

Original Paper

Evidence and Mechanism of External Qi in Chinese Medicine

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ABSTRACT

Background: There are 2 kinds of Qi: Internal Qi is what circulates inside a human body while External Qi is what an experienced practitioner could emit and could be felt by a receiver. The healer's body will emit electromagnetic waves of low oscillating frequency from 0.1–100 Hz.

Objective: To document the existence of External Qi using infrared imaging to detect changes in body surface temperature.

Design, Setting, and Patient: A man in his 40s had been in a car crash at the age of 18 that permanently injured his neck. He was told to sit or lie down and relax, close his eyes, and prepare to accept treatment. During the healing session, the author put his hands several inches from the patient's head, neck, or body but never touched. Infrared images were taken before and after each healing session with External Qi, which typically lasts about 10 minutes. The patient was treated with External Qi once a week from May to August 2005.

Main Outcome Measure: Documented infrared images of change in body surface temperature.

Results: The patient reported continuous and steady improvement in the 3-month period. Significant changes in the maximum temperature were observed at some parts of the body before and after each healing session. The largest differences were 6.7°F in the back region, 1.14°F in the lower back region, 0.97°F in the front region, 3.83°F in the upper back region, and 2.11°F in the face.

Conclusions: Significant changes in the patient's surface body temperature through the effect of External Qi were demonstrated without the patient feeling any pain or discomfort.

Key Words: Qi, Temperature, Meridians, Infrared Imaging, Qigong

INTRODUCTION

CHINESE MEDICINE HAS MADE SIGNIFICANT inroads into Western medical practice in the last few decades. Especially in the last 15 years, there have been numerous scientific studies from various research centers around the world¹ documenting the effectiveness of acupuncture. The theory of Traditional Chinese Medicine relies heavily on 2 fundamental concepts: Meridians and Qi.

In a previous paper,² I proposed a hypothesis that Meridians are made up of stable water clusters, which have permanent electrical dipole moment.^{3–8} The oscillations on the stable water clusters along the Meridians are identified as Qi. In this paper, I present evidence that supports the existence of Qi.

Two kinds of Qi exist: Internal and External. Internal Qi circulates inside a human body. External Qi is what an experienced practitioner, such as a Qigong Master, could emit

TABLE 1. DIFFERENCES OF MAXIMUM TEMPERATURES BEFORE AND AFTER TREATMENT ON MAY 7, 2005

	Temperature, °F		
	Before	After	Difference
Face	96.04	97.17	-1.13
Back	97.87	91.17	6.7
Neck	97.22	96.84	0.38

and be felt by a receiver. As a simple analogy, Meridians are like piano wires. There are 2 kinds of vibrations associated with a piano wire: the internal vibration and the external vibration. The internal vibration is the oscillation of the piano wire itself in sinusoidal movement while the external vibration is the vibration of the air outside the piano wire, which is the sound generated. External Qi is similar to sound waves that travel from the piano wire to a listener.

External Qi emitted by a Qigong Master has been shown to have effects on animals^{9,10} and to affect human fibroblasts,¹¹ human polymorphonuclear leukocytes,¹² and other structures.¹³⁻²⁰ Here, the focus is on the effect of External Qi on surface body temperature.

EMITTING AND ABSORBING EXTERNAL QI

The proposed model of emitting and absorbing External Qi is based on the hypothesis that Meridians are made up of molecular structures with permanent electric dipole moment of molecules, probably stable water clusters, and Qi is vibration of this molecular structure.^{1,2}

To illustrate the mechanism of emission of External Qi from a Qigong Master in a qualitative manner, 2 analogies can be made: a mechanical one and an electrical one. First, Meridians are like wires in a piano. When a piano key is hit, the piano wire starts to vibrate and that can be felt. If the vibration is small, no sound can be heard. But when the

TABLE 2. DIFFERENCE OF MAXIMUM TEMPERATURES BEFORE AND AFTER TREATMENT ON MAY 12, 2005

	Temperature, °F		
	Before	After	Difference
Face	97.76	97.76	0
Front	97.71	97.38	-0.33
Upper back	98.89	98.52	0.37
Neck	99.86	99.17	0.69
Lower back	96.26	95.12	1.14
Legs	94.26	93.97	0.29

