UNO SGUARDO AL FUTURO: LE NUOVE INDICAZIONI PER LE TERAPIE TERMALI

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Comitato Scientifico
Terme di Levico

Levico Terme

19 ottobre 2013

MEDICINA TERMALE: UNA REALTA' IN CRISI

- Scarsa considerazione delle cure termali

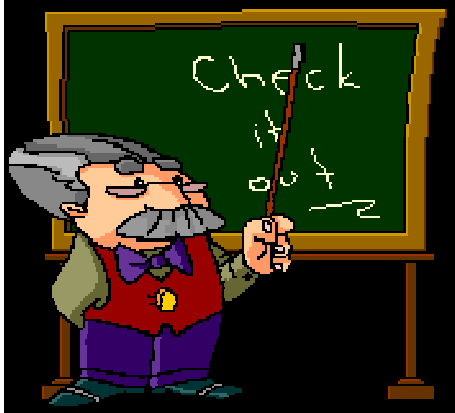
- Oggetto di riserva circa la loro efficacia terapeutica e validità scientifica

- Punite o minacciate di misure restrittive finalizzate a ridurre la spesa sanitaria

CRISI DELLA MEDICINA TERMALE

- ***Origine complessa e multifattoriale***

- ***Coinvolge in varia misura tutte le diverse realtà interessate in questo settore : Sanitarie, Accademiche, Amministrative, Politiche, Strutture termali***



CAUSE DELLA CRISI DELLA MEDICINA TERMALE

Culturali

- Dominio della cultura anglosassone:
  "Debolezza" lavori scientifici del settore
  Mancanza o carenza di tali ricchezze naturali nei Paesi anglosassoni

- Scarsa attenzione e considerazione per la ricerca in Medicina Termale (ricerca di "serie B")

CAUSE DELLA CRISI DELLA MEDICINA TERMALE

- Assenza in Italia di insegnamento della Medicina Termale nei corsi universitari di Medicina

- Convinzione che le cure termali siano solo dei palliativi privi di effetti collaterali (Placebo) o terapie alternative cui ricorrere quando tutti gli altri mezzi di cura hanno fallito

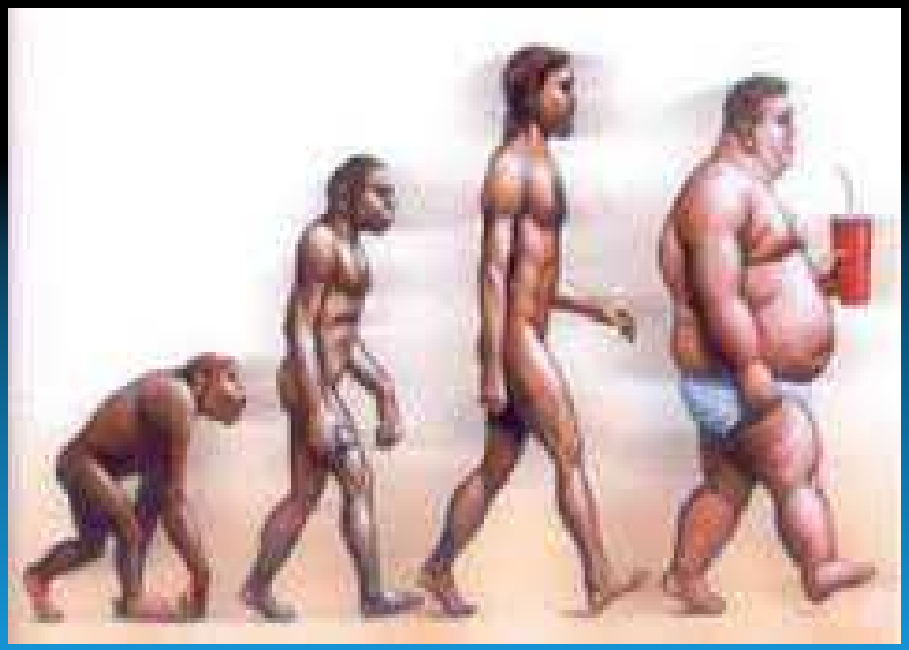
Cause della crisi della Medicina Termale

Errori gestionali da parte delle strutture termali

- Pubblicità equivoca
- Uso di una terminologia vaga, inesatta e non "scientifica" (TERMALESE)
- Esasperata contrapposizione tra terapia termale e terapia farmacologica, tra termalismo terapeutico e benessere termale
- Confusa e strumentale concezione del termalismo come fenomeno alberghiero, turistico, vacanziero e non terapeutico

CAUSE DELLA CRISI DELLA MEDICINA TERMALE

Scarsa attenzione ad estendere le indicazioni del trattamento termale a nuove patologie ad importante impatto epidemiologico e sociale (Obesità, Sindrome dismetabolica, Stress, Affezioni cardiovascolari, ecc…)



“LE MALATTIE DEL BENESSERE!!!!”

