

ThermaCheck[®]

THERMOONCOLOGY BREAST DIAGNOSTIC

With the help of IRIS-XP

Digital Infrared Thermal Imaging System



“New Concept of Pain & Breast Screening”

ThermaCheck

FDA cleared Medical Thermography Imaging System

Medical Thermography

NEW CONCEPT OF PAIN & BREAST SCREENING SYSTEM

► ThermaCheck

ThermaCheck screening is obtained by US-FDA/CE approved Medical Infrared thermography system and it displays the thermal images of sensitive changes on the pain area by detecting the extra minimum infrared rays emitting from the body.

It is very useful test to diagnose the Neuropathy, Breast cancer, Physiological Problems, Inflammation and Circulatory disorder which are difficult to be found by CT or MRI without any radiation.

► Why Should You Use ThermaCheck?

✔ High-Technology & Medical Study



- ❑ International Medical Certificates [US-FDA, CE, CFDA]
- ❑ Built the Standard Reference of Body Temperature for Normal People
- ❑ Researches for over 20 years internationally

✔ Benefits



- ❑ The procedure is totally non-invasive & no-pain [Available for pregnant women]
- ❑ As it does not involve ionizing radiation, there is no patient risk
- ❑ Provides information for the physiological problems which other imaging systems could not detect
- ❑ It is easy to compare the results of before and after treatment by thermal imaging.

✔ Usefulness



- ❑ Quantitatively analyze and visualize the Physiological States of Pain
- ❑ Judge and screen the blood circulation and the underlying disease related to ANS dysfunction
- ❑ The unique tool to visually indicate the Musculoskeletal Disorder

► Clinical Applications

Cancerous Diseases

Breast Cancer Screening, Thyroid & Parathyroid Disease

Neural Diseases

Disc & Spinal Nerve Injury, Spinal Stenosis, Neuralgia, Chronic & Acute Back Pain, Carpal Tunnel Syndrome, Peripheral Nerve Injury, Causalgia, Autonomic Nerve Injury, CRPS, Hyperhidrosis, CVA, Facial Palsy, Migraine, Sensory Nerve Abnormality

Musculoskeletal Diseases

Myofascial Pain Syndrome, Arthritis, Brachial Plexus Injury, Rheumatoid Arthritis, Sprain & Strain, Myofascitis

Vascular Diseases

Deep Vein Disease, Varicose Vein, Thrombosis, Peripheral Vascular Disease, Buerger's Disease, Raynaud's Syndrome, Vascular Inflammatory Disease

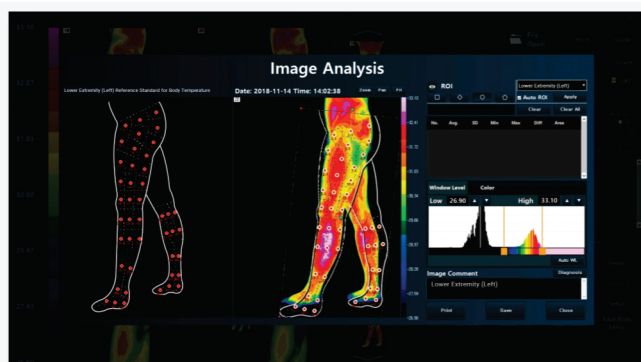
Optimized in Medical Use

DESIGNED FOR MEDICAL THERMOGRAPHY

► Features

- ❑ World-Class IR Imaging Resolution
- ❑ Digital Zooming & Auto Focusing Technology
- ❑ Motorized Stand & Rotatable Camera Head by Remote Control
- ❑ Actual Temperature Realization
- ❑ Auto Temperature Compensation Function according to Room Condition
- ❑ Automatic Diagnosis Function
- ❑ Provide Standard Temperature Data of Normal People
- ❑ Region of Interest [ROI]
 - Automatic ROI & Thermal Pattern Identification
- ❑ Automatic Win Level Adjustment
- ❑ Positioning & Clinical Guide Program
 - Positioning guide for 22 poses and clinical guide for 53 diseases are provided
- ❑ Pain Drawing Chart
 - Draw the actual pain area and compare it with thermal image

