Terapia medica dell'infertilità

Dr Pier Andrea Della Camera

Cosa si intende ?

Terapia medica infertilita'

Terapia medica volta a correggere le cause di infertilita'

Anamnesi del maschio infertile

Dati anamnestici generali
- Età
- Razza
- Religione
- Professione
- Infertilità primaria o secondaria
- Durata infertilità

Anamnesi familiare
- Infertilità
- Aborti spontanei
- Nati morti
- Malattie genetiche ed endocrine

Anamnesi patologica remota
- Febbre alta (nei mesi precedenti)
- Diabete mellito
- Malattie surrenaliche
- Bronchiectasie
- Fibrosi cistica
- Tubercolosi
- Infezioni croniche
- Allergie
- Nefropatie
- Epatopatie
- Neuropatie
- Farmaci

Malattie dell'apparato uro-genitale
- Criptorchidismo
- Pubertà precoce o ritardata
- Traumi testicolari
- Torsione funicolo
- Orchiti
- Epididimiti
- Prostatiti
- Vescicoliti
- Uretriti
- Malattie sessualmente trasmesse
- Dermatosi dei genitali

Interventi chirurgici alle vie genitali
- Orchidopessi
- Orchiectomia
- Ernia inguinale
- Detorsione funicolo
- Varicocelectomia
- Idrocelectomia
- Vasectomia
- Epididimo-vasostomia
- Vasovasostomia
- Prostatectomia
- Interventi vescicali
- Ipospadia
- Circoncisione

Anamnesi lavorativa e stile di vita
- Esposizione a fattori ambientali e occupazionali
- Abitudini alimentari
- Sport
- Alcool
- Fumo
- Uso di stupefacenti
- Sauna
- Pantaloni stretti

Anamnesi sessuale
- Rapporti in periodo fertile
- Frequenza dei rapporti
- Libido
- Difunzione erettile
- Dispareunia della partner
- Caratteristiche della eiaculazione
- Caratteristiche dell'orgasmo