TABLE 3. DIFFERENCE OF MAXIMUM TEMPERATURE BEFORE AND AFTER TREATMENT ON JUNE 7, 2005

	Temperature, °F		
	Before	After	Difference
Face	97.81	96.25	0.56
Front	97.33	96.36	0.97
Upper back	96.63	97.06	-0.43
Neck	97.27	96.73	0.54
Lower back	96.69	95.58	0.71
Legs	93.97	94.75	-0.78

vibration is large, it shakes the air hard enough and we hear sound. Vibrations in the piano wire are sound waves, whereas in the Meridians, it is Qi. When vibrations in Meridians of a Qigong Master become large enough, Qi is emitted from his/her body and enters into air like sound. External Qi is known to contain a component of subsonic waves.^{1,2} If Meridians are made up like stable water clusters with permanent electric dipole, the vibration of Meridians is also like the vibration of the electric dipole in an antenna of a radio broadcasting station. When electric dipole vibrates in an

TABLE 4. DIFFERENCE OF MAXIMUM TEMPERATURE BEFORE AND AFTER TREATMENT ON JULY 12, 2005

	Temperature, °F			Time, PM
	Before	After	Difference	
Face	103.21	99.92	3.29	
Front	102.13	99.11	3.02	
Lower back	98.89	96.04	2.85	
Upper back				
Neck	101.54	98.03	3.51	
Back	101.97	98.14	3.83	
Back (continuous)	101.97			1:11:27
		100.35	1.62	1:16:38
		100.03	1.94	1:17:40
		100.14	1.83	1:18:08
		99.92	2.05	1:18:34
		99.75	2.22	1:18:57
		100.14	1.83	1:19:19
		99.86	2.11	1:19:47
		99.65	2.32	1:20:10
		99.75	2.22	1:20:37
		99.65	2.32	1:21:01
		99.54	2.43	1:21:25
		99.06	2.91	1:21:51
		99	2.97	1:22:13
		99.17	2.8	1:22:36
		99.06	2.91	1:22:59
		98.84	3.13	1:23:23
		98.95	3.02	1:24:46
		99.11	2.86	1:24:10
		98.68	3.29	1:24:33

TABLE 5. DIFFERENCE OF MAXIMUM TEMPERATURE BEFORE AND AFTER TREATMENT ON AUGUST 4, 2005

	<i>Temperature, °F</i>		
	<i>Before</i>	<i>After</i>	<i>Difference</i>
Face	101.11	99	2.11
Neck	100.35	99.38	0.97

antenna, radio signals are emitted and travel through the air. The signals are received by a radio via resonance mechanism of an electric circuit inside the radio. A similar mechanism operates in the healing session. When the healer begins the healing process, presumably, the stable water clusters inside the healer's body will start to vibrate strongly. Since it has an electric dipole moment, the healer's body will emit electromagnetic waves of the oscillating frequency of the water clusters. These waves are mostly in the low frequency from 0.1–100 Hz. Then the waves travel through air and are absorbed by a resonance mechanism through corresponding stable water clusters in the body of the patient.

METHODS

Case Studies

I have studied several hundred cases of healing by External Qi with 4 different healers. One learned Qigong healing through martial arts. Two healers learned Qigong directly from Taoist masters. The fourth healer is gifted with natural healing ability from birth. All relevant cases showed a significant difference in surface body temperature of patients before and after each healing session.

On many occasions, the author performed the healing and demonstrated via infrared imaging system the difference in surface body temperatures of volunteers in front of expert audiences.²¹ All cases were different in specific details, yet all were done in a similar fashion. A single case reported here serves to illustrate the procedure involved and represents the massive amount of data accumulated so far.

In this case, the subject of the study was a man in his 40s. He had been in a car crash at the age of 18 that permanently injured his neck.

The patient was asked to either lie on a bed or sit in a chair quietly, relax, close his eyes, and prepare to accept treatment. During the healing session, I put my hands several inches from his head, neck, or body. He was never touched. I felt that Qi was emitted from me to various parts of his body. Infrared images were taken before and after each healing session with External Qi, which typically lasts about 10 minutes.

After giving consent for treatment, the patient was treated with External Qi once every week from May to August 2005.

It is well studied by the manufacturer (Meditherm) that the normal fluctuation of surface temperature of a patient is about 0.2°F to 0.45°F. A difference of surface temperature before and after a 10-minute healing session of less than 0.45°F is not significant. If it is much more than 0.90°F, then it is 2 standard deviations away from the normal fluctuation; the change is significant. It can be attributed to external influence from the healers to the subject. Or, it is evidence to support the existence of External Qi.