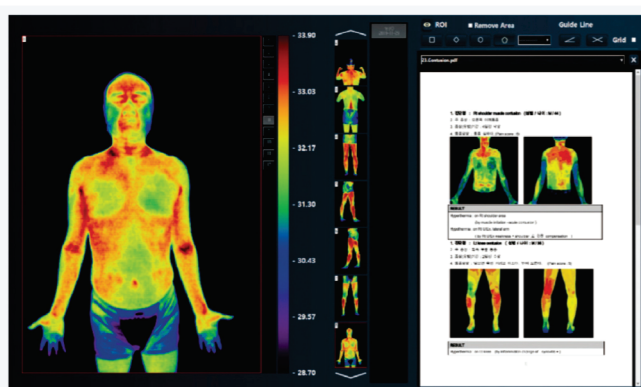
Auto ROI & Thermal Pattern Identification



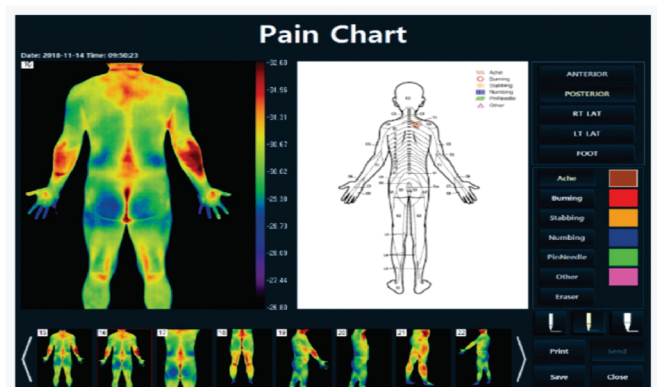
Automatic Diagnosis



Clinical Guide Program

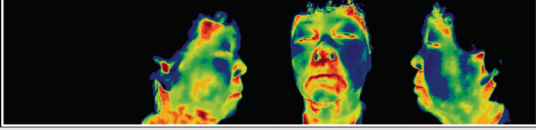
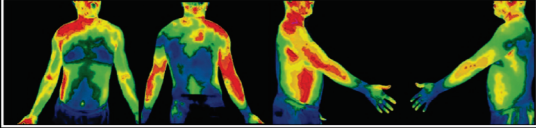
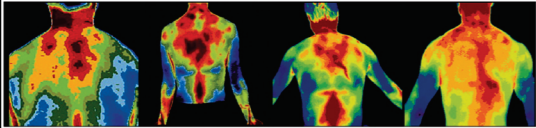
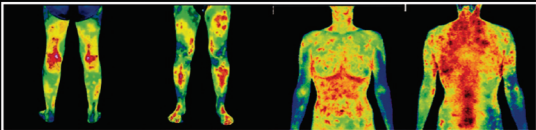
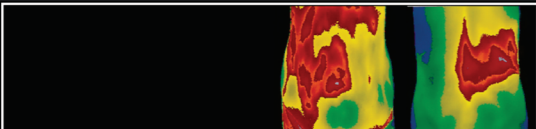
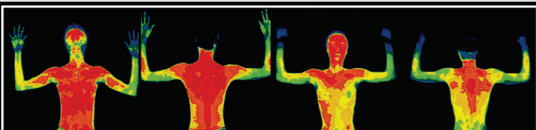
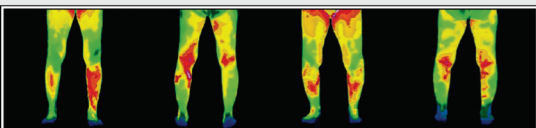
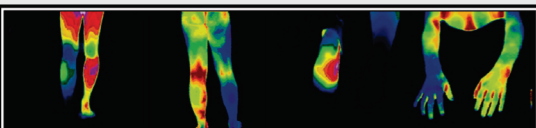