Terapia specifica per cause note

Terapia empirica per causee idiopatiche

Terapia infertilità maschile

Disturbi eiaculazione

Disturbi erezione

Causee pretesticolari

Cause testicolari

Cause post-testicolari

Ipogonadismi

Fsh ↑
Lh ↑

Indice di danno testicolare

Controlla profilo genetico

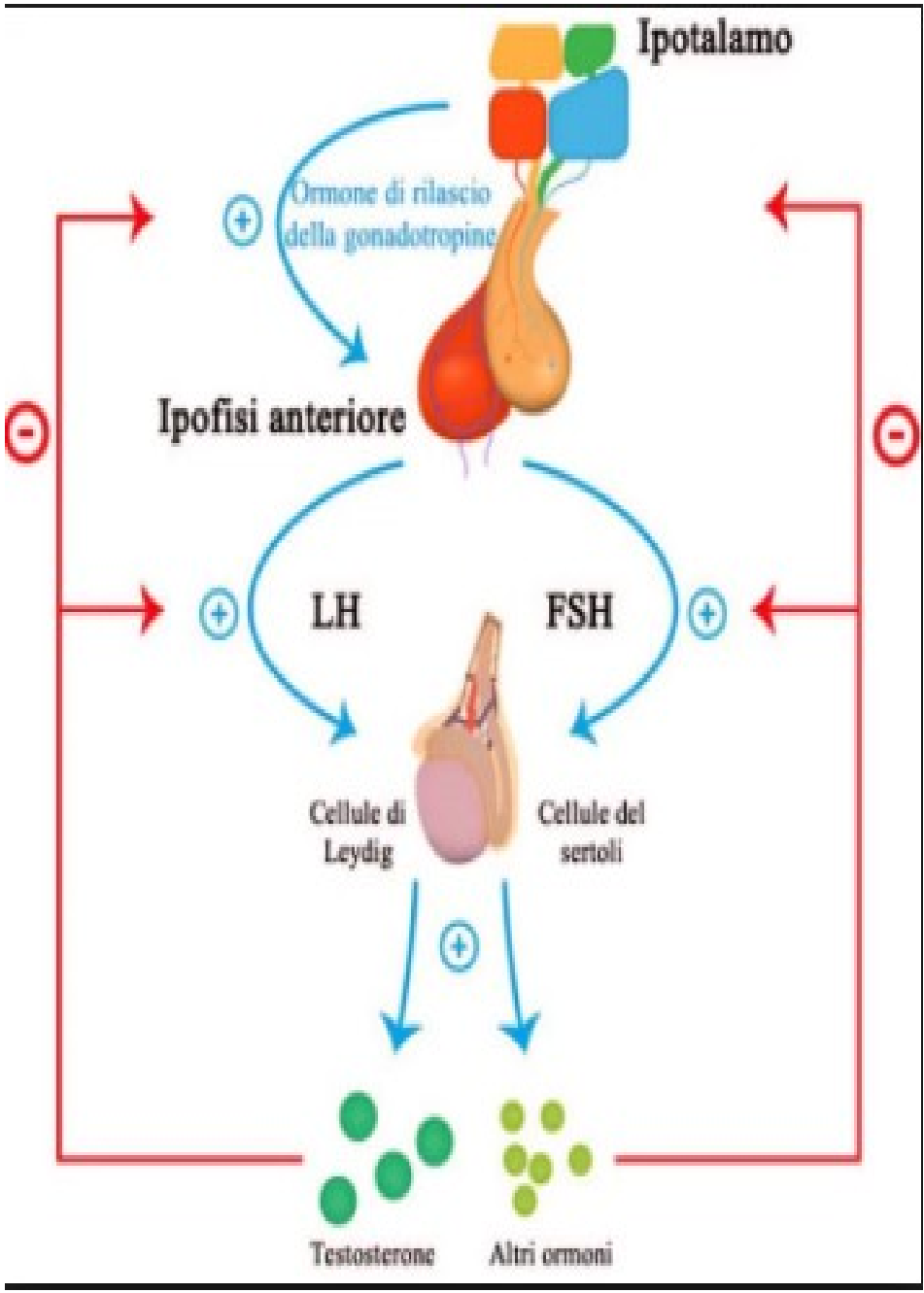
Fsh ↓
Lh ↓

Controlla l'ipofisi

Controlla profilo genetico

Fsh =

Lh =

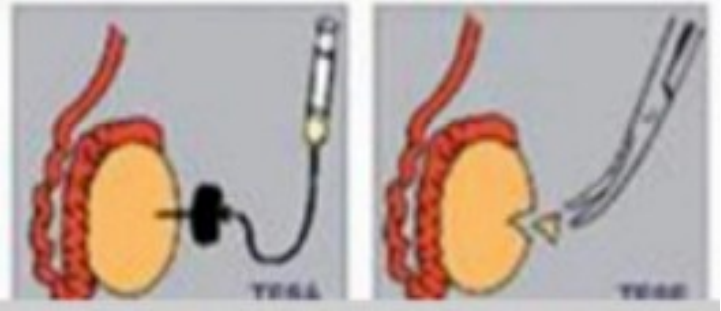


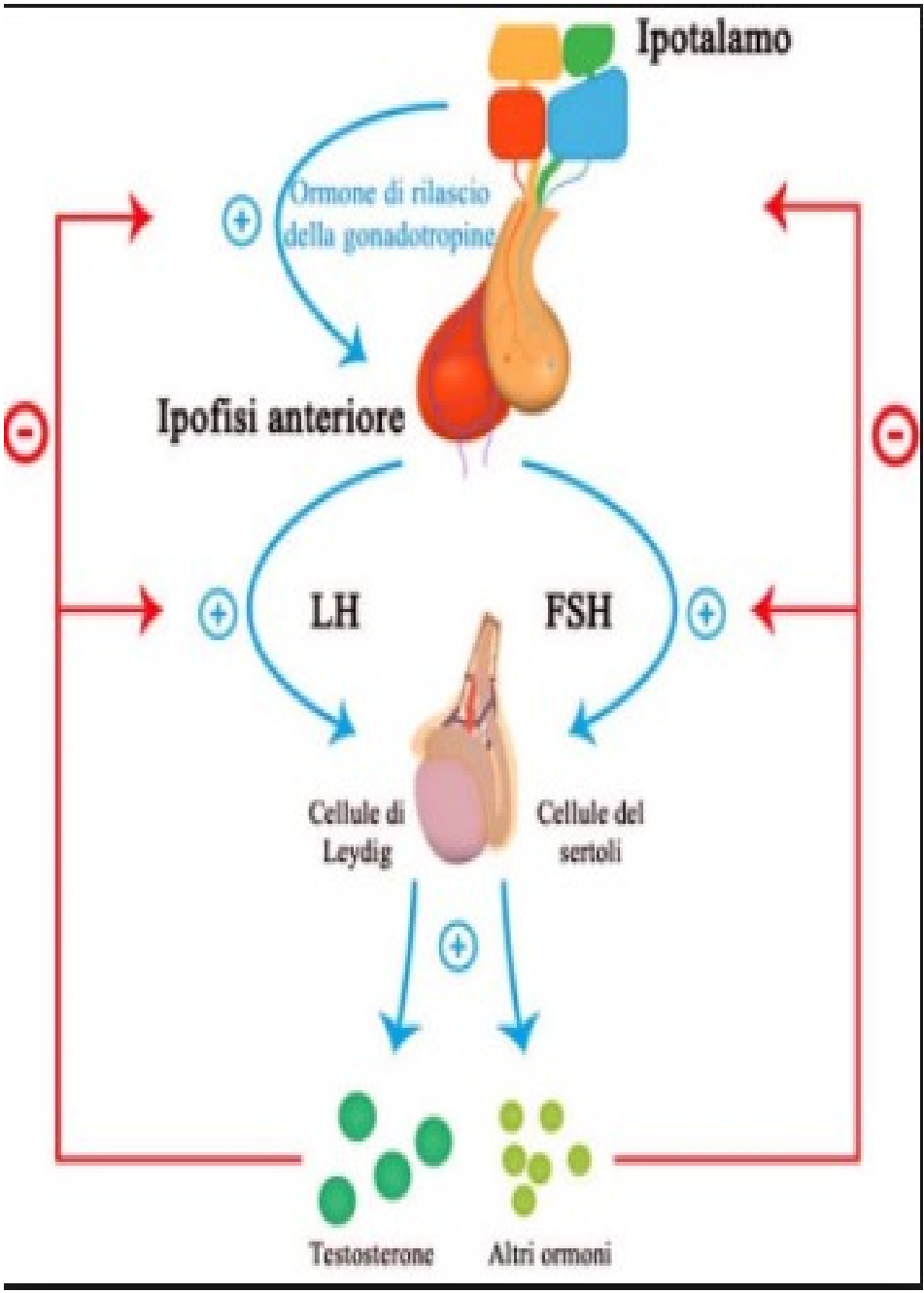
Ipogonadismi

Fsh ↑

Lh ↑

Indice di danno testicolare





Ipogonadismi

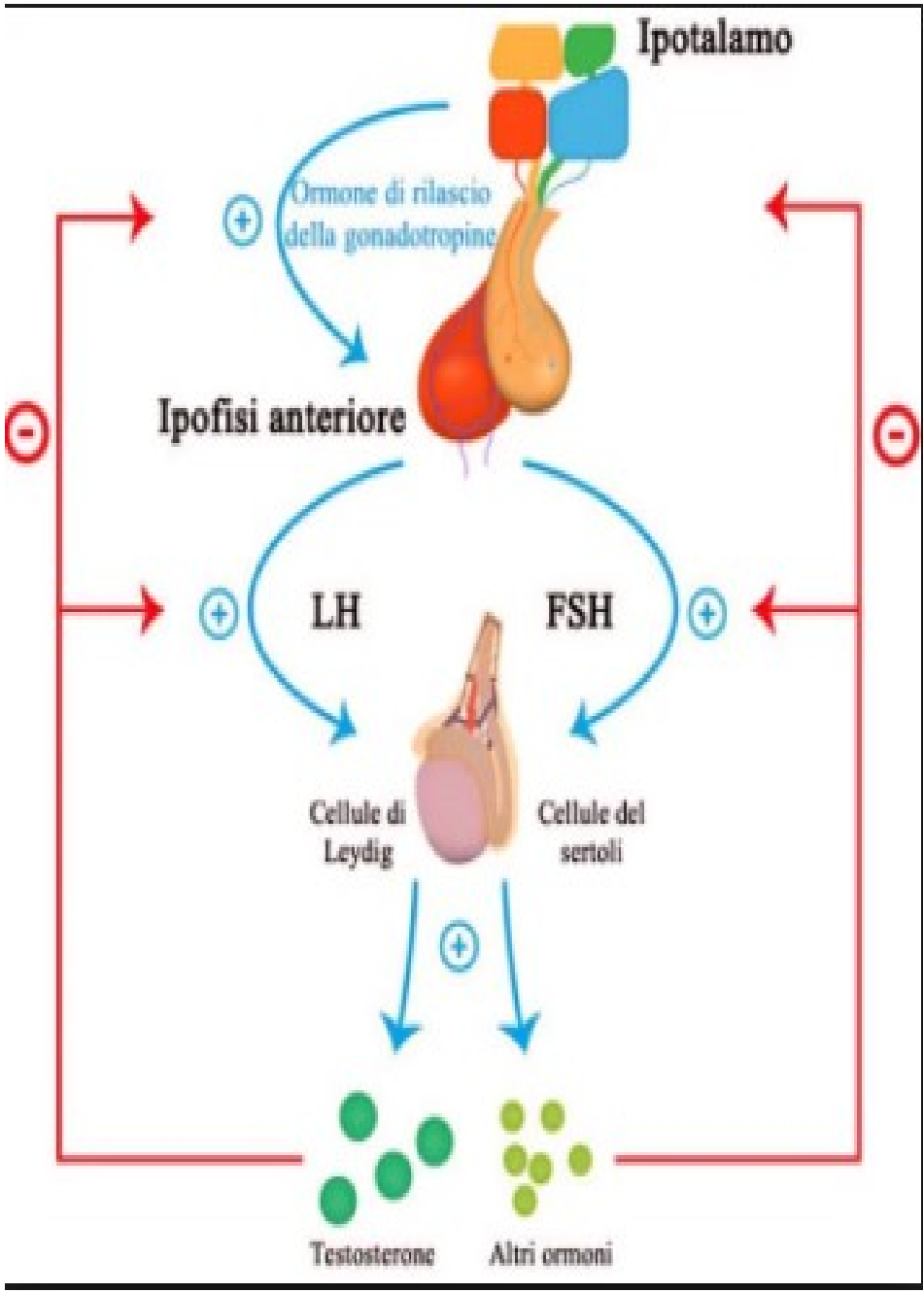
Fsh ↓

Lh ↓

Controlla l'ipofisi
(craniofaringiomi e adenoma ipofisi)

Controlla profilo genetico

↓



-Terapia dopo i 18 anni

-Nota 74 SOLO FOSTIMON

Transl Androl Urol. 2016 Dec;5(6):859-865. doi: 10.21037/tau.2016.08.03.