Each picture depicted contains more than 20,000 data points. Visual inspection of 2 pictures before and after gives viewers an immediate impression of whether there is difference in temperature due to healing. For the convenience of comparison, the maximum temperature was chosen as the single parameter for numerical study. The data are tabulated in Tables 1–6.

TABLE 6. DIFFERENCE OF MAXIMUM TEMPERATURE BEFORE AND AFTER TREATMENT ON AUGUST 9, 2005

	<i>Temperature, °F</i>			<i>Time, PM</i>
	<i>Before</i>	<i>After</i>	<i>Difference</i>	
Face	100.51	99.38	1.13	
Front	101.37	99.49	1.88	
Upper back				
Neck	97.81	96.09	1.72	
Back	99.32	97.49	1.83	
Back	97.81			12:10:03
(continuous)		97.66	0.15	12:10:56
		97.49	0.32	12:11:37
		97.49	0.32	12:12:21
		97.12	0.69	12:13:08
		97.17	0.64	12:13:50
		97.44	0.37	12:14:35
		96.95	0.86	12:15:20
		97.33	0.48	12:16:05
		96.63	1.18	12:16:50
		96.3	1.51	12:17:35
		97.12	0.69	12:18:10
		96.73	1.08	12:18:54
Neck	99.32			
(continuous)		98.63	0.69	12:10:56
		99.11	0.21	12:11:37
		99.21	0.11	12:12:21
		98.73	0.59	12:13:08
		98.57	0.75	12:13:50
		98.73	0.59	12:14:35
		98.46	0.86	12:15:20
		99.17	0.15	12:16:05
		97.81	1.51	12:16:50
		97.92	1.4	12:17:35
		97.66	1.66	12:18:10
		97.49	1.83	12:18:54

For the infrared pictures, those taken on only 2 dates in Figures 1 and 2 are shown: in May and again in August 2005, where time dependence of the effect of External Qi was recorded. (Additional pictures may be obtained directly from the author.)

The time dependence of the maximum temperatures in the neck and back regions are tabulated in Tables 4 and 6; the exponential fits to the time dependence are shown in Figures 3, 4, and 5.

RESULTS

The patient reported continuous and steady improvement in the 3-month period. Significant changes in the maximum temperature were observed at some parts of the body before and after each healing session (Tables 1–5). The largest differences were 6.7°F in the back region in Table 1; 1.14°F in the lower back region in Table 2; 0.97°F in the front region in Table 3; 3.83°F in the upper back region in Table 4; and 2.11°F on the face in Table 5.

DISCUSSION

The practice of using External Qi to heal people as described above follows a commonly accepted routine that has been used for thousands of years in China. The difference here was to use modern imaging methods to document the time dependence of body surface temperature during the healing. The healing session is short and lasts about 10 minutes, and infrared images were being taken continuously to ensure that environmental effects and other interference were minimal.

In addition to the effect on the surface body temperature of the patients by External Qi, the scientific basis of emitting and receiving External Qi should be explored:

- Are there permanent electric dipole structures in acupoints and Meridians? This can be studied by using a nanoprobe that can be inserted slowly into acupoints and measuring the electric potential as it goes in. If acupoints are made up of molecular structure with positive and negative charges, then the nanoprobe could detect such changes at