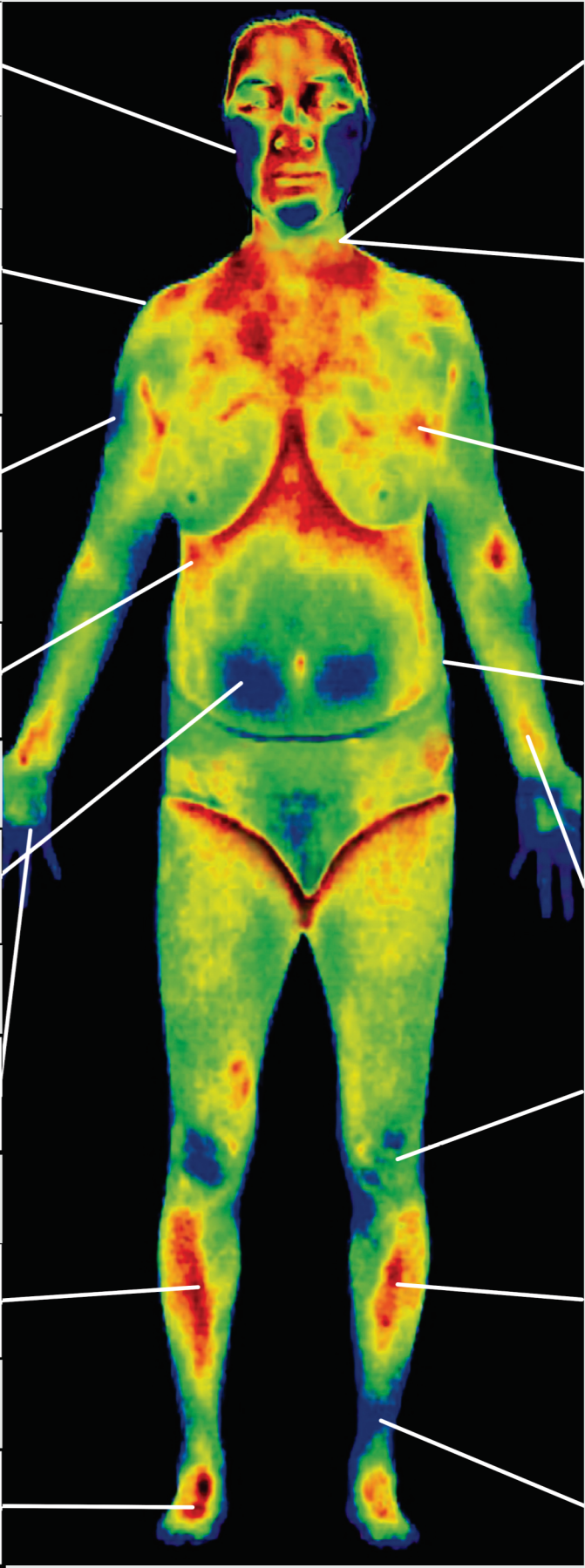
Pain Drawing Chart



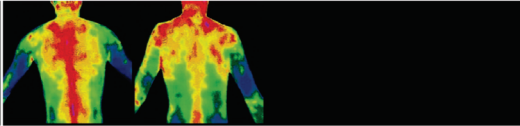
Clinical Cases

A UNIQUE THERMAL IMAGE INTO YOUR HEALTH

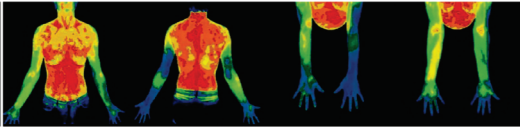
	Facial Palsy
	Shoulder Pain
	M.P.S
	Fibromyalgia
	Herpes zoster
	Hyperhidrosis
	Varicose vein
	CRPS



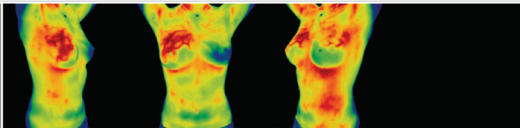
Cervical Sprain



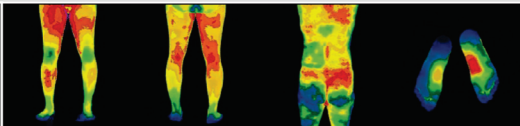
Cervical Disc
(C5-6-7)



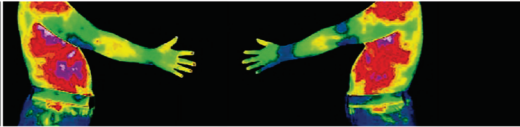
Breast Cancer



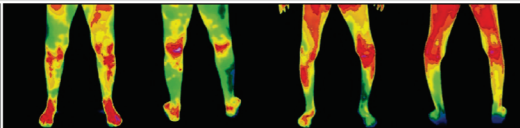
Lumbar Disc
(L4-L5)



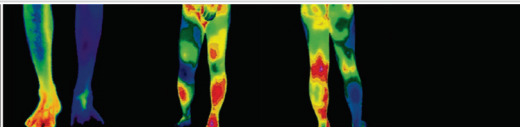
CTS



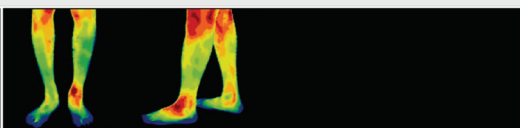
Rheumatology



ASO



Ankle Sprain



► Breast Thermography

It is a valuable procedure for alerting doctor for changes that can indicate early stage breast disease.

