the majority of the non-differentiated trials, it was evident that if the above question could be answered by studying the actions of individual acupoints, then only these two acupoints would serve as suitable subjects.

In the entries for these two acupoints in *A Manual of Acupuncture*², Shuaigu GB.8 is indicated for all the classic symptoms of migraine, including all those symptoms that could be said to result from Liver dysfunction, but nowhere in the text is there any mention of this acupoint having any direct effect on the Liver. Similarly, in the entry for Fengchi GB.20, the acupoint is clearly indicated for many of the main symptoms for headache, but there is no mention that this acupoint has any direct effect on the Liver.

The same situation exists in *The Foundations of Chinese Medicine*³, and *Chinese Acupuncture and Moxibustion*⁴.

It seems that this phenomenon, if it exists, does not appear to be documented.

² Peter Deadman, Journal of Chinese Medicine Publications 2001

³ Giovanni Maciocia, Churchill Livingstone 1989

⁴ Cheng Xinnong, Foreign Languages Press Beijing, 1987

Non-differentiated		Differentiated		All trials	
Shuaigu GB.8	5	Fengchi GB.20	4	Fengchi GB.20	8
Fengchi GB.20	4	Hegu LI.4	3	Shuaigu GB.8	7
Taiyang	2	Taichong LIV.3	3	Taiyang	4
Lieque LU.7	2	Shuaigu GB.8	2	Hegu LI.4	4
Xingjian LIV.2	1	Taiyang	2	Baihui DU.20	3
Touwei ST.8	1	Baihui DU.20	2	Taichong LIV.3	3
Yanglingquan GB.34	1	Neiguan P.6	2	Lieque LU.7	2
Waiguan SJ.5	1	Sainyinjiao SP.6	2	Xingjian LIV.2	2
Fenglong ST.40	1	Zusanli ST.36	2	Touwei ST.8	2
Baihui DU.20	1	Xingjian LIV.2	1	Yanglingquan GB.34	2
Hegu LI.4	1	Touwei ST.8	1	Waiguan SJ.5	2
Dianxian	1	Yanglingquan GB.34	1	Fenglong ST.40	2
Sizhukong SJ.23	1	Waiguan SJ.5	1	Neiguan P.6	2
Toulingqi GB.15	1	Fenglong ST.40	1	Sainyinjiao SP.6	2
Luoque BL.8	1	Yintang	1	Zusanli ST.36	2
Yangbai GB.14	1	Taixi KI.3	1	Dianxian	1
Zhongzhu SJ.3	1	Hanyan GB.4	1	Sizhukong SJ.23	1
Fubai GB.10	1	Yingu KID.10	1	Toulingqi GB.15	1
Zulinqi GB.41	1	Dazhui DU.14	1	Luoque BL.8	1
		Houxi SI.3	1	Yangbai GB.14	1
		Xuanlu GB.5	1	Zhongzhu SJ.3	1
				Fubai GB.10	1
				Zulinqi GB.41	1
				Yintang	1
				Taixi KI.3	1
				Hanyan GB.4	1
				Yingu KID.10	1
				Dazhui DU.14	1
				Houxi SI.3	1
				Xuanlu GB.5	1

Table 5

Is the effectiveness in the non-differentiated trials only short-lived?

The puzzling effectiveness of the non-differentiated trials now raises the following question. Since, in general, only local acupoints were used, and none of these seem to be documented as having any direct effect on the Liver (which is the main organ that is usually cited in the TCM pathology of headache), could it be that if an underlying Liver syndrome were present in a patient, then their headache would return soon after the treatment had finished?

This, of course, is an issue that the follow up period is designed to test for. In the non-differentiated trials, three had no follow up, one had a follow up period of three months, and only the remaining one trial had a follow up period of six months.

Trial I used a follow up period of six months. The trial achieved a 'Cure' rate of 76% (that is, the headache and accompanying symptoms disappeared completely and there was no recurrence within six months), and a total effective rate of 92.6%.

Trial H used a follow up period of three months. The trial achieved a 'Cure' rate of 64.4% (that is, the clinical symptoms and signs disappeared and there was no recurrence within three months), and a total effective rate of 100%.

When comparing these two trials to the other trials in the non-differentiated group, the use of a follow up period does not appear to have produced less effective results.

These two trials provide specific evidence that the headaches are not returning within the follow up period.

Further, in the section *Follow up period*, on page 13, it was shown that though the non-differentiated group consisted of less trials that used a follow up, this had not produced a bias in favour of the non-differentiated group, as regards effectiveness.

These two factors are enough to cast serious doubt on the suspicion that the non-differentiated approach was only producing temporary effectiveness and was not having any effect on any underlying organ syndromes that might have been present. The evidence provided by the above two trials seems to suggest the opposite.

Is a standard acupoint prescription suggested for headache?

Another question that this study's results prompts, is that since, in the acupuncture treatment of headache, it does not appear to be necessary to use differentiation, is there a standard acupoint prescription that is suggested by the trials included in this study?

Table 5 lists all the acupoints used in the trials. Amongst the non-differentiated trials, the only consensus seems to be that the following acupoints must be used:

- Shuaigu GB.8
- Fengchi GB.20

Beyond this, a standard acupoint prescription was not suggested. However, when considering the totals for all the trials, it could be said that the following five acupoints were considered to be the most important in the treatment of headache (regardless of whether or not differentiation was used):

- Fengchi GB.20
- Shuaigu GB.8
- Taiyang
- Hegu LI.4
- Baihui DU.20

Final conclusions

This study found that the acupuncture treatment of headache was significantly more effective if a standard acupoint prescription was used to treat each patient and no attempt was made to differentiate between any underlying syndromes that might be present.

The trials included in this study were divided into two groups, those that used differentiation and those that did not. The trials that were included in each of these two groups were comparable as regards the definition of headache; the design of the trials; the total numbers of patients; the patient age, sex distribution, and duration of illness; the treatment frequency; the use of follow up periods. In all these factors, there was no evidence of bias in favour of one group or the other.

In general, the non-differentiated trials tended to emphasize the treatment of Wind (or exuberant Yang), stagnation of both Qi and Blood, and obstruction in the Gallbladder channel, and paid no attention to treating organ pathology. This approach produced more effective results, and the results were shown to be long-lasting.

One possible explanation for this outcome is that by using acupoints to clear Qi and Blood stagnation in the head; to expel Wind (or exuberant Yang) from the head; and to clear any blockages in the Gallbladder channel; this approach may also have the effect of regulating the Liver and Kidney. However, if this phenomenon does exist, it does not appear to be documented in the main acupuncture textbooks.

When comparing all the trials in the non-differentiated group, a standard acupoint prescription for headache did not seem to suggest itself. All that could be concluded in this respect was that the following two acupoints were essential to use:

- Shuaigu GB.8
- Fengchi GB.20

And that the following further three acupoints were frequently used in the treatment of headache, regardless of whether or not differentiation was used:

- Taiyang
- Hegu LI.4
- Baihui DU.20

One final question remains. Why does the differentiated approach appear to be less effective? Of course, any answer to this question must consist largely of speculation, but here is one possible scenario:

In some cases, perhaps the differentiation is not accurate, and therefore the treatment's resources are expended on rectifying an underlying cause that does not exist, or perhaps does not exist in the simplified form that the practitioner imagines he has detected. In other words, perhaps what is going on is more complex than is realized by the practitioner, and so if he were to use the non-differentiated approach instead, ignore the underlying organ pathology, and concentrate on freeing the flow of Qi and Blood in the head meridians, then perhaps the underlying problem would be given the opportunity of rectifying itself—without the interference of well-meant but inappropriate interventions.

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