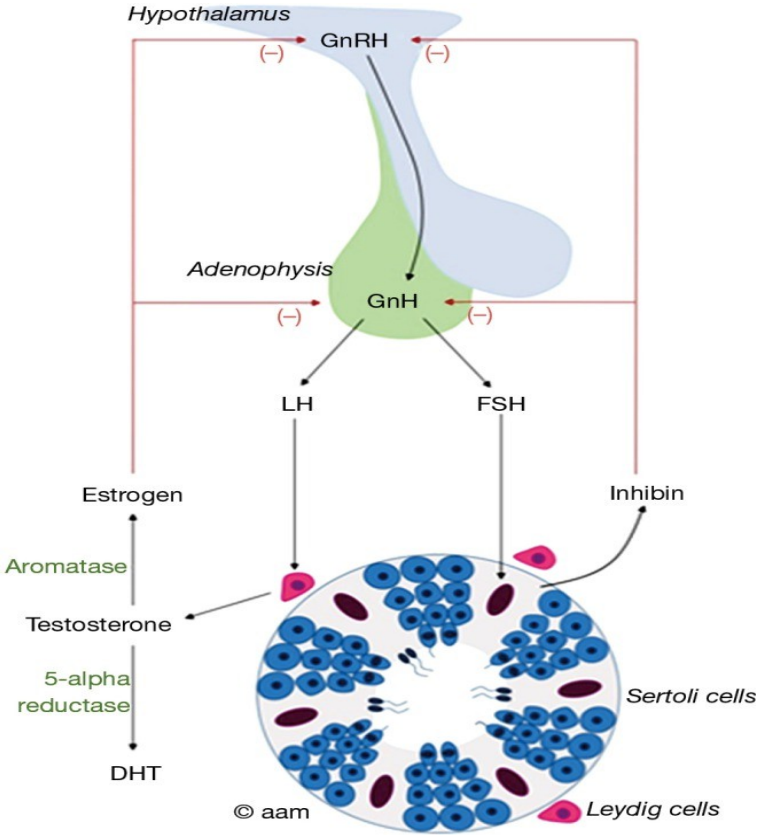
Testosterone replacement in the infertile man.

Majzoub A[1], Sabanegh E Jr[1].

Exogenous administration of T results in a negative feedback **inhibition of the HPG axis which consequently causes a decrease in endogenous and intratesticular T levels**

Despite a normal or high serum T concentration in men receiving anabolic steroids, **intratesticular T levels may be markedly inhibited resulting in oligozoospermia or azoospermia**

Atrophy of the germinal epithelium together with spermatogenesis suppression and subsequent azoospermia after 10 weeks of therapy has been documented by a World Health Organization Task Force investigating exogenous **T as a male contraceptive option** . **Recovery is expected after 6 months of treatment cessation,** with almost half the patients returning to their baseline pre-treatment sperm density. However, **up to 10% of patients with poor pre-treatment sperm production remain azoospermic after treatment cessation**



Ipogonadismi ipogonadotropi

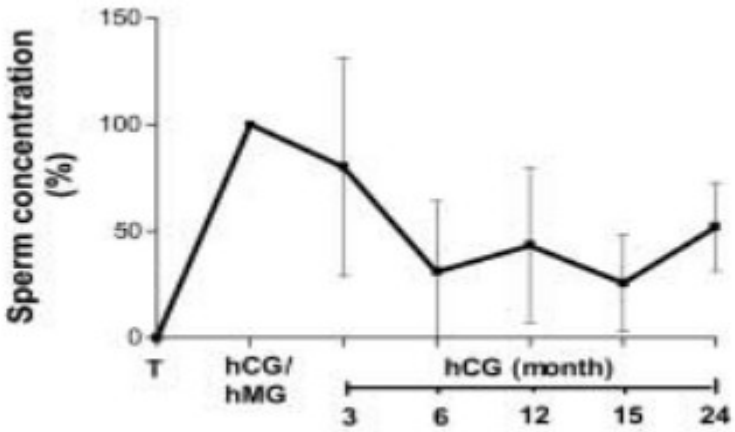
Urofollitropina (hFSH-hp) 150 IU 3 volte/settimana i.m./s.c.

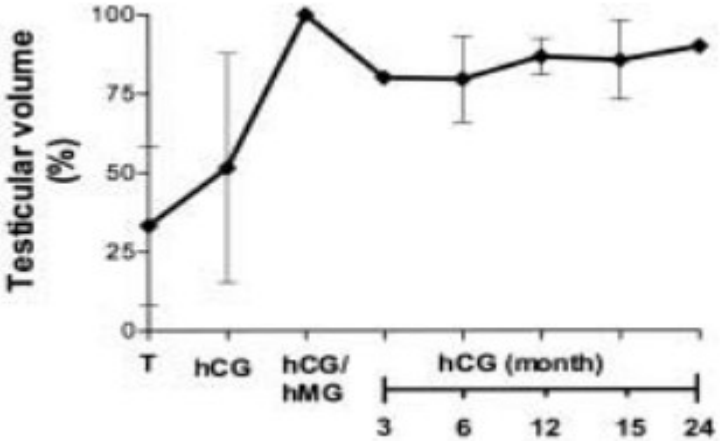
HCG 500 a giorni alterni im/sc

Possono essere mixati insieme per ridurre disconfort e ricontrollare profilo ormonale e spermiogramma per aumentare dosi

Maintenance of spermatogenesis in hypogonadotropic hypogonadal men with human chorionic gonadotropin alone.

Depenbusch M[1], von Eckardstein S, Simoni M, Nieschlag E.





Spermatogenesis had been successfully induced by treatment with hCG/hMG, hCG treatment alone continued for 3 –24 months

After 12 months under hCG alone, sperm counts decreased gradually but remained present in all patients

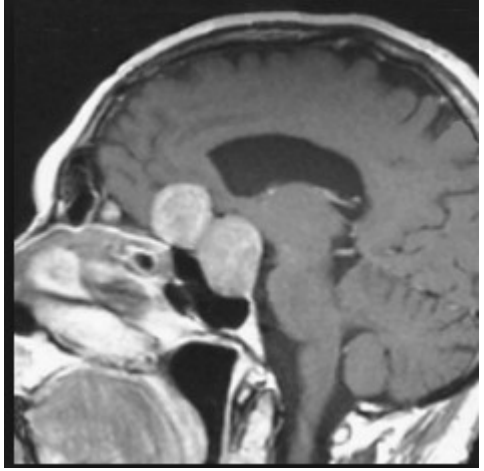
Testicular volume decreased only slightly and reached 87% of the volume achieved with hCG/hMG

FSH and LH levels were suppressed to below the detection limit of the assay

FSH is essential for maintenance of quantitatively normal spermatogenesis.