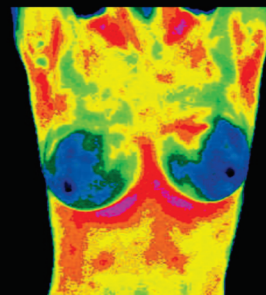
We offer the opportunity of earlier detection of breast cancer that has been possible only by mammography alone.

► Painless & Non- Invasive

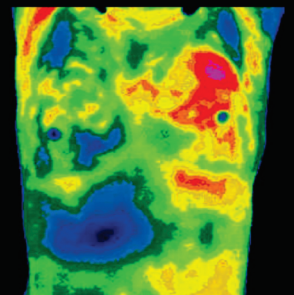
Unlike mammography, the procedure for thermography is painless, non-invasive, and radiation free.

- ❑ No radiation
- ❑ Closer monitoring available without being exposed to radiation
- ❑ No painful compression
- ❑ Detects early warning signs before a lump formation
- ❑ Effective for women with dense breast tissue
- ❑ Effective for women with fibrocystic breast
- ❑ Effective for women with breast implants
- ❑ Effective for younger women/ teens
- ❑ Comfortable
- ❑ Convenient

Abnormal Breast



F/23
Lt UIQ 3.5cm
Phyllodes tumor
M/US: suspicious Ca.
ΔT=1.7



F/53
Lt upper Ca.
4cm palpable
with axilla
III LN mets

Medical Certificates

제인 03-33 호	
의료기기 제조 인증서	
(업 허가번호 : 제 871 호)	
구 분	[✓] 제조 / [] 수입
명 칭 (제품명, 품목명, 모델명)	(주)메디코아 · 의료용적외선촬영장치, IRIS-XP 외 3건
분류번호(등급)	A21030.01 (2)
모 양 및 구 조	별첨
원 재 료	별첨
제 조 방 법	기 인증사항과 동일
성 능	별첨
사 용 목 적	기 인증사항과 동일
사 용 방 법	별첨
사 용 시 주의사항	기 인증사항과 동일
포 장 단 위	기 인증사항과 동일
저장방법 및 사용기간	저장방법 : 기 인증사항과 동일, 사용기간 : 기 인증사항과 동일
시 험 규 격	제 의기법 10-01-20201708-0025호(2020.04.29)한국산업기술시험원
제조(수입)업자 정보	제조업자명 : (주)메디코아, 경기도 성남시 중원구 사기막로로 148, 801-803호 (상대원동, 중앙아파트)
하 가 조 건	없음
소 재 지	경기도 성남시 중원구 사기막로로 148, 801-803호 (상대원동, 중앙아파트)
비 고	
「의료기기법」 제6조 · 제15조 및 같은 법 시행 규칙 제6조제2항 · 제34조에 따라 위와 같이 인증합니다.	
2020 년 05 월 06 일	
한국의료기기안전정보원장 (인) 직 인 생 략	

KFDA in South Korea

	CE Certifikát Orvosi és Kórháztechnikai Ellenőrző és Tanúsító Kft.	CMK-M-17 Közzététel: 2020.05.06. Változat: 01/2020
Műszaki dokumentáció-értékelő jelentés Technical documentation evaluation report		
Munkaszám: Work order number:	88-CE-140813	
Gyártó: Manufacturer:	Medicore Co. Ltd.	
Cím: Address:	No.801-803, Joonganginnotech, 148, Sagimakgol-ro, Jungwon-gu, Seongnam-si, Gyeonggi-do, Korea	
EU REP	Jekarna Invest, s.r.o., Hlávského 226/5, 767 01 Kromeriz, Czech Republic	
Eszköz megnevezése: Description of the device:	Infrared thermography device	
Típus: Type:	IRIS XP	
Változatok: Variants:	-	
A termék felhasználási területe: Intended use:	Infrared camera for detection of thermal differences	
A termék fő jellemzői: Main features:		
A tanulmányozott dokumentáció: Documentation studied:	IRIS XP TECHNICAL FILE Document No: MDS-100-002.	
Összefoglaló értékelés: Summary of evaluation:		
A tanulmányozott műszaki dokumentációban vizsgált jegyzékek, elemzések és értékelések szerint a termék a 4/2009. (III. 17.) EüM rendelet 1. számú mellékletében közzétett Alapvető követelményeknek		
Based on the test reports, assessments and evaluations included in the studied documentation and supplements compliance of the product with the essential requirements in Annex I of Council Directive 93/42/EEC		
megfelel is demonstrated		
Dátum: 2020.05.06		
 értékelő / assessor		
Fájlneve: Technikai dokumentáció_140813_2020-05-06		
Oldal: 2 Összes oldal: 1 / 11		