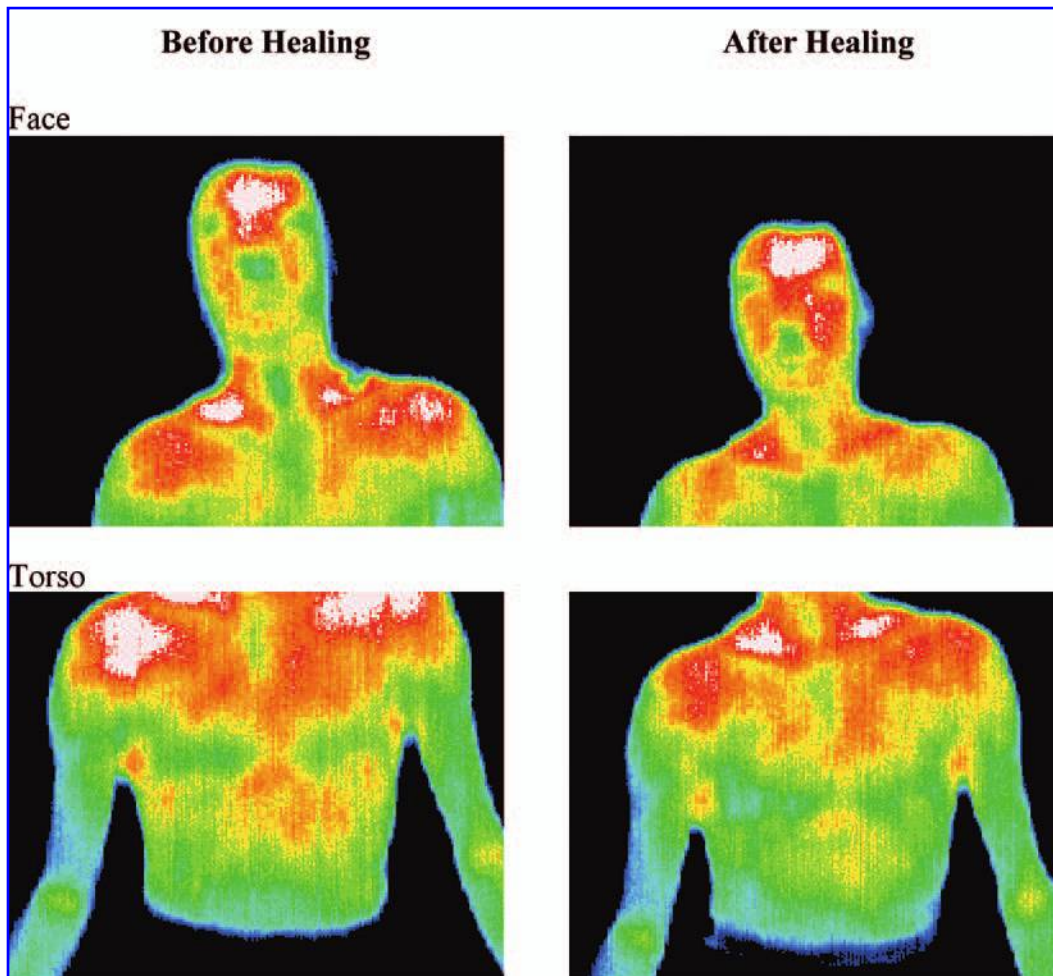


FIG. 1. Infrared images from May 12, 2005

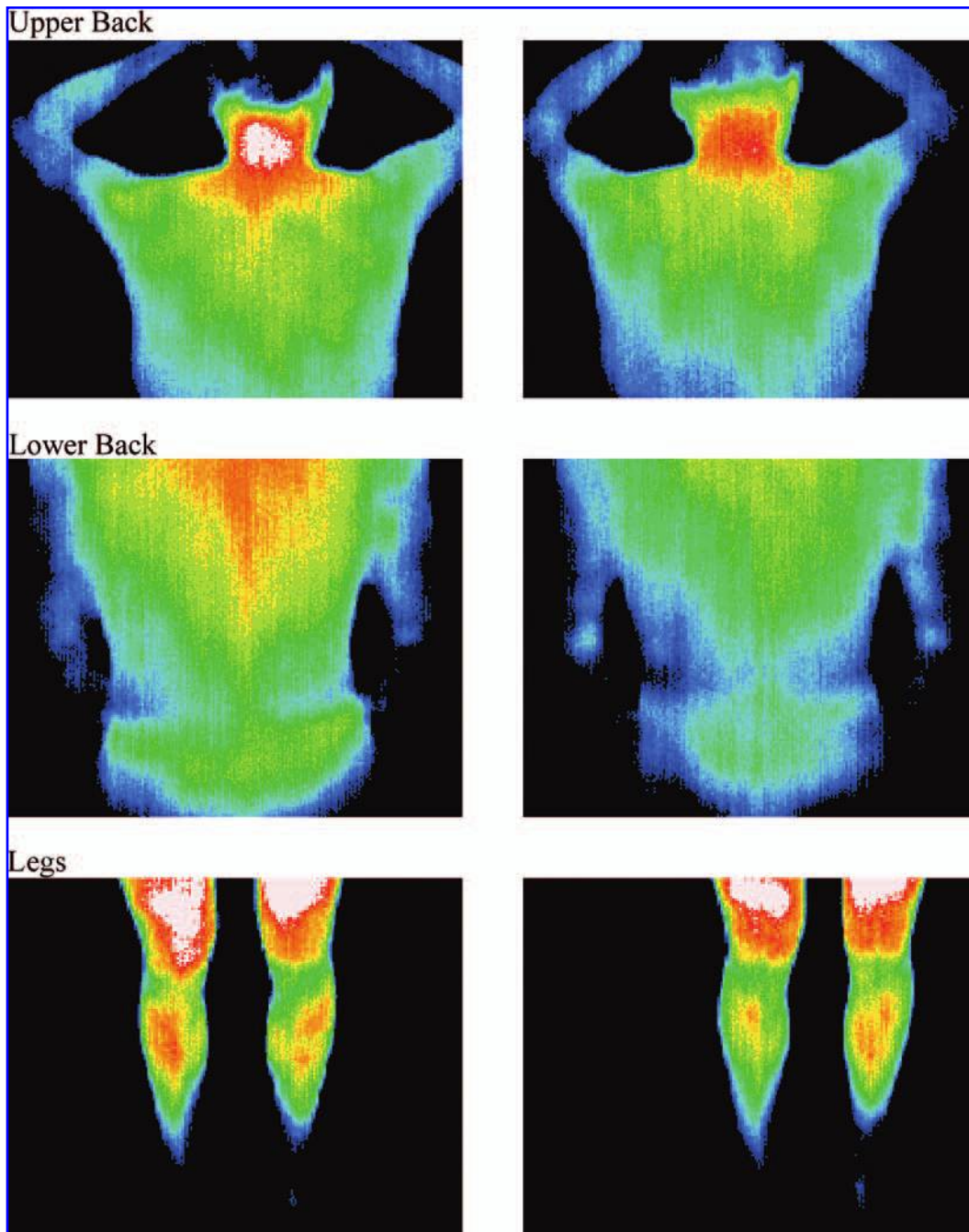


FIG. 1. *Continued.*

acupoints and Meridians, but not elsewhere. (From our study herein, stable water clusters were detected from 10 nm-1 μ m.) Modern nanoprobe technology can detect such structures.

- Are there low-frequency electromagnetic waves between the healer and the patient during the healing session? The present simple model of Meridians predicts that low-frequency electromagnetic waves will be generated by the oscillations of permanent electric dipole moment possessed by the stable water clusters along the Meridians.

The oscillation frequency of stable water clusters is in the range of 0.1–100 Hz.¹ Therefore, when a detector of electromagnetic waves of these frequency ranges is placed between the healer and the patient, it should be able to detect signals during the session, and no signals before or after the session. The existence of low-frequency oscillation of electric potential at acupoints of the healer and the patient can be detected by attaching electrodes. Electric potential is probably in the range of microvolt to millivolt region.