Terapia Termale e fattori di rischio cardiovascolare

Riduzione Colesterolo Totale, LDL-Colesterolo, Incremento HDL-Colesterolo dopo Balneoterapia sulfurea

(Grassi M et al., Clin Term 1985; De Gregorio G et al., Clin Term 1986, Ekmekcioglu C et al., Forsch Komplem Klass Natur 2002; Strauss-Blasche G et al., Forsch Komplem Klass Natur 2003; Olah M et al. Int J Biometeorol 2010)

Riduzione Glicemia e HbA_{1c} dopo Balneoterapia con acque salse in soggetti sani (Kamioka H et al, J Epidemiol 2006)

Incremento Insulinemia in soggetti sani dopo Balneoterapia con acque ricche di Radon

(Yamaoka H et al, J Radiol Res 2004)

TERAPIA TERMALE ED OMOCISTEINA

- L'Omocisteina rappresenta un importante fattore di rischio cardio-vascolare (elevati livelli plasmatici sono associati con infarto del miocardio, aterosclerosi, ipertensione arteriosa, insufficienza cardiaca, complicazioni del diabete)

- Una significativa riduzione dei livelli circolanti di Omocisteina è stata dimostrata al termine di un ciclo di balneoterapia sulfurea in pazienti con osteoartrosi

ELSEVIER

Clinica Chimica Acta 343 (2004) 105–111

www.elsevier.com/locate/clinchim

Improving homocysteine levels through balneotherapy: effects of sulphur baths

Valentin Leibetseder[a,*], Gerhard Strauss-Blasche[a], Franz Holzer[b], Wolfgang Marktl[a], Cem Ekmekcioglu[a]

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Circulation
JOURNAL OF THE AMERICAN HEART ASSOCIATION

American Heart Association.

Thermal Treatment Attenuates Neointimal Thickening With Enhanced Expression of Heat-Shock Protein 72 and Suppression of Oxidative Stress

Motoi Okada, Naoyuki Hasebe, Yoshiaki Aizawa, Kazuma Izawa, Jun-ichi Kawabe and Kenjiro Kikuchi

Circulation. 2004;109:1763-1768; originally published online March 29, 2004;
doi: 10.1161/01.CIR.0000124226.88860.55
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Print ISSN: 0009-7322. Online ISSN: 1524-4539

Background—The beneficial effects of thermal therapy have been reported in several cardiovascular diseases. However, it is unknown whether the thermal treatment has some beneficial roles against the development of atherosclerosis.

Methods and Results—The inflammatory arterial lesion was introduced by placement of a polyethylene cuff on femoral arteries of male Sprague-Dawley rats for 4 weeks. Thermal-treated group underwent daily bathing in 41°C hot water for 15 minutes. Neointimal thickening along with immunohistochemical expression of heat-shock proteins (HSPs), monocyte chemoattractant protein-1 (MCP-1), and NADPH oxidase were compared with those of a thermally untreated (Control) group. Morphometric analysis demonstrated a significant suppression of neointimal thickening in thermal-treated group compared with the Control group (intimal/medial area ratios, 0.01±0.01 versus 0.31±0.04, $P<0.01$). Expression of MCP-1 and infiltration of ED-positive cells were enhanced in the adventitial layer of Control. More importantly, expression of HSP72 in media was enhanced by thermal treatment. Expression of p22-phox, the major membrane subunit of NADPH oxidase, and MCP-1 was augmented in cuff-injured adventitia of the Control but not the thermal-treated groups.

Conclusions—Thermal treatment significantly attenuated infiltration of inflammatory cells in adventitia and suppressed neointimal thickening in cuff-injured arteries with the enhancement of HSP72 expression and suppression of oxidative stress.

Transverse sections of arteries 4 weeks after cuff injury (top, hematoxylin and eosin staining; magnification x400)

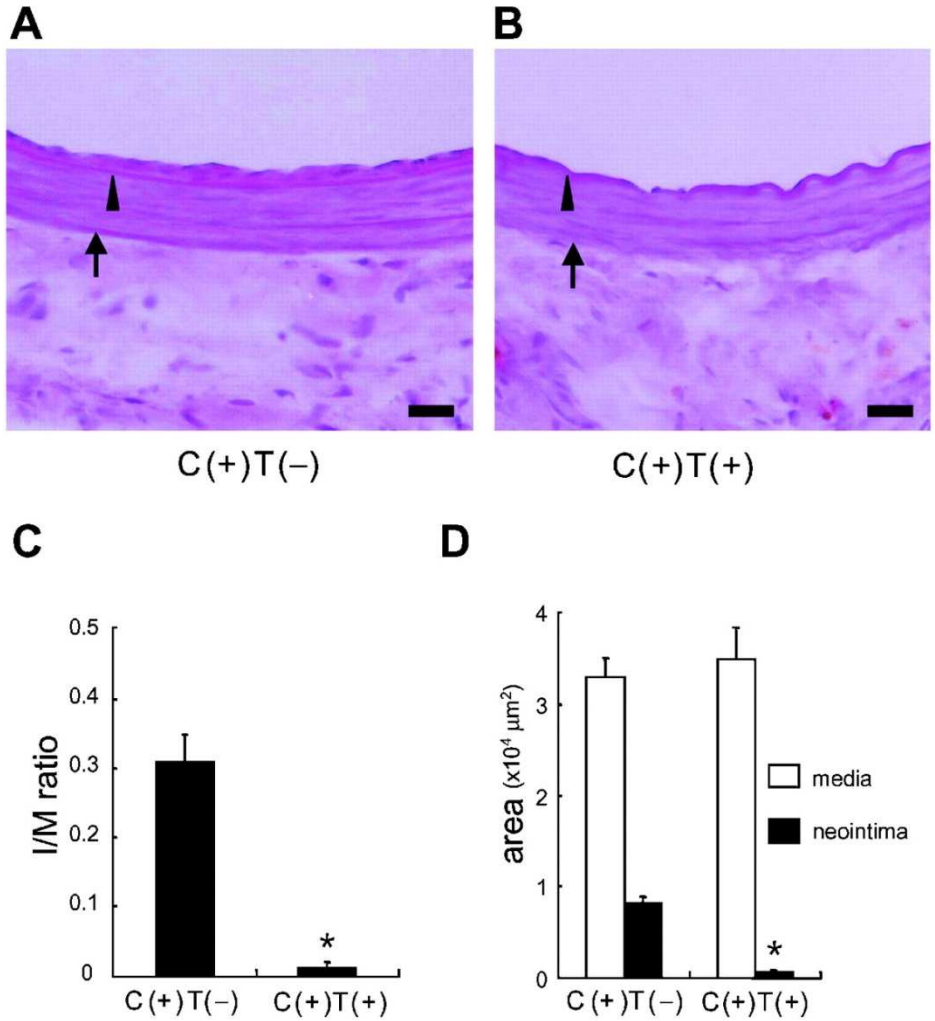
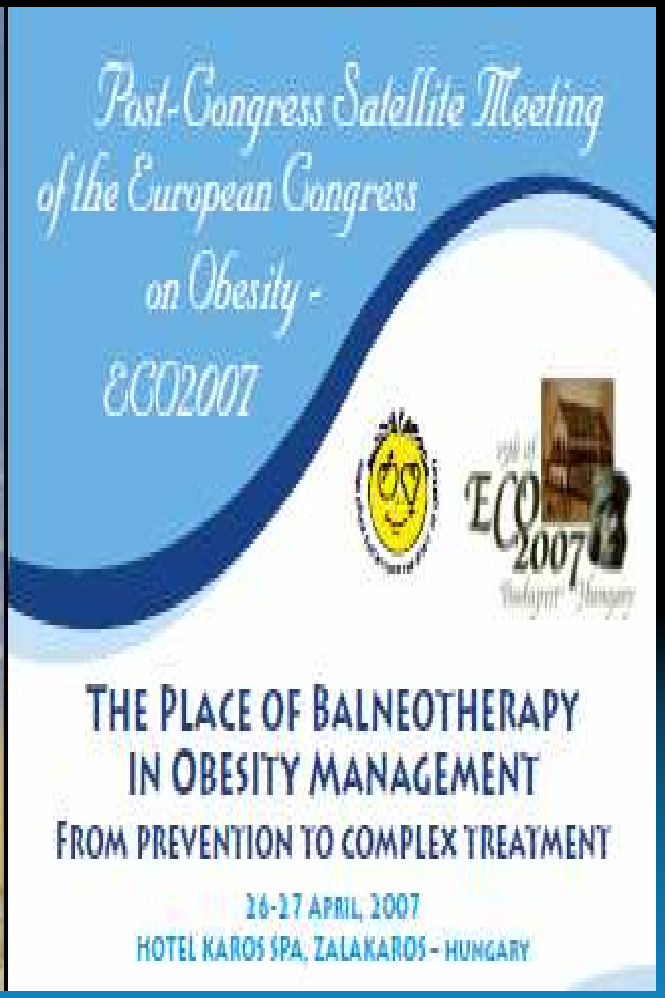