CE in Europe

	U.S. FOOD & DRUG ADMINISTRATION
Medicore Co., Ltd. % DoGyun Lim Senior Researcher GMS Consulting 4th Floor, Digital Cube, 34, Sangamsan-ro Seoul, Mapo-gu 03909 REPUBLIC OF KOREA	September 13, 2021
Re: K212412 Trade/Device Name: IRIS-XP Regulation Number: 21 CFR 884.2980 Regulation Name: Telethermographic System Regulatory Class: Class I, reserved Product Code: LHO Dated: July 26, 2021 Received: August 3, 2021	
Dear Dogyun Lim:	
We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. Although this letter refers to your product as a device, please be aware that some cleared products may instead be combination products. The 510(k) Premarket Notification Database located at https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpnm/pnm.cfm identifies combination product submissions. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.	
If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register .	
Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part	
U.S. Food & Drug Administration 10903 New Hampshire Avenue Silver Spring, MD 20993 www.fda.gov	

FDA in USA

中华人民共和国医疗器械注册证	
注册证编号: 国械注进20142215258	
注册人名称	Medicore Co., Ltd
注册人住所	delice b/d, 164, Sagimakgol-ro, Sangdaewon-dong, Jungwon-gu, Seongnam-si, Gyeonggi-do
生产地址	delice b/d, 164, Sagimakgol-ro, Sangdaewon-dong, Jungwon-gu, Seongnam-si, Gyeonggi-do
代理人名称	北京高思明创科技有限公司
代理人住所	北京市朝阳区望京园601号楼20层2310
产品名称	医用红外热像仪 Infrared Imaging System
型号、规格	IRIS-XP
结构及组成	该产品由红外摄像头, 显示器(包含图像处理及显示单元), 打印机, 台车, 红外摄像头支架, 脚踏开关和电源模块组成。
适用范围	本产品为医用红外热成像装置, 是感知从体表释放出来的红外辐射, 并采集, 将体表温度分布图像来显示的设备
附件	注册产品标准
其他内容	/
备注	
审批部门: 国家食品药品监督管理总局	批准日期: 2014年10月31日 有效期至: 2019年10月31日

CFDA in China

Effectiveness and safety of moxibustion for alleviating symptoms of overactive bladder

A prospective, randomized controlled, crossover-design, pilot study

Hye-Yoon Lee, KMD, PhD^{a,b}, Young-Ju Yun, MD, KMD, PhD^{a,b}, Jun-Yong Choi, KMD, PhD^{a,b}, Jin-Woo Hong, KMD, PhD^{a,b}, In Lee, KMD, PhD^{a,b}, Seong-Ha Park, KMD, PhD^{a,b}, Jung-Nam Kwon, KMD, PhD^{a,b,*}

Abstract
Background: This study aimed to evaluate trial feasibility and explore the potential efficacy and safety of moxibustion in the treatment of overactive bladder (OAB).

Method: A randomized, controlled, cross-over, assessor blinded design was used. This study was conducted in an outpatient department of a university hospital in Republic of Korea. The overall study period was 8 weeks. Participants were randomly allocated to either Group A or Group B. Group A participants underwent 8 to 12 sessions of moxibustion with behavioral training during the first 4 weeks, while the Group B participants received behavioral training only. Over the next 4 weeks, the treatment offered to the 2 groups was reversed (Group A participants received behavioral training only, while Group B participants underwent the moxibustion session with behavioral training). The OAB-validated 8-question awareness tool (OAB-V8), OAB symptom scores (OABSS), visual analog scale (VAS) for lower urinary tract symptoms, and frequency voiding chart were used to assess outcomes. For analysis, we used effect size, measured as Hedge's *g*, to present descriptive results indicating the actual difference between the groups.

Results: Compared to that in Group B, the Hedge's *g* of OAB-V8 for the former 4 weeks in Group A was -0.248 , that of OABSS was -1.531 , and that of VAS was -0.713 . During the latter 4 weeks, Group B showed similar effect with $g = 0.465$, 1.207 , and 0.427 for OAB-V8, OABSS, and VAS, respectively, compared to Group A. The portion of nocturnal voiding volume decreased ($g = -0.965$), the mean voiding volume increased ($g = 0.690$), and the voiding frequency decreased ($g = -0.498$) with moxibustion.