Iperprolattinemia

(ipogonadismo ipogonadotropo)



Dosaggio basale e a 30'

ANTIDOPAMINERGICI

Neurolettici
Antidepressivi triciclici
Inibitori MAO
Oppiacei
Cocaina

ALTRE CAUSE

Prolattinomi
Malattie ipotalamiche
Neurologiche
Idiopatiche

Cabergoline (0.125–1.0 mg twice weekly) is the preferred agent because it has the highest efficacy in normalizing prolactin levels and shrinking prolactin-secreting tumors

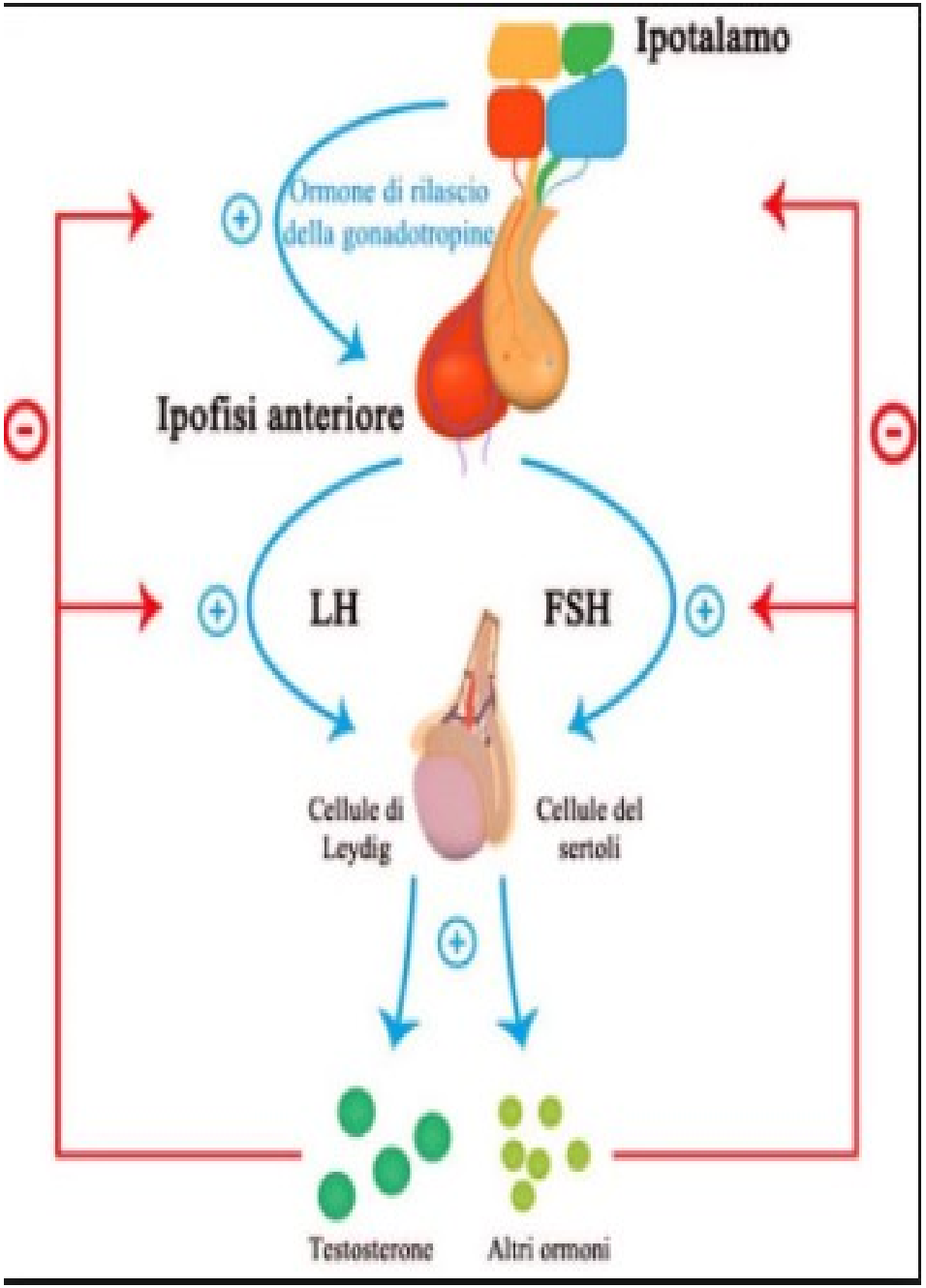
It has been shown that 53% of cases treated with dopamine agonist had reversal of infertility

Initial Dose= 0,25-0,5 mg/wk
Maintance= 0,25-3 mg/wk

Ipogonadismi

Fsh =

Lh =



Nat Rev Urol. 2013 Jan;10(1):55-62. doi: 10.1038/nrurol.2012.234. Epub 2012 Dec 11.

Follicle-stimulating hormone treatment in normogonadotropic infertile men.

Valenti D[1], La Vignera S, Condorelli RA, Rago R, Barone N, Vicari E, Calogero AE.

nature REVIEWS
UROLOGY

Somministrazione dell'Fsh in pazienti normogonadotropici con alterato spermiogramma

Associazione con gonasi se ipogonadici ed alterato spermiogramma

Attenzione dati in letteratura che un utilizzo protratto per molti anni di b hcg e fsh ricombinante possono condurre ad azospermia

Treatment of the Hypogonadal Infertile Male—A Review

Christopher Chee Kong Ho, FRCS (Urol), FECSM* and Hui Meng Tan, FRCS†‡

Anti-Estrogens

Clomiphene citrate is an estrogen receptor modulator with predominant antagonist activity that **blocks negative feedback exerted by estrogen at the hypothalamus and anterior pituitary**

The result is increased secretion of GnRH from the hypothalamus, which stimulates pituitary gonadotropin production that could stimulate both testicular production of testosterone and spermatogenesis

Clomiphene may be a good choice for the treatment of hypothalamic hypogonadotropic hypogonadism. There are reports of successful treatment with clomiphene which resulted in **normalization of gonadotropins, testosterone, and semen parameters**

Aromatase Inhibitor

Aromatase inhibitors function by blocking aromatase, which is a cytochrome P-450 enzyme responsible for **converting testosterone to estradiol.**

Therefore, by reducing estradiol,aromatase inhibitors may indirectly **increase serum levels of LH, FSH, and testosterone**.

In hypogonadism and Before Tese

REVIEW

Gonadotrophins for idiopathic male factor subfertility: a Cochrane systematic review

Abdelhamid M. Attia, M.D.
Hesham G. Al-Inany, M.D., Ph.D.
Michel L. Proctor; M.Sc.

Department of Obstetrics and Gynecology, Cairo University, Cairo, Egypt

Revisione sistematica: 5 trial randomizzati con 426 pz su effetto della terapia con hMG/hCG, FSH sul tasso di gravidanze

3 trial (278 pz) avevano come outcome le gravidanze spontanee

Clomiphene Administration for Cases of Nonobstructive Azoospermia: A Multicenter Study

ALAYMAN HUSSEIN,* YASAR OZGOK,† LAWRENCE ROSS,‡ AND CRAIG NIEDERBERGER‡

*From the *Minia Infertility Research and Treatment Unit, El-Minia University, Egypt; the †Gulhane Military Medical Faculty, Ankara, Turkey; and the ‡University of Illinois at Chicago, Illinois.*