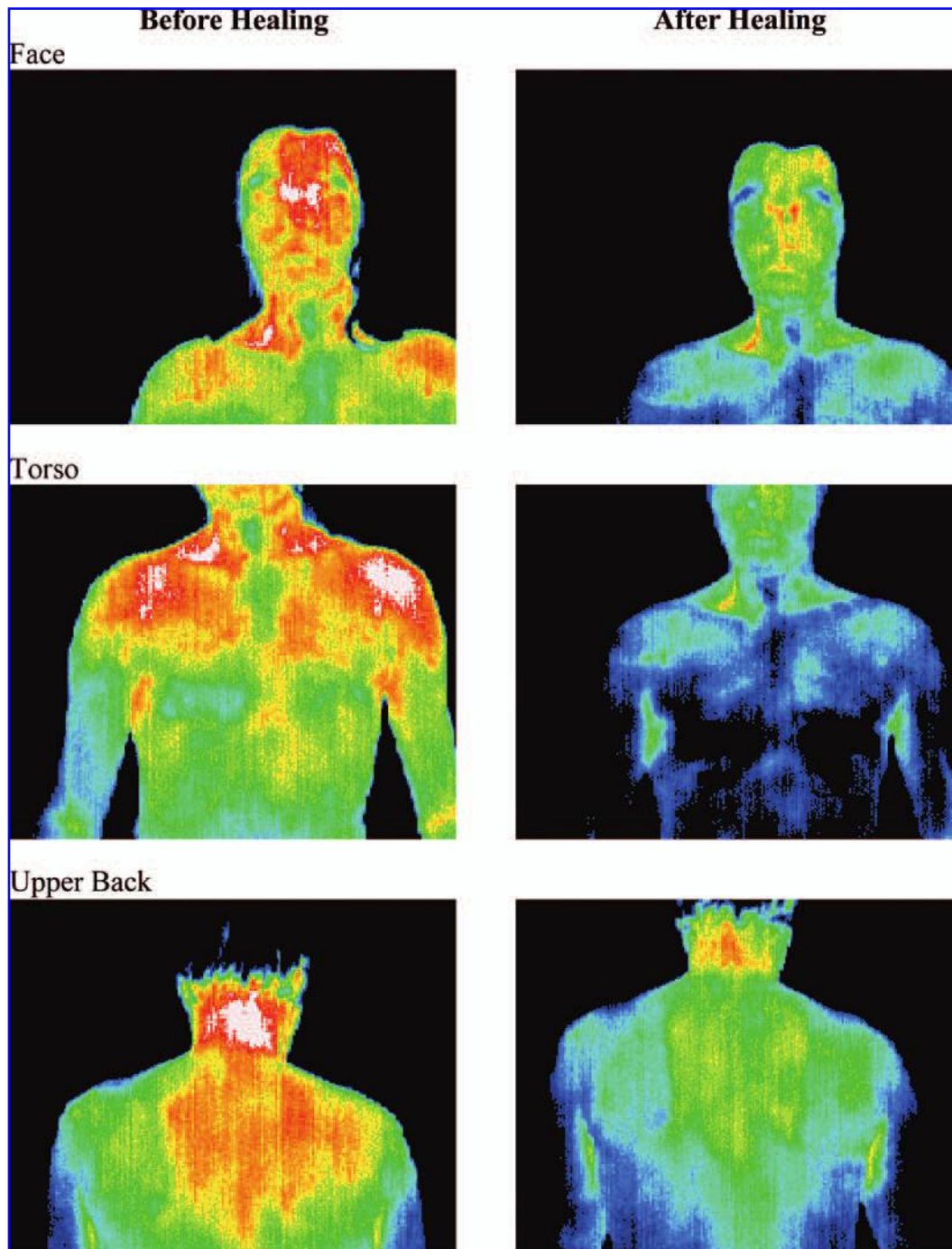


FIG. 2. Infrared images from August 9, 2005

CONCLUSIONS

The objective of this study was to determine the existence of External Qi and not to answer the more difficult question of whether External Qi has a positive effect on the patient. If the effect is genuine and reproducible, then this study supports the existence of External Qi. Whether Qi exists is an important question underlying the founda-

tion of acupuncture. There is a school of thought that claims the curing effect of acupuncture comes only through the nervous system and not at all through the Meridian systems or Qi.¹ The results reported herein do not support this school of thought. In more than 300 cases over a period of 2 years, it was always observed, without exception, significant changes in surface body temperature of the patients through the effect of External Qi without touching