Conclusions: Moxibustion might be considered as an alternative for OAB. A full-sized randomized controlled trial may be feasible with minimal modification in outcome measures and comparator population.

Other information: This clinical trial has been registered on clinicaltrials.gov (NCT02271607).

Abbreviations: ADLs = activities of daily living, AEs = adverse events, ANS = autonomic nervous system, BT = body temperature, CONSORT = consolidated standards of reporting trials, DBP = diastolic blood pressure, DIT1 = digital infrared thermal imaging, FVC = frequency-volume chart, ICI = inter-contraction interval, IPSS = international prostate symptoms score, IRB = Institutional Review Board, ITT = intention-to-treat, KHQ = King's health questionnaire score, KMD = doctor of Korean medicine, LUTS = lower urinary tract symptoms, MI = multiple imputation, NGF = neural growth factor, OAB = overactive bladder, OABSS = OAB symptom scores, OAB-V8 = OAB-validated 8-question awareness tool, PPS = per-protocol-set, PR = pulse rate, QoL = quality of life, SBP = systolic blood pressure, sd = standard deviation, STRATA = standards for reporting interventions in clinical trials of acupuncture, UA = urine analysis, UTI = urinary tract infection, VAS = visual analog scale.

Keywords: CV4, lower urinary tract symptoms, LR3, moxibustion, overactive bladder, SP6

Editor: Giovanni Taranito.

Declarations: Ethics approval and consent to participate: This study was approved by the institutional review board (IRB) of Pusan National University Korean Medicine Hospital (IRB No. 2014003).

Consent for publication: Not applicable.

Availability of data and material: The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

The authors have no funding and no conflicts of interest to disclose.

Supplemental Digital Content is available for this article.

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^bCorrespondence: Jung-Nam Kwon, Republic of Korea (E-mail: jnkwon@pusan.ac.kr).

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Yonsei Medical Journal
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Infrared Thermographic Imaging in the Assessment of Successful Block on Lumbar Sympathetic Ganglion

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This study examined the net changes in temperature at various regions of the lower extremities in an attempt to identify the regions demonstrating the most significant temperature changes following a lumbar sympathetic ganglion block (LSGB).

Thermography was performed before and after the LSGB in 26 sympathetic nerve system disorder cases. The inspection points were the anterior and posterior surfaces of the thigh, the knee and leg, and the dorsal and plantar surfaces of the feet. The net increases in skin temperature following the LSGB (ΔT) at the plantar and dorsal surfaces of the feet, were $6.2 \pm 2.68^\circ\text{C}$ (mean $\pm$ SD) and $3.9 \pm 1.89^\circ\text{C}$, respectively, which were higher than those observed in the other regions of the lower extremities ($p < 0.05$). The areas, in order of decreasing ΔT , are as follows: the plantar surface of the foot, the dorsal surface of the foot, the skin, the anterior surface of the knee, the calf, the posterior surface of the knee, the anterior surface of the thigh, and the posterior surface of the thigh. There was one case of orthostatic hypotension during the thermography procedure.

In conclusion, thermographic imaging is a useful method for demonstrating the success of a LSGB in various diseases. An evaluation of the ΔT on the plantar surface of the foot using thermographic imaging is the most effective, simple, and safe method for assessing a successful LSGB.

Key Words: Lumbar sympathetic ganglion block, thermography

INTRODUCTION

A great deal of experimental and clinical evi-

dence has indicated that a lumbar sympathetic ganglion block (LSGB), with the local anesthetics or neurolytic agents, is a useful diagnostic, prognostic or therapeutic procedure for various diseases, including complex regional pain syndrome (CRPS), hyperhidrosis and peripheral vascular diseases. When a neurolytic LSGB is being contemplated, a diagnostic or prognostic LSGB with local anesthetics is first recommended in order to predict the patient's response to the neurolytic block. The efficacy of the procedure and the minimization of side effects must be demonstrated before a neurolytic LSGB is performed.^{1,3}

Evaluating the effect of a LSGB, or its comprehensiveness, requires that specific tests of the sympathetic function be undertaken. The methods include skin conductance response, sweat tests, skin plethysmography and the ice response test.^{1,4} Measuring the changes in blood flow following a LSGB is also regarded as an effective method for determining the success of the block because a LSGB can change the blood flow by its direct vasodilatory effect on the blood vessels and indirectly by the breaking effect of the vicious cycle of sympathetically maintained pain. Blood flow in the skin can be measured by the changes in skin temperature, washout techniques, laser Doppler flowmetry, ulcer healing process, or the tissue PaO_2 .^{1,6}