Effetto su azoospermia non ostruttiva in 42 pazienti

64% dei pz hanno prodotto un eiaculato con spermatozoi sufficienti

Cause di infertilità maschile

Disturbi eiaculazione

Disturbi erezione

Causee pretesticolari

Cause testicolari

Cause post-testicolari

Anticorpi Antispermatozoi

Cause= traumi testicolari, infiammazioni, ostruzione vasale es. vasectomia

Terapia = Prednisolone

Infezioni genito -urinarie

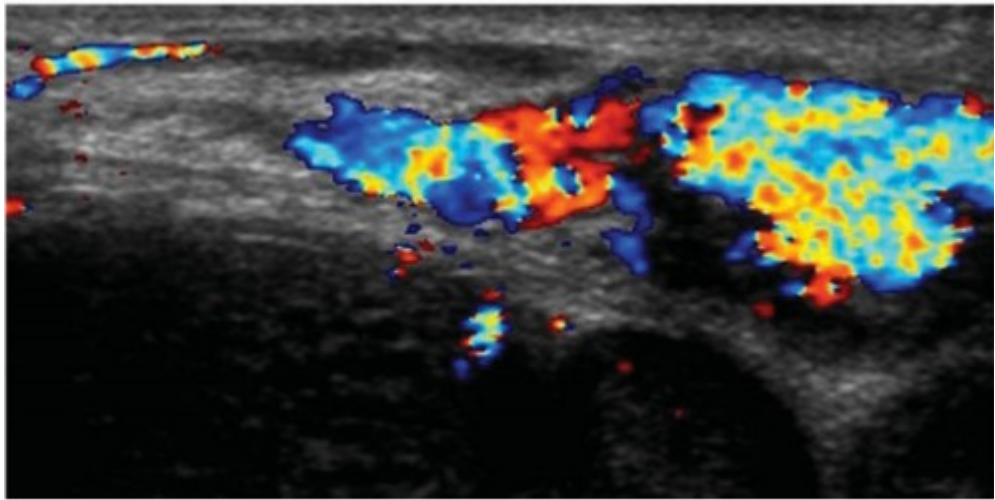
Prostatiti, Orchiti , uretriti, cistiti

Terapia = chinolonici sempre meno efficaci.

Danno testicolare

Esiti di radiazioni, chemioterapia, Torsione

Varicocele



Cause di infertilità maschile

Disturbi eiaculazione

Disturbi erezione

Causee pretesticolari

Cause testicolari

Cause post-testicolari

Anaeiaculazione

Causee

Piu frequente linfoadenectomia retroperitoneale in ragazzi operati di etp testicolo

Interventi pelvici fatti in eta' pedratrica

Interventi di adenectomia prostatica o turp o tuip

Attenzione alla assunzione di alcuni farmaci ad azione alfa adrenergica (tamsulosina, silodosina, alfuzosina ecc ecc) REVERSIBILE!!!

Terapia

Midodrina= Efficacia: 50% dei casi

Parasimpaticomimetici (fisostigmina e neostigmina) poco efficaci

Anaeiaculazione

Recupero spermatozoi dalle urine (post interventi ad esempio turp)

Dieta alcainizzante nei due giorni precedenti

Far bere molta acqua

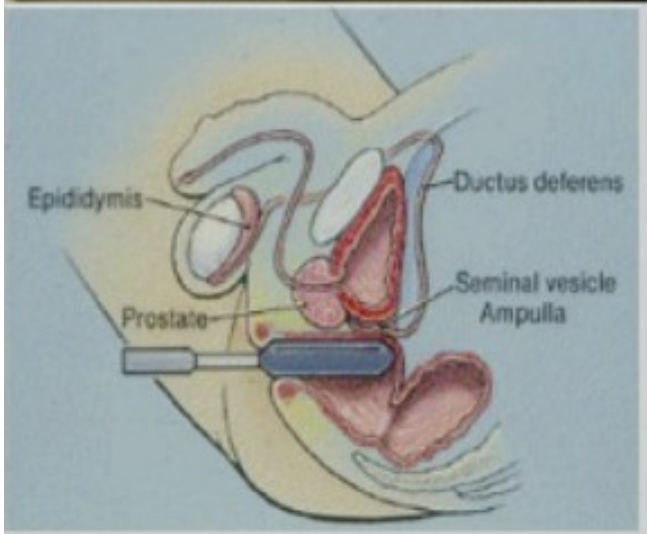
Far svuotare la vescica

Masturbazione

Far urinare in un contenitore sterile

Vibrostimolazione pene elettrostimolazione (mielolesi)

Stimolazione del glande e delle vescichette seminali e recupero dello sperma



Iperviscosità seminale (spr fibrosi cistica)

N acetil cisteina compresse da 600 mg die

Azione mucolitica

Azione antiossidante diretta

Azione antiossidante indirette
(garantisce livelli elevati di glutatione e ipotaurina)

EFFETTI POSITIVI
Baker et al. 1995 – produzione di ROS
Oeda et al. 1997 – motilità
Lopes et al. 1998 – danno del DNA
Comhaire et al. 2000 – produzione ROS
Safarinejad and Safarinejad 2009 – concentrazione, motilità e morfologia
Ciftici et al. 2009 – motilità, volume, viscosità e stato ossidativo
Paradiso Galatioto eta al 2008 - concentrazione

.....E L'INFERTILITA' IDIOPATICA ?

Terapie empiriche

ACE INIBITORI

Low-Dose Lisinopril in Normotensive Men With Idiopathic Oligospermia and Infertility: A 5-Year Randomized, Controlled, Crossover Pilot Study

AU Mbah[1], GO Ndukwu[2,3], SI Ghasi[1], EN Shu[1], FN Ozoemena[4,5], JO Mbah[6], OD Onodugo[7], EC Ejim[7], MI Eze[8], PO Nkwo[8] and PO Okonkwo[1]