Figure 1. Transverse sections of arteries 4 weeks after cuff injury (top, hematoxylin and eosin staining; magnification ×400). A, Cuff-treated but non–thermal-treated [C(+)T(–)] group. B, Cuff-treated and thermal-treated [C(+)T(+)] group. Neointimal thickening was apparently reduced in thermal-treated group. Arrowheads and arrows indicate internal and external elastic lamina, respectively. Bars=25 μm. Effect of thermal treatment on neointimal regression (bottom). C, Ratios of intimal to medial areas (I/M ratio) in C(+)T(+) group were significantly smaller than those of C(+)T(–) group. D, Open bars indicate medial area and closed bars indicate neointimal area in cuff-injured artery [C(+)], both non–thermal-treated [T(–)] and thermal-treated [T(+)] groups. Area of neointima was significantly smaller in C(+)T(+) group. Data represent mean±SEM (n=8 each). *$P<0.01$ vs C(+)T(–).

Okada, M. et al. Circulation 2004;109:1763-1768

Circulation

Obesità e Terapia Termale



Hindawi Publishing Corporation
Evidence-Based Complementary and Alternative Medicine
Volume 2012, Article ID 150839, 7 pages
doi:10.1155/2012/150839

Research Article

One-Year Effectiveness of a 3-Week Balneotherapy Program for the Treatment of Overweight or Obesity

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Objective: To assess the one-year effectiveness on weight loss of a 3-week balneotherapy program (BT).

Method: A Zelen double consent randomised controlled trial to compare one-year BMI loss between a 3-week BT program versus usual care (UC) (70 patients of each group) for overweight or obese patients, associated or not with a dietary motivational interview (DMI) during the follow-up.
BT was a 3-week program; the core of the program included 18 daily sessions of: i) individual mineral water bubble bathing at 37°C during 10 minutes; ii) mineral water manual massages during 10 minutes; iii) mud body wrap applied at 42°C during 10 minutes; iv) mineral water pool supervised exercises (34°C, 15 minutes); v) daily mineral water drinking from the resort.