The temperature at the extremities is largely dependent on blood flow. Therefore, its measurement by means of infrared thermographic imaging has been found to be useful.⁷ In addition, thermography has the advantages of being non-invasive, safe (without X-ray irradiation), simple, can be monitored remotely, and is capable of

http://dx.doi.org/10.3346/jkms.2014.29.4.502 • J Korean Med Sci 2014; 29: 502-506

Digital Thermography of the Fingers and Toes in Raynaud's Phenomenon

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The aim of this study was to determine whether skin temperature measurement by digital thermography on hands and feet is useful for diagnosis of Raynaud's phenomenon (RP). Fifty-seven patients with RP (primary RP, $n = 33$; secondary RP, $n = 24$) and 146 healthy volunteers were recruited. After acclimation to room temperature for 30 min, thermal imaging of palmar aspect of hands and dorsal aspect of feet were taken. Temperature differences between palm (center) and the coolest finger and temperature differences between foot dorsum (center) and first toe significantly differed between patients and controls. The area under curve analysis showed that temperature difference of the coolest finger (cutoff value: 2.2°C) differentiated RP patients from controls (sensitivity/specificity: 67/60%, respectively). Temperature differences of first toe (cutoff value: 3.11°C) also discriminated RP patients (sensitivity/specificity: about 73/66%, respectively). A combination of thermographic assessment of the coolest finger and first toe was highly effective in men (sensitivity/specificity: about 88/60%, respectively) while thermographic assessment of first toe was solely sufficient for women (sensitivity/specificity: about 74/68%, respectively). Thermographic assessment of the coolest finger and first toe is useful for diagnosing RP. In women, thermography of first toe is highly recommended.

Keywords: Raynaud Disease; Thermography; Digital Thermography; Temperature

INTRODUCTION

Raynaud's phenomenon (RP) is characterized by a three-phase color change of blanching, cyanosis, and rubor in distal extremities after exposure to cold and subsequent rewarming (1). RP is not easily diagnosed in the clinic. It is difficult to observe the triphasic color change even in winter because most patients wait in a warm waiting room long enough for any color change to disappear. Thermography on hands has been used to assess RP for a long time. Typically, an infrared camera was used to determine skin temperature distributions by measuring thermal radiation (2). Whether RP is primary or secondary, the symptoms and signs of RP are manifested via vasospasms of the small muscular arteries and arterioles of the digits (3). Blood carries heat to the skin of the fingers, but vasospasms reduce blood flow, resulting in low temperature of the fingers. However, concerns about the reproducibility of thermography have limited its use (4). As RP affects both hands and feet (5, 6) we used infrared thermography to measure skin temperature differences between the palm of the hand and the fingers and between the dorsum of the foot and the toes in patients with RP and normal healthy controls.

MATERIALS AND METHODS

Subjects

We recruited 57 patients with RP (primary RP, $n = 33$; secondary RP, $n = 24$). All patients with primary RP (21 women, 12 men) satisfied the diagnostic criteria of LeRoy and Medsger (7) and had no clinical or immunological evidence of connective tissue disease, including normal nailfold capillary filling. Patients with secondary RP (20 women, 4 men) had the following underlying diseases: systemic sclerosis ($n = 10$), mixed connective tissue disease ($n = 2$), rheumatoid arthritis ($n = 3$), Sjögren's syndrome ($n = 6$), systemic lupus erythematosus ($n = 1$), Buerger's disease ($n = 1$), or atherosclerosis ($n = 1$). In addition, 146 healthy people (86 women, 60 men) who has no underlying disease such as diabetes mellitus or hypertension volunteered for the study. Infrared digital thermography was performed at a single rheumatism center in Incheon (Korea).

