Development of a new foot-to-foot standing bioelectrical impedance analysis device to measure the abdominal visceral fat

25/07/2012	No longer recruiting	Prospectively registered
		<pre>Protocol</pre>
Registration date 26/10/2012	Overall study status Completed	Statistical analysis plan
		Results
Last Edited 31/05/2017	Condition category Other	[] Individual participant data
		Record updated in last year
Plain English summary of protocol Background and study aims Bioelectrical impedance analysis (BIA) is a commonly used method for estimating body composition, and in particular body fat. Visceral fat is body fat that is stored within the abdominal cavity around internal organs such as the liver, pancreas and intestines. The aim of this study is to test a newly developed standing -posture BIA system to see whether it can accurately measure abdominal visceral fat. Who can participate? Healthy Taiwanese adults with normal physical activity What does the study involve? The abdominal visceral fat area measured using BIA is compared with the area measured using an abdominal computerized tomography (CT) scan. What are the possible benefits and risks of participating? The risks to participants are exposure to radiation during the CT scan, but this is a safe and legal dose. Where is the study run from?		
Where is the study in Dali Jen-Ai Hospital		
When is the study starting and how long is it expected to run for? January 2008 to December 2013		

Who is the main contact? Dr Kuen-Chang Hsieh

Who is funding the study?

National Science Council of the Republic of China (China)

Contact information

Type(s)

Scientific

Contact name

Dr Kuen-Chang Hsieh

Contact details

Office of Physical Education and Sport National Chung Hsing University 250 Kuo Kuang Road Taichung 402 Taiwan 402

Additional identifiers

Protocol serial number

N/A

Study information

Scientific Title

Using computerized tomography to evaluate the foot-to-foot standing bioelectrical impedance analysis device to measure the abdominal visceral fat area

Study objectives

The newly developed standing-posture bioelectrical impedance analysis (BIA) system with four-contact electrodes can measure abdominal visceral fat area with accuracy.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Institutional Review Board (IRB) of Advisory Committee at Jen-Ai Hospital, 11/05/2010, ref: 99-02

Study design

Randomised study

Primary study design

Interventional

Study type(s)

Screening

Health condition(s) or problem(s) studied

Abdominal visceral fat measurement in healthy volunteers

Interventions

- 1. Abdominal VFA measurements using a standing BIA system
- 2. Abdominal VFA measurements using abdominal computerized tomography (CT) scanned at the L4-L5 level

Both of these two measurements were performed subsequently at the same condition.

Intervention Type

Device

Phase

Not Applicable

Primary outcome(s)

Abdominal VFA measurements obtained using abdominal computerized tomography (CT) scanned at the L4-L5 level

Key secondary outcome(s))

Abdominal VFA measurements obtained using a standing BIA system

Completion date

31/12/2013

Eligibility

Key inclusion criteria

Healthy subjects with normal physical activity were selected in Taiwan

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Sex

All

Key exclusion criteria

- 1. The participants had no major diseases, such as diabetes, cancer, kidney dysfunction, liver diseases or long-term asthma
- 2. Pregnant women or women who were likely to become pregnant, menstruating women
- 3. Individuals with electronic implants (electronic devices attached to the body)

Date of first enrolment

01/01/2008

Date of final enrolment

Locations

Countries of recruitment

Taiwan

Study participating centre
National Chung Hsing University
Taichung 402
Taiwan
402

Sponsor information

Organisation

Charder Electronic Co.Ltd. (Taiwan)

Funder(s)

Funder type

Government

Funder Name

National Science Council of the Republic of China (China) (ref: NSC100-2410-H-028-001-MY3)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Not provided at time of registration

Study outputs

Output type Details Date created Date added Peer reviewed? Patient-facing?

Participant information sheet

Participant information sheet

11/11/2025 11/11/2025 No

Yes