THE JOURNAL of UROLOGY®
Official Journal of the American Urological Association

LISINOPRIL 2,5 MG AL GIORNO

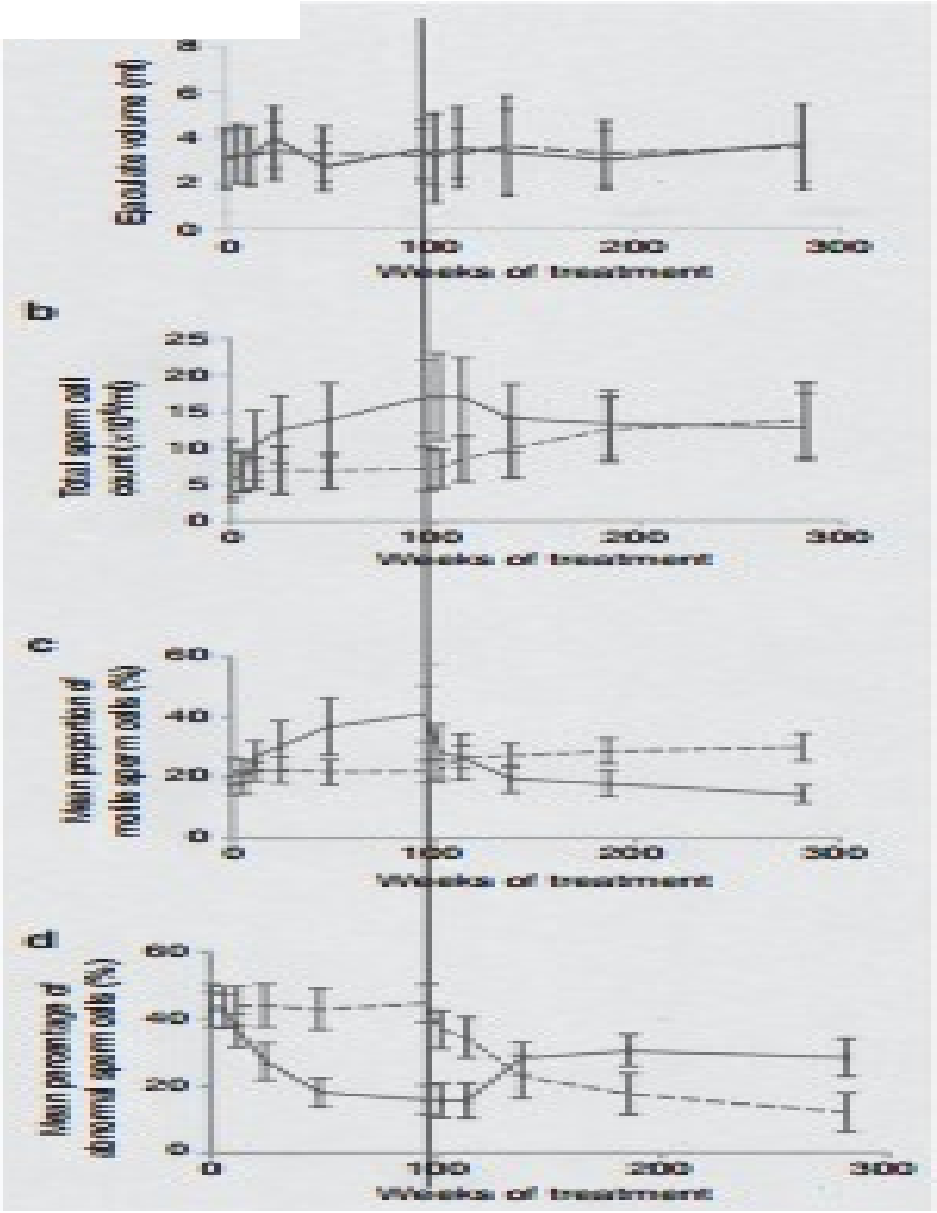
STUDIO ESEGUITO SU 50 PARTECIPANTI

RISPETTO AL GRUPPO CONTROLLO MIGLIORAMENTO DELLA MORFOLOGIA, NUMERO E MOTILITA'

Table 2 A comparison of the symptoms reported by the patients during lisinopril treatment and during placebo treatment

Subject no.	Symptoms reported	With lisinopril treatment n (%)	With placebo treatment n (%)	Relative risk	95% Confidence interval of the relative risk
1	Anorexia	7 (5.4)	7 (4.4)	1.12	0.65–1.93
2	Constipation	3 (2.3)	1 (0.6)	1.72	0.96–3.08
3	Chest pain	7 (5.4)	0 (0.0)	2.30	2.02–2.63[a]
4	Cough	10 (7.8)	16 (10.0)	0.84	0.50–1.38
5	Catarrh	12 (9.3)	8 (5.0)	1.34	0.92–1.97
6	Diarrhea	6 (4.7)	8 (5.0)	0.96	0.52–1.78
7	Dizziness	6 (4.7)	0 (0.0)	2.30	2.02–2.63[a]
8	Epigastric pain	1 (0.8)	12 (7.5)	0.17	0.03–1.12
9	Fever	26 (20.3)	34 (21.4)	0.88	0.64–1.20
10	Headache	7 (5.4)	17 (10.7)	0.63	0.33–1.19
11	Joint pains	20 (15.6)	3 (1.9)	1.98	1.61–2.44[b]
12	Malaise	15 (11.7)	19 (11.9)	0.95	0.64–1.41
13	Myalgia	4 (3.1)	6 (3.8)	0.90	0.42–1.95

[a]Statistically highly significant ($P < 0.01$). [b]Statistically very highly significant ($P < 0.001$).



Pde-5i

·Review·

Effects of phosphodiesterase 5 inhibitors on sperm parameters and fertilizing capacity

F. Dimitriadis[1], D. Giannakis[1], N. Pardalidis[1], K. Zikopoulos[1], E. Paraskevaidis[1], N. Giotitsas[1], V. Kalaboki[1], P. Tsounapi[1], D. Baltogiannis[1], I. Georgiou[1], M. Saito[2], T. Watanabe[2], I. Miyagawa[2], N. Sofikitis[1,2]

[1]*Laboratory of Molecular Urology and Genetics of Human Reproduction, Department of Urology Ioannina University School of Medicine, Ioannina 45110, Greece*
[2]*Department of Urology Tottori University School of Medicine, Yonago 683, Japan*

Nitric oxide is found to improve or maintain sperm motility probably through the stimulation of cGMP Production in sperm flagella

Sperm membrane alterations which are important for the sperm capacitation process and the acrosomal reaction

Stimulate contractility of seminiferous tubules in man

Attivita' fisica, dieta e stile di vita. Prevenzione o terapia ?

Am J Mens Health. 2017 May;11(3):654-662. doi: 10.1177/1557988316669045. Epub 2016 Sep 19.

The Impact of Intense Exercise on Semen Quality.

Jóźków P[1], Rossato M[2].

Author information

This review of the current literature suggests that intense physical activity may affect the semen concentration, as well as the number of motile and morphologically normal spermatozoa.

Training at higher intensities and with increased loads seems to be associated with more profound changes in semen quality.

In recreational athletes, exercise has either a positive or neutral effect on semen parameters.

Recent studies have reported evidence of decreased sperm concentrations in cyclists and mountain trekkers after periods of intense physical effort. Alterations in the hypothalamo–pituitary–gonadal axis, and/or hyperprolactinemia disturbances in the hormonal milieu oxidative stress, and scrotal heating

Glob J Health Sci. 2015 Feb 24;7(5):11-22. doi: 10.5539/gjhs.v7n5p11.

Lifestyle and Outcomes of Assisted Reproductive Techniques: A Narrative Review.

Zeinab H, Zohreh S, Samadaee Gelehkolaee K[1].

Weight watch and diet, exercise and physical activity, psychological health, avoiding medications, alcohol and drugs, preventing diseases, environmental health, spiritual health, social health, and physical health.

These methods can be greatly helped *before and during* implementing assisted fertility techniques

Male infertility: lifestyle factors and holistic, complementary, and alternative therapies

David F Yao, Jesse N Mills
Department of Urology, UCLA, 1260 15th St #1200, Santa Monica, CA 90404, USA

Obesity

Associated with lower serum testosterone and LH

Excess scrotal fat has been hypothesized to elevate scrotal temperatures

Gradual weight loss through exercise and a progressive decrease in caloric intake led to improvement in sperm parameters.

Tobacco

benzo(a)pyrene binding to DNA in sperm

Alcohol

Deterioration of sperm parameters and testicular pathology in a dose-dependent fashion

An inhibition of gonadotropins

Reversible with alcohol abstinence

Caffeine

>6 cups coffee daily was associated with increased sperm motility in one study,

Promote germ cell survival

Moderate consumption of caffeine appears to be safe for male reproductive health.

Acupuncture

Mind-body practice

Scrotal cooling

Faith based treatment

Traditional Chinese medicine

«..e se per difetto del seme viene..debbono essere aiutati con quelle cose c'hanno a crescere e a generare lo seme, cioè cipolle, pastinache domestiche e cose somiglianti»

«vulva di lepre, bava pendente dalla bocca delle pecore, vino Falerno, erba mercuriale»

Quinto Sereno Sammonico III sec. d.C.

TERAPIE DI COMBINAZIONE

FERTILITY AND STERILITY®
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Published by Elsevier Science Inc.
Vol. 67, No. 4, April 1997
Printed on acid-free paper in U.S.A.