Thermography protocol

Thermography images were acquired using an infrared thermography camera (IRIS-XP[®], Mediceo, Seoul). A technician who has acquired official qualification of infrared thermography and has experience of 5 yr in Inha University Hospital per-

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Original Article

Effects of different sitting positions on skin temperature of the lower extremity

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Abstract. [Purpose] The purpose of this study was to identify the effect of different sitting positions on the skin temperature of the lower extremity. [Subjects] The subjects of this study were 23 healthy university students (8 males, 15 females). [Methods] Normal sitting (NS), upper leg cross (ULC) and ankle on knee (AOK) positions were conducted to measure the changes in skin temperature using digital infrared thermographic imaging (DITI). [Results] ULC upper ankle, NS upper shin, ULC upper shin and NS lower shin showed significant declines in temperature with time. [Conclusion] These findings suggest that the ULC and NS sitting positions cause decline of blood flow volume to the lower extremity resulting in decrease of temperature of the lower extremity. Especially, sitting with the legs crossed interferes with the circulation of blood flowing volume much more than just sitting in a chair. **Key words:** Sitting position, Skin temperature, Blood flow

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INTRODUCTION

With recent rapid economic growth, an affluent diet, lack of exercise, professional jobs, and a sedentary life-style in which people are usually standing or sitting for long hours, is on the rise¹. Also, as people spend more and more time using computers at home and in the workplace, thanks to the popularization of the PC and universal usage of computers at work, hours of sedentary work are increasing².

Crossing the legs can cause hip adduction, provide stability to the sacroiliac joint³, and increase the torque on the lumbar region by rotating the pelvis of a person with a limited joint range of motion in the coxa⁴. It has been reported that when working in a standing position, an asymmetrical weight supporting stand-up position causes asymmetric activation of the left and right trunk muscles and the muscles surrounding of the hip joint, imposing abnormal stress on the tissue surrounding the hip joint and sacroiliac joint⁵. Also, the habit of sitting with crossed legs can cause kyphosis, with the additional possibility of causing scoliosis⁶. Minimal stimulus following a postural change elicits a change in the peripheral circulation⁷. Sitting with the legs crossed has the same impact on the nuclei and peripheral blood pressures, temporarily causing partial numbness with a stinging tingly

feeling, as if pricked by pins and needles, due to neural pressure or blockage of blood supply⁸.

If the peripheral circulation does not function smoothly, the tissue or cells are not provided with sufficient oxygen, causing organic change⁹.

The skin temperature is associated with the change of blood flow rate, and the skin's absolute temperature is known to vary depending on the temperature of the external environment, time, and the measured part. The controlling factor of skin temperature is blood flow rate, and a lot of blood vessels and nerves are concentrated in the skin of the body, playing a pivotal role in controlling the body temperature of the extremities¹⁰. Consequently, it is thought that sitting upright or with the leg crossed for a long time causes a temporary disturbance in the blood circulation, which will have significant impacts on the lower extremities.

A number of studies have been conducted focusing on the asymmetric muscle activities of truncal muscles during sitting with crossed legs^{11, 12}, the legs on the spinal kinematic changes and pelvic inclination in the sitting position with the legs crossed⁹, but no research has measured the change in the blood flow rate in the lower extremities through the change in skin temperature in the sitting position with the legs crossed.

Accordingly, this study was conducted to test the hypothesis that if the sitting position with crossed legs were to be continued, it would lead to neurophysiologic and blockage of the blood supply to the lower extremities, causing leg numbness and poor blood circulation. Infra-red computer thermography was used to measure the change in blood flow rate and the variation of skin temperature in the lower extremities over the course of time.

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Specification

Type	 Premium Type • Camera • Motorized Stand • Work Station	 Standard Type • Camera • Motorized Stand • Software	 Economy Type • Camera • Tripod Stand • Software
IR Camera	- IR Resolution : 384x288 pixels or 640x480 pixels - Pixel Size : 17um - Thermal Sensitivity (NETD) : ≤50mk - Focal Length : 8.1mm - FOV : 49° x 36° - Spatial Resolution(IFOV) : 1.1mRad - Spectral range : 8~14 Microns - Detector Type : Uncooled Micro-bolometer - Frame Rate : 9 or 30 Hz		
H/W	- Focusing Type : Auto Focusing [Premium], Manual Focusing [Economy / Standard] - Stand Type : Motorized Stand [Premium / Standard], Tripod Stand [Economy] - Rotating Camera Head by Remote Control [Premium] - Electric Power : AC 100~220V, 50/60Hz, 250W		
S/W	- Color mode : 19 different color modes - Auto Temperature Compensation Function - Image process functions : Zoom, Crop, Isotherm, Flip, Reset, Magnify, Pan, Fit etc. - Software functions : Auto Win Level, ROI, Auto ROI & Thermal Pattern Identification, Automatic Diagnosis by AI, Real time IR image recording - Image network system : PACS System		
Certificates	    		



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