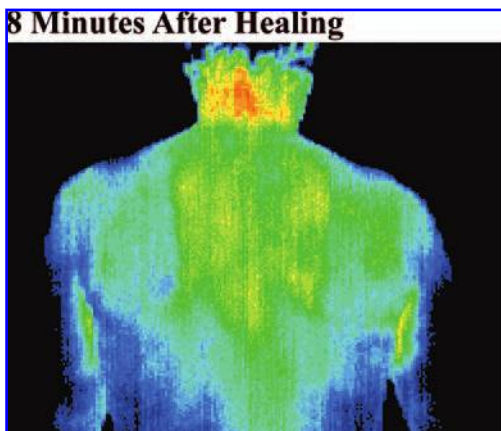
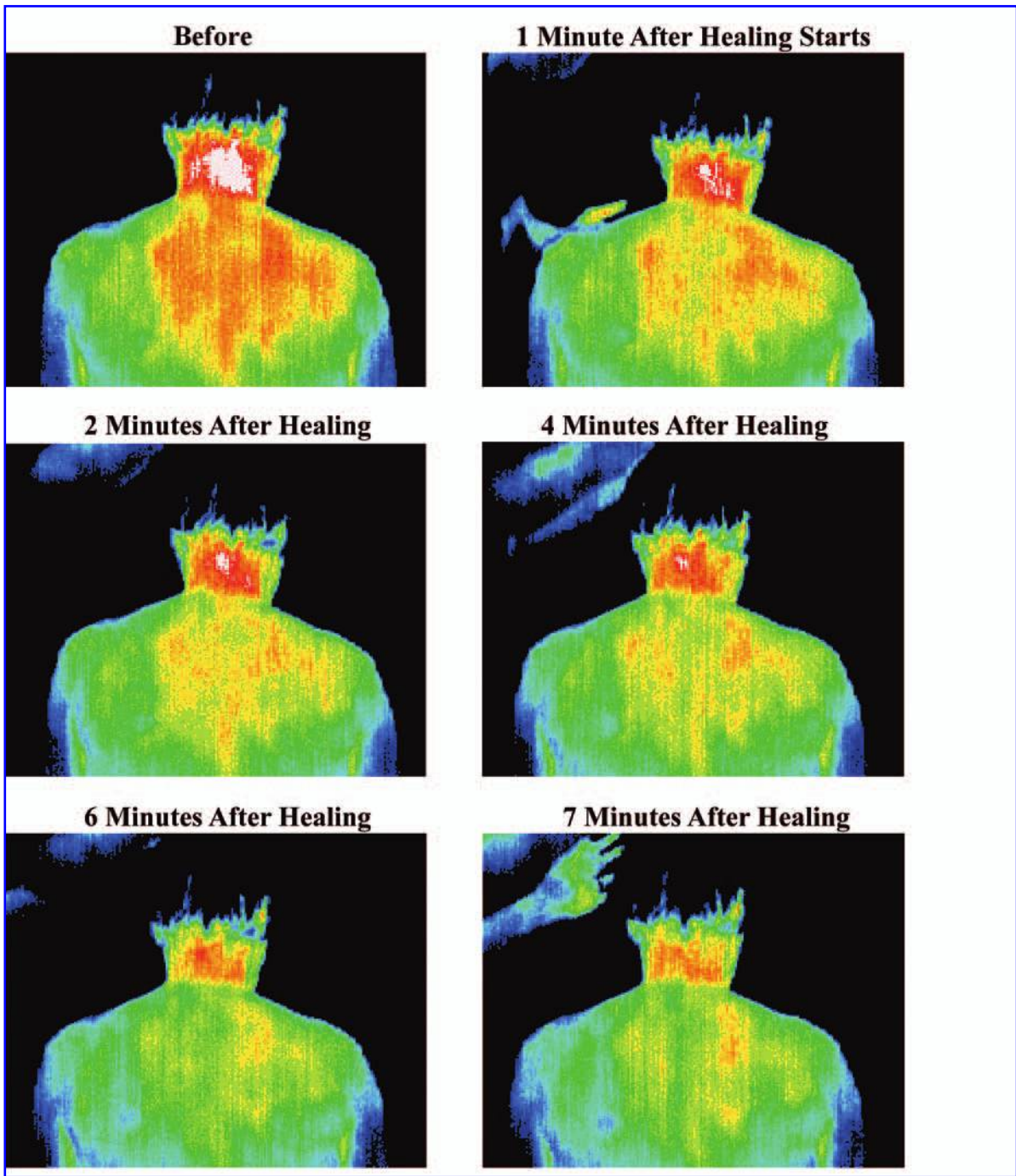


FIG. 3. Time dependence of variation of body temperature at the upper back on August 9, 2006.

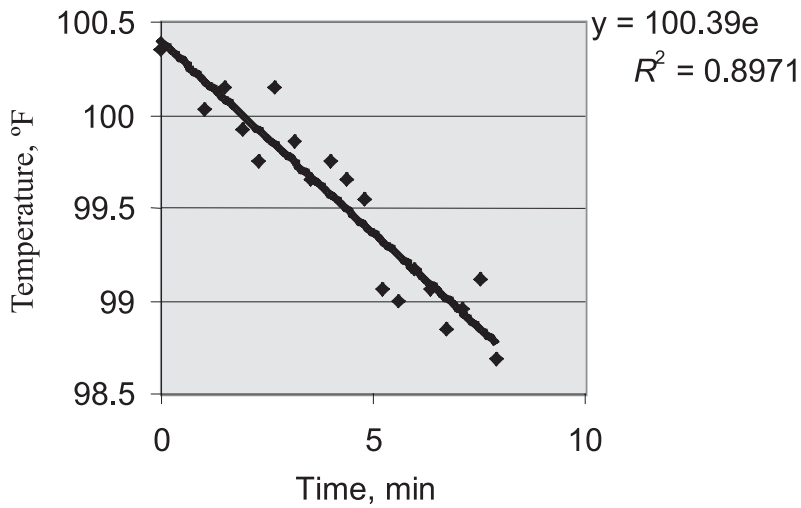


FIG. 4. Time dependence of the maximum temperature of the upper back on July 12, 2006. The exponential fit is the solid line with the algebraic expression on the upper right corner, with the χ^2 as R^2 per df .