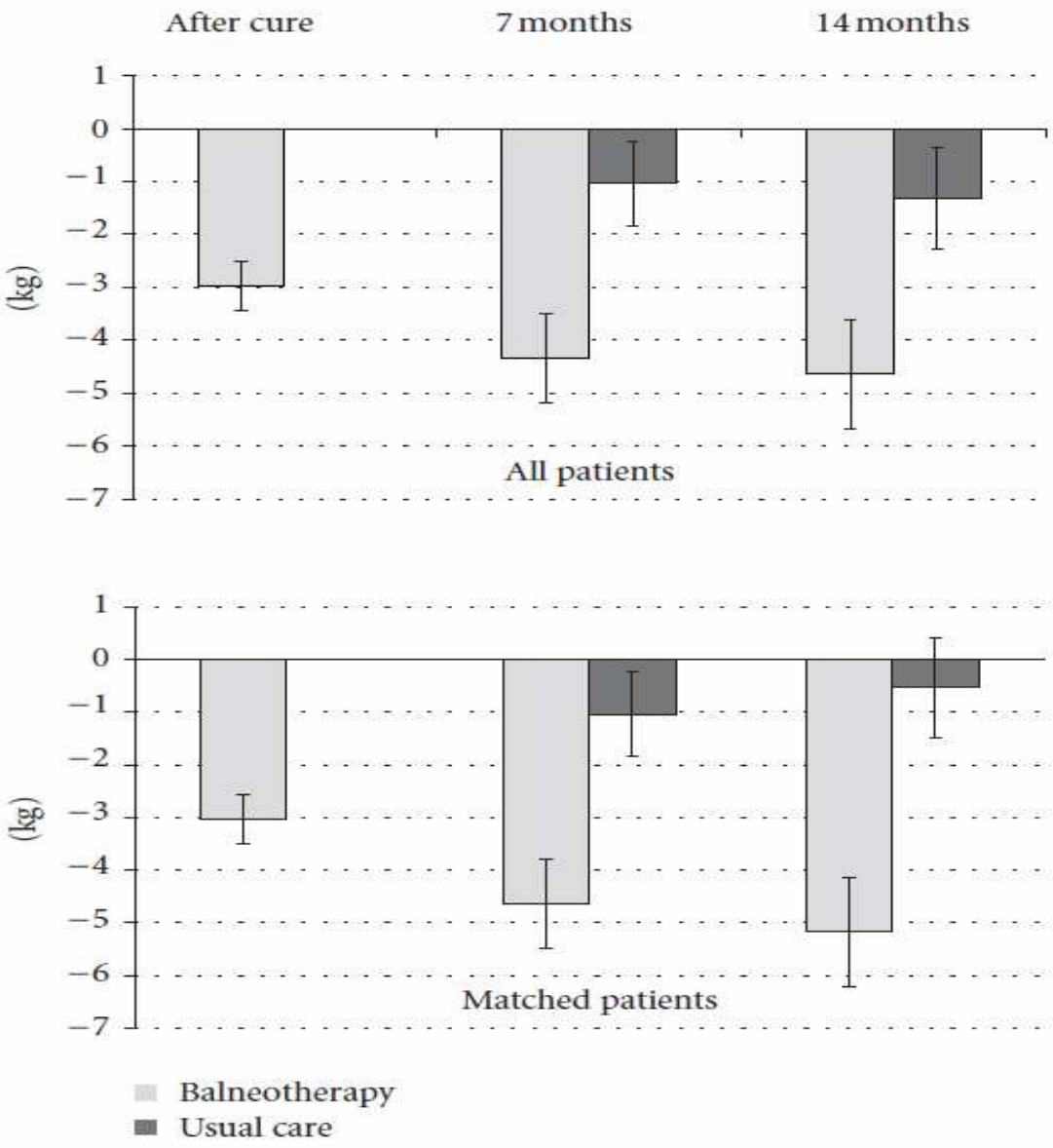

FIGURE 2: Weight variation (kg) from baseline for matched and all patients.

Thierry H et al.
Evidenced Based Complem Altern Med 2012

SPA THERAPY IN OBESE PATIENTS WITH AND WITHOUT TYPE 2 DIABETES

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A Simpatico, I Ponikowska**

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Świeradów, Zdrój
Poland
Sep. 5-8, 2013

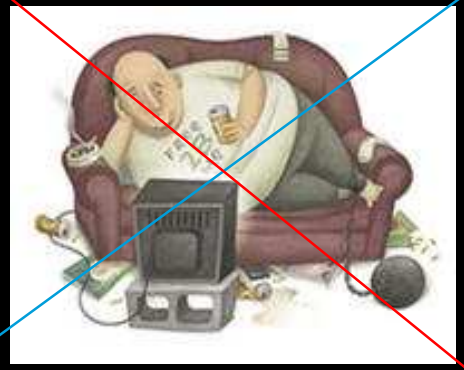
METHODS

Patients

Fifty male obese subjects [BMI ≥ 27 Kg/m^2] ranging in age from 26 to 65 years were enrolled in the study. Twenty one of these patients presented a type 2 of diabetes [fasting glucose ≥ 126 mg/dL]

Exclusion criteria: Balneotherapy controindication (severe co-morbidity of heart, lung, liver, cerebrum or kidney, acute illness, varices, systemic blood diseases, neoplasms, pregnancy or nursing), major eating disorders (bulimia nervosa), previous balneotherapy for weight problems, use of drugs known to affect body weight within prior 3 months.

METHODS

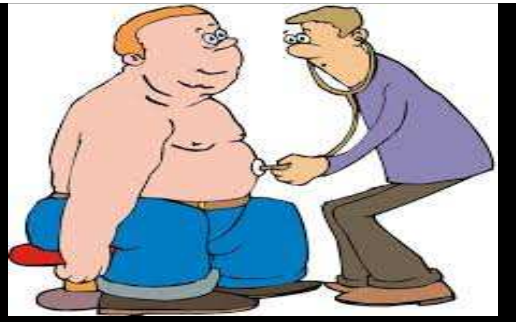


Treatment

During a period of 3 weeks the patients maintained a diet of 1000 Kcal and were involved in the following procedures at the Thermal Hospital in Ciechocinek: Mineral baths in pool or in tub (15 procedures); Kinesytherapy (individual or in group, 12 procedures, 45 min each time); Hydrotherapy (13 procedures, underwater massage or shower bath) and Peloidotherapy (11 procedures). We used the natural mineral water 4% NaCl in tub temp. 37° C per 10 – 15 min, in swimming pool the same of mineral water, temp. 31 C – 30 min

Concomitant medication: Pre-existing pharmacotherapy for associated diseases was not modified, however, new medications were not introduced