The combination of testosterone undecanoate with tamoxifen citrate enhances the effects of each agent given independently on seminal parameters in men with idiopathic oligozoospermia*

Dimitrios A. Adamopoulos, M.D.†
Stamatina Nicopoulou, M.D.
Niki Kapolla, B.S.,
Maria Karamertzanis, M.D.
Evangelia Andreou, M.D.

Endocrine Department, Elena Venizelou Hospital, Athens, Greece

Terapia combinata migliora i parametri seminali, differendo in maniera significativa dal placebo e i farmaci utilizzati singolarmente

4 gruppi: placebo, testosterone undecanoato (120 mg/die), tamoxifene citrato (20 mg/die), entrambi I FARMACI per 6 mesi

FERTILITY AND STERILITY®
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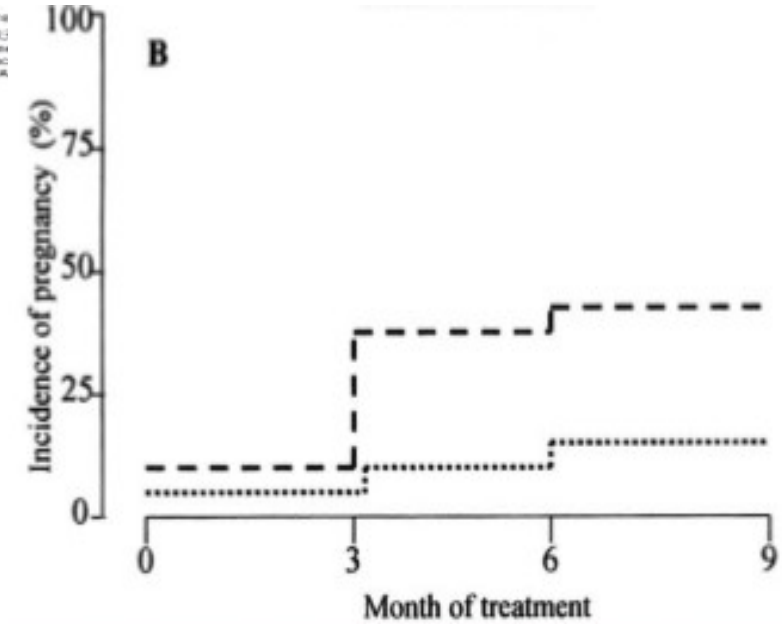
Effectiveness of combined tamoxifen citrate and testosterone undecanoate treatment in men with idiopathic oligozoospermia

Dimitrios A. Adamopoulos, M.D., Athina Pappa, M.Sc., Evangelia Billa, M.D., Stamatina Nicopoulou, M.D., Eftychia Koukkou, M.D., and John Michopoulos, M.D.

Department of Endocrinology, Elena Venizelou Hospital, Athens, Greece



212 coppie con infertilità maschile idiopatica

Tasso di gravidanze 33,9% vs 10,3% in favore del gruppo trattato

INTEGRATORI ED ANTIOSSIDANTI

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REVIEW

A systematic review of the effect of oral antioxidants on male infertility

C Ross [a], A Morriss [a], M Khairy [a], Y Khalaf [a], P Braude [a,b], A Coomarasamy [c], T El-Toukhy [a,*]

Study	Antioxidant used	Study outcome measures	Improvements
Suleiman et al. (1996)	Vitamin E	Motility, level of lipid peroxidation	Motility in asthenozoospermic men and reduction in level of lipid peroxidation
Omu et al. (1998)	$ZnSO_4$	Concentration, motility, membrane integrity, serum zinc, cadmium, antisperm antibodies, FSH, LH, prolactin, TNFα and IL-4 concentrations	Count, progressive motility, membrane integrity and reduction in antisperm antibodies
Scott et al. (1998)	Vitamins A, C, E, selenium	Concentration, motility, serum selenium	Motility
Rolf et al. (1999)	Vitamins C and E	Concentration, motility, morphology, volume, 24-h sperm survival	No improvement
Wong et al. (2002)	Folic acid and/or $ZnSO_4$	Concentration, motility, morphology, seminal plasma, blood plasma and erythrocyte folate and zinc	Concentration and total normal sperm count
Keskes-Ammar et al. (2003)	Vitamin E and selenium	Concentration, motility, morphology, volume, viability, semen MDA, serum vitamin E and cholesterol	Motility
Lenzi et al. (2004)	Carnitine	Concentration, motility, morphology, volume	Number of total motile sperm and forward motile sperm
Cavallini et al. (2004)	Carnitine	Concentration, motility, morphology, testicular volume	Concentration, motility and morphology, except for grade IV and V varicocoeles, where there was no difference.
Balercia et al. (2005)	Carnitine	Concentration, motility, morphology, volume, semen total oxyradical scavenging capacity	Straight progressive velocity and total oxyradicalscavenging capacity
Comhaire et al. (2005)	Astaxanthin	Concentration, motility, morphology, volume, pregnancy rate, serum FSH, LH, testosterone, inhibin B, ROS generation,[a] a, zona-free hamster oocyte test, seminal γ-glutamyltransferase, gluconidase.	No improvement.
Greco et al. (2005a)	Vitamins C and E	Concentration, motility, morphology, sperm DNA fragmentation[b]	DNA fragmentation.
Sigman et al. (2006)	Carnitine	Volume, motility, concentration, forward progression, seminal plasma and semen carnitine	No improvement.
Galatioto et al. (2008)	Vitamins A, C, E, *N*-acetyl cysteine and zinc	Concentration, motility, morphology, volume	Odds of having a normal sperm count.
Omu et al. (2008)	Vitamins C and E with $ZnSO_4$, vitamin E with $ZnSO_4$ or $ZnSO_4$ alone	Concentration, motility, morphology, volume, sperm chromatin integrity and apoptosis,[c] sperm membrane integrity, serum and seminal plasma antioxidants, cadmium, magnesium, selenium, zinc, cytokines, oxidants, antisperm antibodies antibody levels and *Bcl2* and *Bax* expression	Sperm motility, fertilizing capacity (*in vivo*) and DNA fragmentation index (*in vitro*).
Safarinejad and Safarinejad (2009)	*N*-acetyl cysteine, *N*-acetyl cysteine and/or selenium	Concentration, motility, morphology, serum testosterone, inhibin B, LH, FSH	Count, motility, morphology.
Ciftci et al. (2009)	*N*-acetyl cysteine	Concentration, motility, morphology, volume, viscosity, liquefaction time, oxidative status	Motility, volume, viscosity, liquefaction time, oxidative status (total antioxidant capacity, total peroxide and oxidative stress index).