FIG. 5. Time dependence of the maximum temperature at the upper back in August 2006. The exponential fit is the solid line with the algebraic expression on the upper right corner, with the χ^2 as R^2 per df .

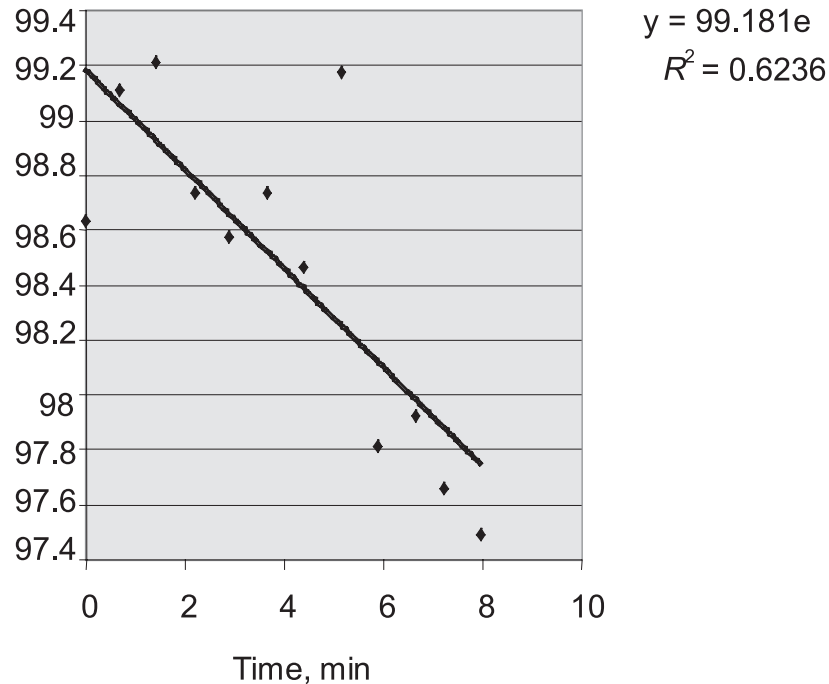
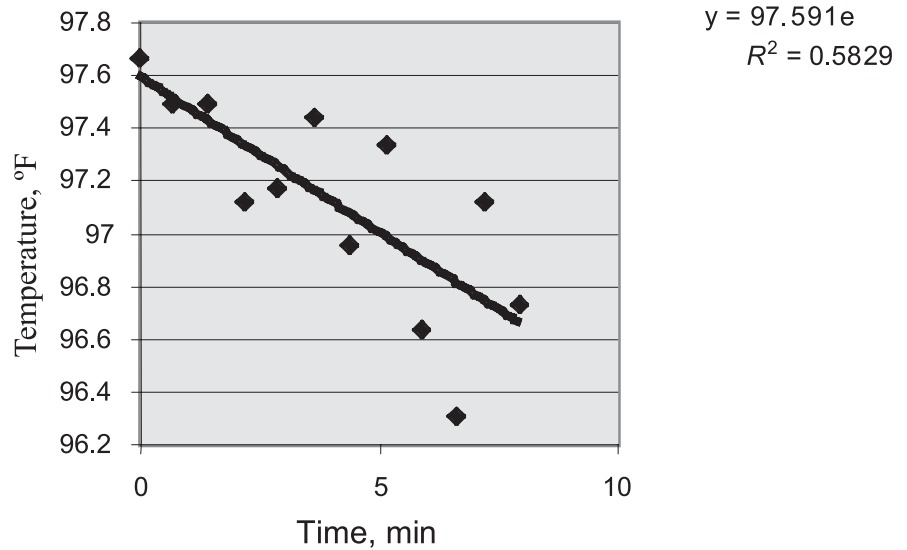


FIG. 6. Time dependence of the maximum temperature of the neck on August 9, 2006. The exponential fit is the solid line with the algebraic expression on the upper right corner, with the χ^2 as R^2 per df .

the nervous system and without patients feeling any pain or discomfort.

A larger-scale study is under way with patients having similar clinical conditions; the study will be a randomized double-blind study. I suggest a more fundamental kind of investigation to understand the nature of External Qi.

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