METHODS

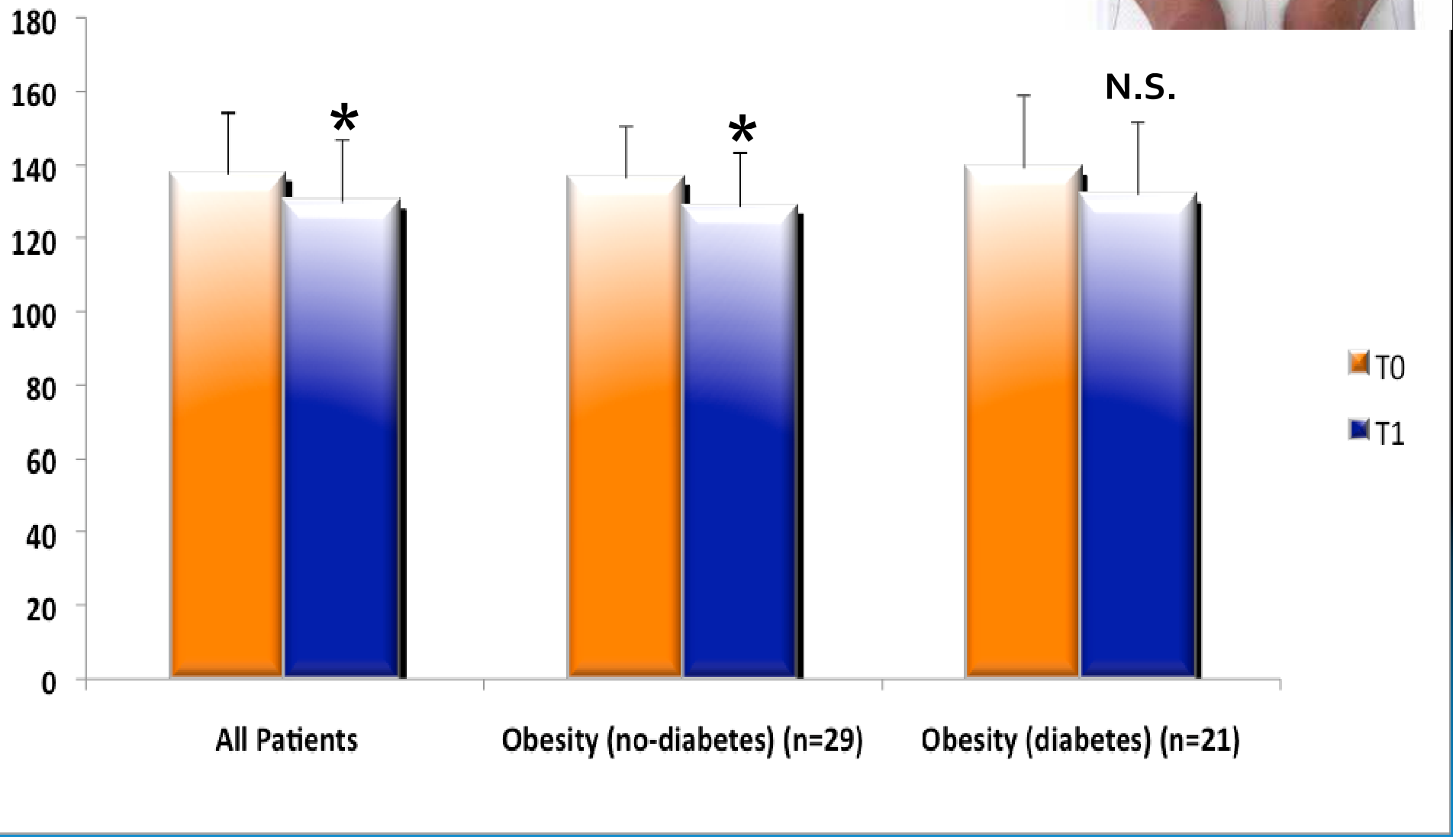


Assessments

At basal time and at the end of the study the following clinical and biochemical assessments were performed:

- Weight;
- Body mass index (BMI) [weight/height^2 (kg/m^2)];
- Serum total cholesterol (mg/dL); triglycerides (mg/dL); high-density lipoprotein-cholesterol (HDL-C) (mg/dL); low-density lipoprotein-cholesterol (LDL) (mg/dL) (Friedewald formula) ; glycemia (mg/dL);
- Serum levels of Leptin (µg/ml), Adiponectin (ng/ml), Visfatin (ng/ml) (ELISA);
- Serum levels of high- sensitivity C-reactive protein (hs-CRP) (mg/l) (ELISA)