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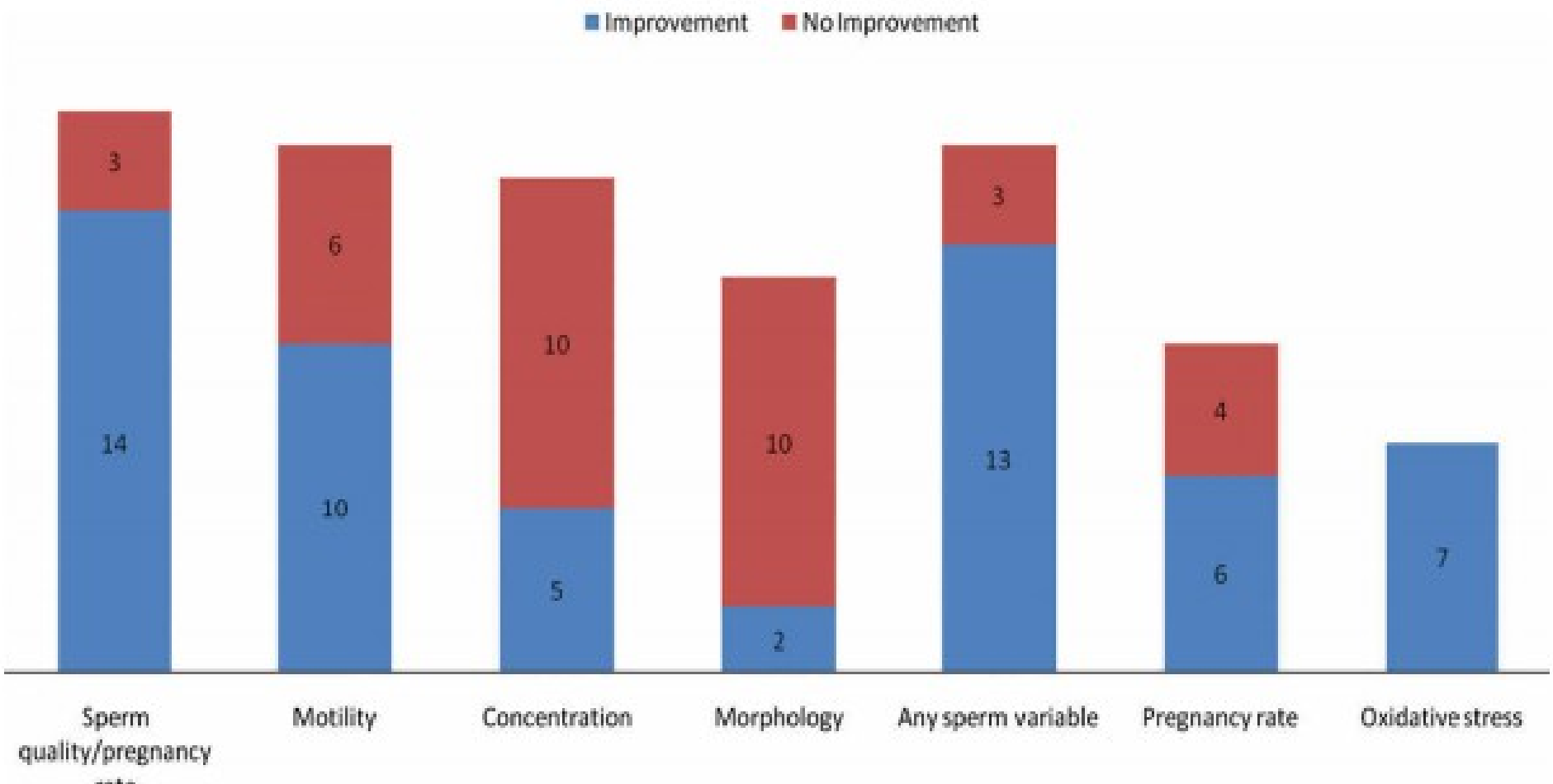
REVIEW

A systematic review of the effect of oral antioxidants on male infertility

C Ross [a], A Morriss [a], M Khairy [a], Y Khalaf [a], P Braude [a,b], A Coomarasamy [c], T El-Toukhy [a,*]



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REVIEW

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Table 4 Effect of antioxidants on spontaneous or treatment-related pregnancy rate in the included studies.

Study	*Antioxidant*	*Effect of antioxidants on pregnancy rate*
Suleiman et al. (1996)	Vitamin E	21% (11/52) versus 0% (0/35), $P = 0.003$[a]
		Live birth rate 17% (9/52) versus 0% (0/35), $P = 0.009$
Omu et al. (1998)	Zinc sulphate	22% (11/49) versus 4% (2/48), $P < 0.03$[a]
Scott et al. (1998)	Selenium, vitamins A, C and E	11% (5/46) versus 0% (0/18), $P = 0.15$[a]
Rolf et al. (1999)	Vitamins C and E	0% (0/15) versus 0% (0/16), $P = 1$[a]
Lenzi et al. (2004)	Carnitine	13% (4/30) versus 0% (0/26), $P = 0.04$[a]
Cavallini et al. (2004)	Acetyl L-carnitine and carnitine	22% (22/101) versus 2% (2/118), $P < 0.01$[a]
Balercia et al. (2005)	L-Carnitine and acetyl L-carnitine	20% (9/44) versus 20% (3/15), $P = 1$[a]
Comhaire et al. (2005)	Astaxanthin	55% (6/11) versus 11% (2/19), $P = 0.028$[a]
Galatioto et al. (2008)	Vitamins A, C and E, *N*-acetyl cysteine and zinc	5% (1/20) versus 0% (0/22), $P = 0.95$[a]
Tremellen et al. (2007)[b]	Menevit	64% (23/36) versus 38% (6/16), $P = 0.077$
		Viable pregnancy rate at 13 weeks (38% (20/52) versus 16% (4/25), $P = 0.046$

[a]Pregnancy rates are for spontaneous pregnancies that occurred during the study period.
[b]Pregnancy rates per embryo transfer.

Terapie di combinazione con antiossidanti

Combination clomiphene citrate and antioxidant therapy for idiopathic male infertility: a randomized controlled trial

Hussein Ghanem, M.D.,[a] *Osama Shaeer, M.D.,*[a] *and Amgad El-Segini, M.D.*[a]

[a] Department of Andrology, Faculty of Medicine, Cairo University, Cairo, Egypt

Comparison between combination therapy group and placebo group regarding the incidence and timing of pregnancy.

	Active treatment	Placebo
Cases	30	30
Pregnancies (1–3 mo)	4	3
Pregnancies (3–6 mo)	7	1
Total pregnancies	11 (36.7%, $P = 0.037$)	4 (13.3%)

Clomifene citrato 25 mg/die + vitamina E 400 mg/die vs placebo

Tasso di gravidanze 36,7% vs 13,3% in favore del gruppo trattato

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Studi molto eterogenei in termini di criteri di inclusione dei pz, tipo, dosaggio e durata della terapia

Non è possibile fornire raccomandazioni evidence based

La maggior parte degli integratori disponibili in commercio contengono bassi dosaggi di antiossidanti

Possono essere considerati dei "coadiuvanti"

Conclusioni

La terapia medica dell'infertilita' escludendo i casi di comprovata presenza di patologia sottostante e' da considerarsi sperimentale sin quando non sia comprovata da studi clinici randomizzati e controllati

Nonostante il successo delle tecniche di PMA la maggior parte delle coppie preferirebbe non concepire i propri bambini in laboratorio…

Considerare i costi delle tecniche di PMA
E' aumentata l'età della coppia che cerca figli

Guidare i pazienti attraverso la giungla di terapie e trattamenti offerti

E soprattutto ……..Continuare la ricerca e la formazione dei giovani

….....***L'insegnamento e la ricerca scientifica restano il più grande dono d'amore: è come piantare una quercia che darà ombra a chi non conosceremo mai***.
MI raccomando, siete giovani , amate questo lavoro e i vostri pazienti...*grazie per tutto quello che avete fatto per me; e' stato un onore esser curato dai mei allievi ...****ma io sono vecchio pensate ai giovani...***
Ancora il più affettuoso "in bocca al lupo" per la vostra vita e naturalmente per la vostra professione!!

Prof.Glauco Ambrosi

Grazie per l'attenzione