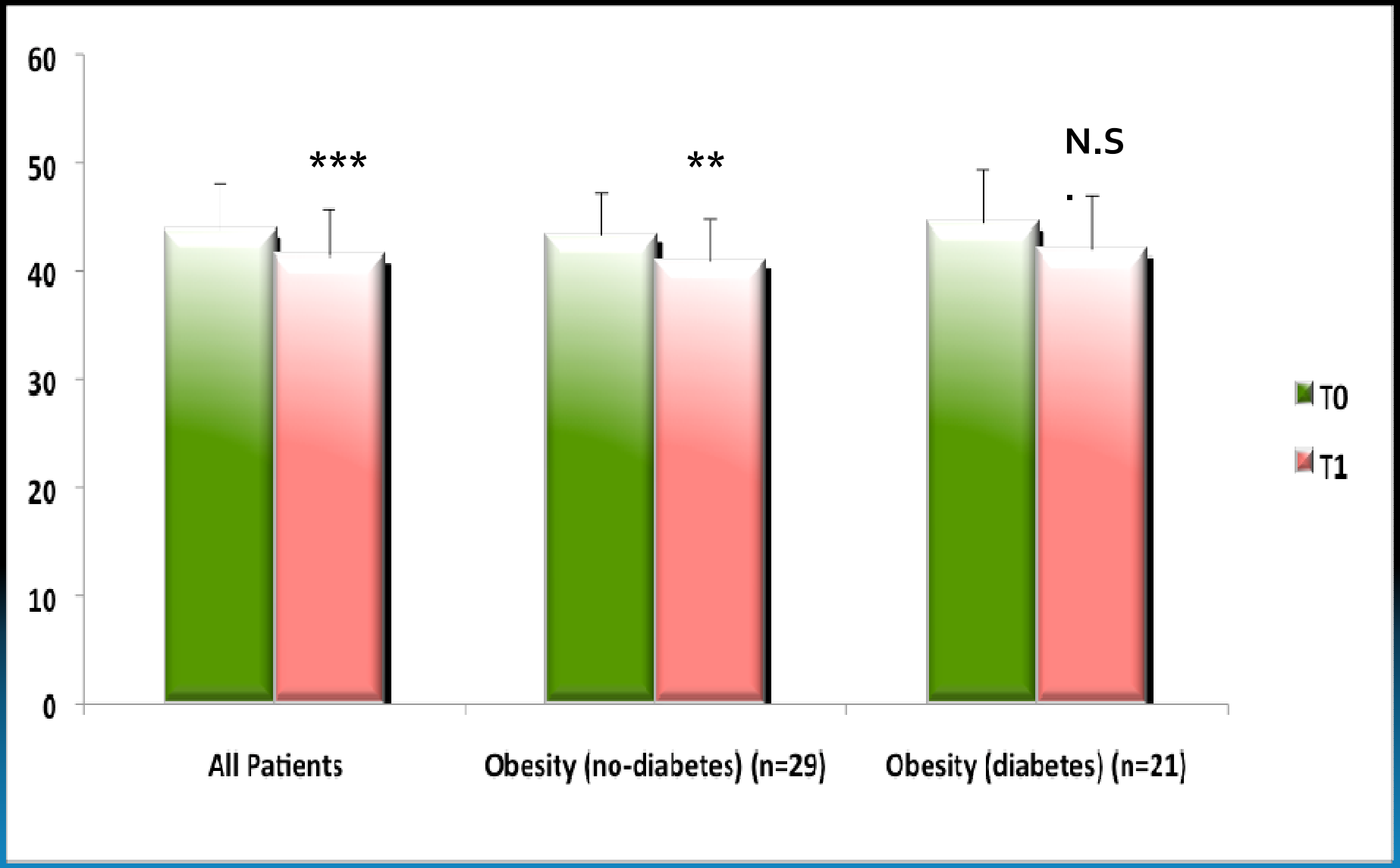
Weight(Kg)
(mean ± SD)



T0: Basal time; T1: End of the study

**$P < 0.05$ To vs T1 ; N.S. :not significant

BMI (kg/m²) (mean ± SD)



T0: Basal time; T1: End of the study

**$P < 0.01$ To vs T1

***$P < 0.005$ To vs T1

N.S. not significant

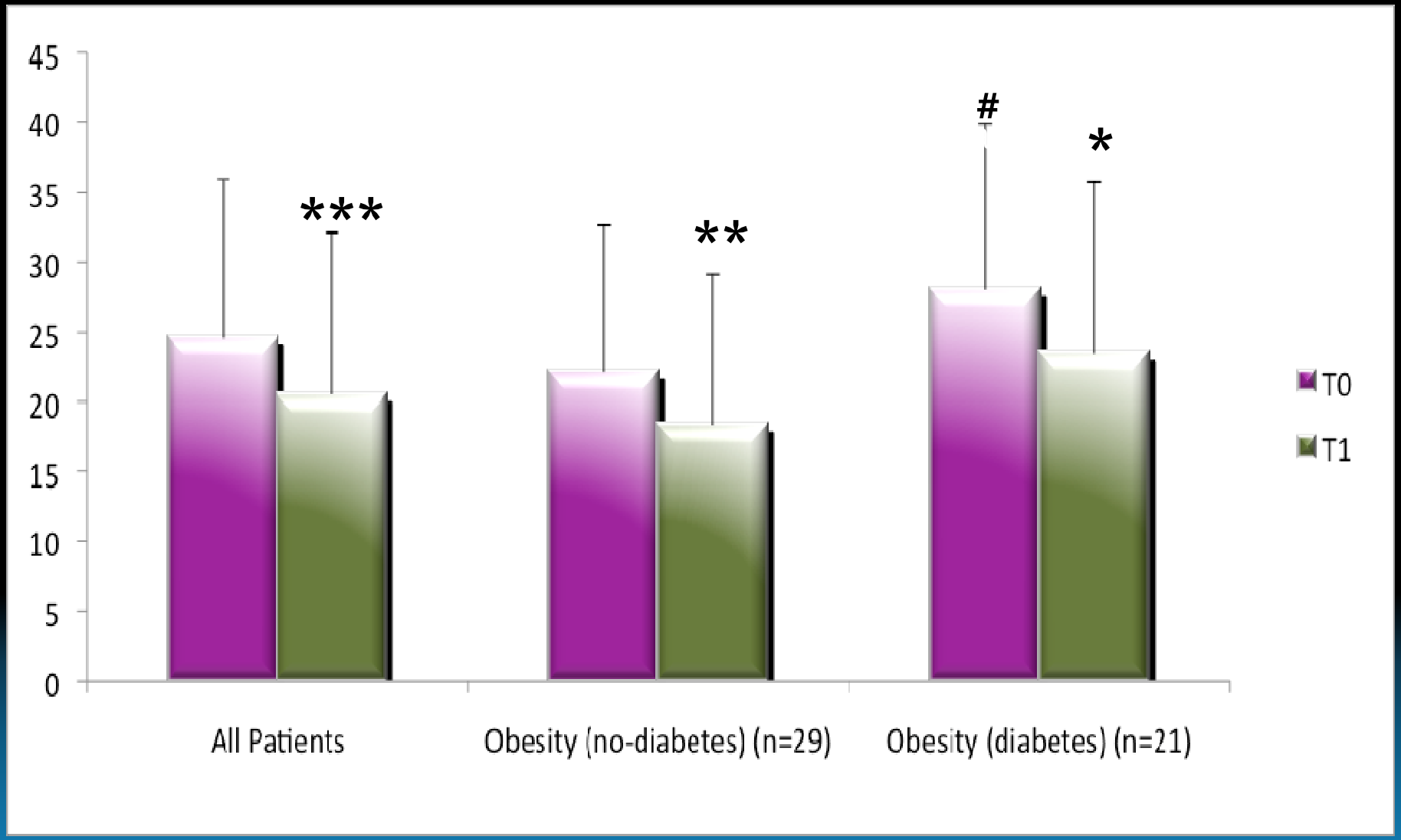
Biochemical data before and after thermal therapy (mean ± SD)

Parameters	All Patients (n=50)		Obesity no-diabetes group (n=29)		Obesity diabetes group (n=21)	
	T_0	T_1	T_0	T_1	T_0	T_1
Triglycerides - mg/dL	187.9±140.9	161.9±94.2**	175.8±150.39	161.1±104.2	204.7±128.4	163.9±81.1**
Cholesterol - mg/dL	207.6±49.1	195 ±46.6***	210.9±55.1	200.4±54.4	202.9±40.2	188.4±32.9**
HDL -C mg/dL	56.8±27.2	62.5±32.7	59.6±30.4	66±39.6	52.9±15.3	57.6±19.2
LDL –C mg/dL	119.6±45.0	102.4±40.8**	119.8±52.41	101.6±44.8*	119.4±32.6	103.5±35.7*
Glycemia - mg/dL	144.8±155.2	110.1±30.7*	113.3±39.2	101.3±22.7*	137.4±29.6	122.1±36.5*

T0: Basal time; T1: End of the study

*P < 0.05 To vs T1 ;**P < 0.005 To vs T1 ; ***P < 0.001 To vs T1

Leptin (µg/ml) (mean ± SD)



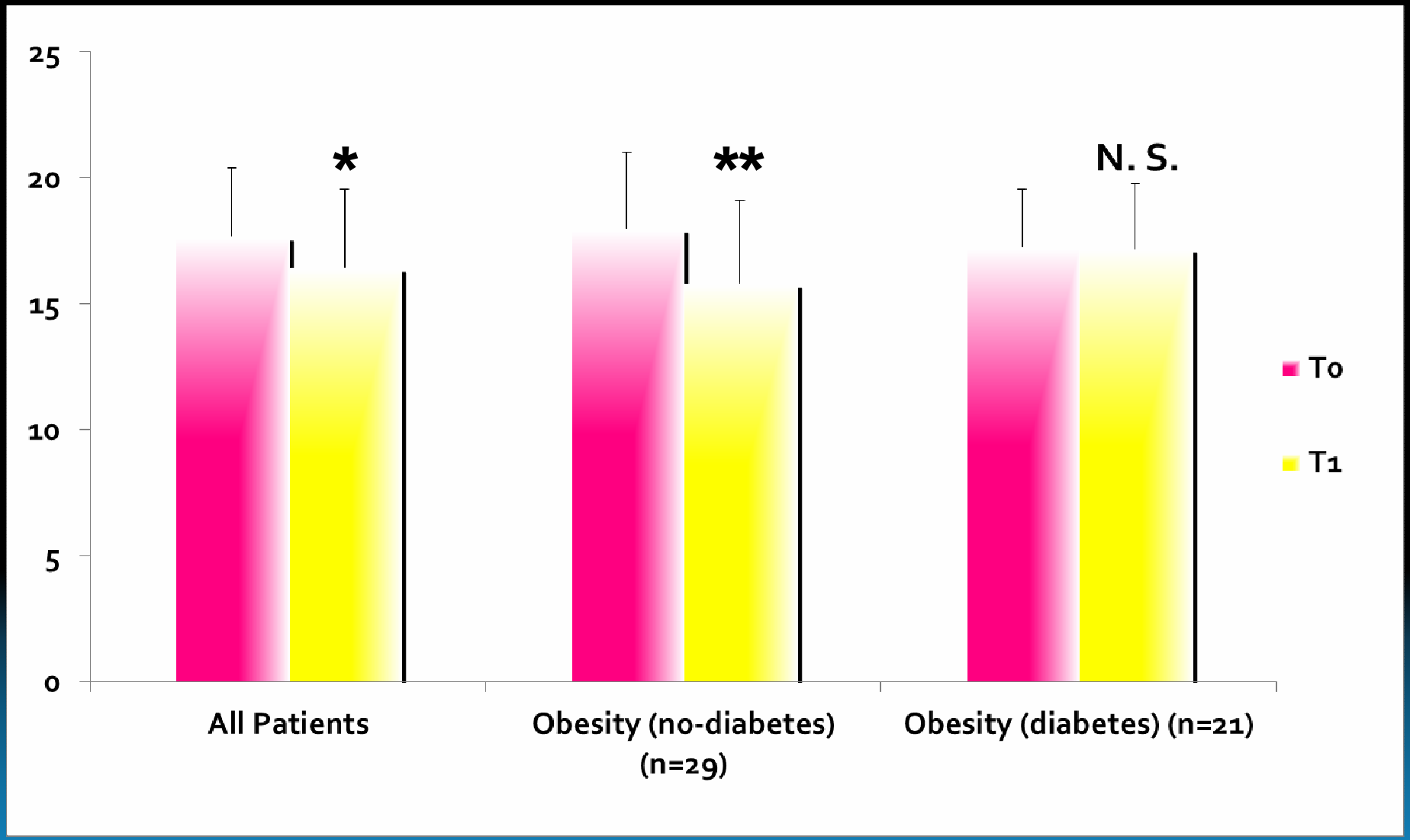
T0: Basal time; T1: End of the study

*$P < 0.05$ To vs T1 ;**$P < 0.01$ To vs T1

***$P < 0.001$ To vs T1

# $P < 0.05$ vs no-diabetes

hs-CRP (mg/l) (mean ± SD)



T0: Basal time; T1: End of the study

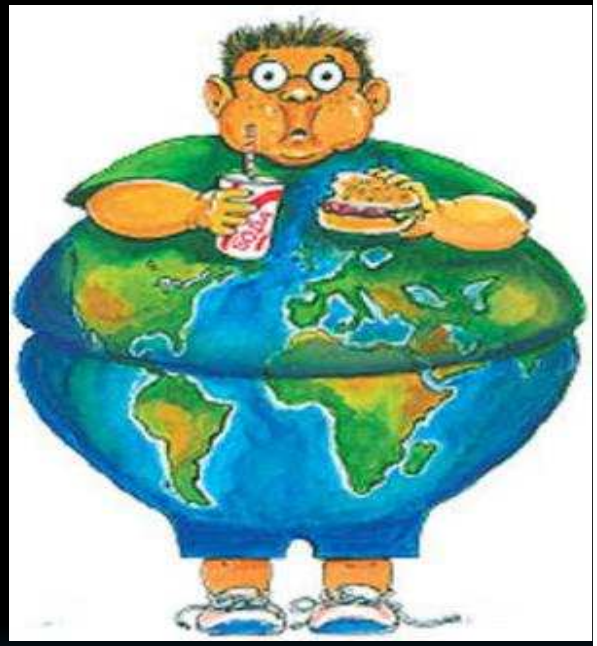
*P<0.05 To vs T1

**P < 0.005 To vs T1

N.S. not significant

CONCLUSIONS

In this study we showed that a 3 week program of thermal therapy in obese patients induced a significant decrease of body weight (about 7% of basal weight), BMI, triglycerides, total cholesterol, LDL –C, glycemia, and serum levels of leptin and hs-CRP



We believe that Balneotherapy associated with Kinesytherapy, Physical therapy and a controlled diet, may be a promising treatment for obesity and type 2 diabetes decreasing body weight and many risk factors for atherosclerosis and metabolic syndrome

RICERCA SCIENTIFICA E MEDICINA TERMALE

- La “certificazione” scientifica rappresenta lo strumento per inserire le cure termali nel programma di interventi terapeutici finalizzati alla prevenzione, cura e riabilitazione di vecchie e nuove patologie ad importante impatto socio-epidemiologico

- Il riconoscimento del valore terapeutico e l’individuazione di nuove indicazioni delle Terapia Termale attraverso la validazione scientifica può offrire nuovi sbocchi ed aperture del mercato (italiano ed estero)

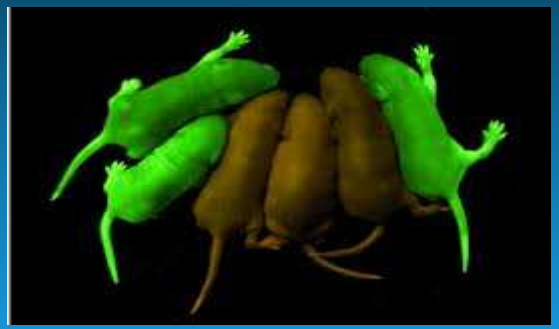
- La validazione scientifica costituisce un elemento imprescindibile per acquisire una reale credibilità da parte del Medico di Medicina Generale che non può essere considerato un semplice “prescrittore” di tali terapie

- **L’ evidenza scientifica attraverso la pubblicazione su riviste internazionali di livello rappresenta inoltre l’unica valida risposta da fornire al legislatore per sanare l’annoso problema della erogabilità delle Cure Termali da parte del S.S.N**

LA RICERCA SCIENTIFICA IN MEDICINA TERMALE: DIFFICOLTA'

- **Realizzazioni di studi in doppio cieco**
- **Numerosità delle casistiche**
- **Studi multicentrici**
- **Eterogeneità dei mezzi di cura termali**
- **Standardizzazione metodiche di applicazione dei mezzi di cura termali**
- **Follow-up dei pazienti a lungo termine**
- **Pianificazione di studi sui meccanismi d'azione (modelli sperimentali *in vitro* e *in vivo* sul modello animale)**



LA RICERCA SCIENTIFICA IN MEDICINA TERMALE: DIFFICOLTA'

FINANZIARIE:

Carenza di finanziamenti idonei a supporto di una ricerca scientifica di livello proiettata alla pubblicazione su riviste scientificamente valide e che non abbia il solo scopo di ottenere risultati rapidi da utilizzare solo per fini pubblicitari (spesso effimeri)

Per modificare la realtà attuale non basta la buona volontà individuale, ma SERVONO STRATEGIE operative a medio e a lungo termine

SERVONO ALLEANZE

Tra tecnici, politici ed operatori

SERVONO COINVOLGIMENTI

Delle Società Scientifiche e dell'Industria Termale

SERVE SOPRATTUTTO UN NUOVO ATTEGGIAMENTO CULTURALE

GRAZIE PER L'ATTENZIONE