

Detection of hagar el sada and comparing it with others treatment

Introduction

Premature ejaculation (PE) refers to the persistent or recurrent discharge of semen with minimal sexual stimulation before, during, or shortly after penetration, before the person wishes it, and earlier than he expects it (**Masters and Johnson , 2006**).

Types of Premature ejaculation

1-Primary premature ejaculation
2-Secondary premature ejaculation (**Waldinger et al., 2005**).

Diagnosis: Diagnosis of PE is based mainly on patient self reported, clinical history and examination finding because of little finding in investigations. (**Waldinger,2008**).

Treatment

Pharmacological treatment

A) Selective Serotonin reuptake inhibitor :The mechanism of action of SSRIs is linked to increase the extracellular level of serotonin by inhibiting its reuptake into the presynaptic cell, increasing the level of serotonin in the synaptic cleft available to bind to the postsynaptic receptor (**Waldinger et al., 2000**).

Selective Serotonin Reuptake

Inhibitor as:-1- Fluoxetine is a SSRI, Fluoxetine's mechanism of action is primarily that of a SSRI although it may produce some of its effects through

5HT2Cantagonism. Fluoxetine has also been shown to increase the penile sensory threshold of the dorsal nerve, thereby delaying time to orgasm (**Manasia et al., 2003**).

2- Paroxetine: A more recent SSRI, paroxetine has proved to be effective. (Montgomery, 2001).

2-Sertraline is primarily a SSRI, it is also a dopamine reuptake inhibitor (**Mcmahon , 1998**).

4-Dapoxetine is a SSRI designed for use as an oral on-demand therapy for PE(**Hellstrom , 2009**).

5- Escitalopram is an antidepressant of the SSRI class(**Cipriani et al., 2009**).

B)Clomipramine inhibits the reuptake of nor epinephrine as well as serotonin,it also elevates the penile sensory threshold (Master and Turek , 2001).

C)Phosphodiesterase type 5 (PDE5) inhibitors in combination with SSRIs provide better results when used to treat PE than use of SSRIs alone. The reason for this is unknown, but the mechanism may be, in part, that an improved erection (firmness, duration, or both) (**Abdel-Hamid , 2004**).

D)Analgesic and Pindolol have 5-HT1A auto receptor antagonist action subsequently potentiate

the action of an SSRI medication in treatment of PE(Waldinger, 2008).

E)Topical treatments as:

1-S S - c re a m

2- lidocaine-prilocaine creams

3-A mouthwash spray

intracavernous

pharmacotherapy(Waldinger et al., 2004).

Psychological and nonpharmacologic therapies:

Behavioural treatment options

as 1-The start-stop

2-Squeeze-stop technique

3-Kegel exercises

These techniques are effective treatments in PE by reducing or removing stimulation, but they require partner participation with poor long-term efficacy(**Masters and Johnson , 2006**).

Psychological intervention

Surgery: In case of lifelong PE refractory to behavioural and /or pharmacologic treatment.

(**Waldinger et al., 2004**).

Hagar Al Sada : Recently peoples use Hagar Al Sada as a treatment of premature ejaculation. Hagar Al Sada is crashed and dissolved in water to form a gel and applied locally on the penis or directly locally applied on lower surface of the penis when it is used (**El Anani , 2006**).

In previous searches it was found that Hagar Al Sada contains nitrite or nitrate with lead, arsenic or silver. and it is a tree sap This tree sap composition is mainly

nitrite or nitrate with metals which can be changed according to feeding of the tree in soil and place of tree growth. As this tree sap contain the metals in feeding of the tree in soil.

(**Nikki Phipps., 2002**).

Cadmium nitrite :

Formula: $Cd(NO_2)_2$

By direct contact to skin and mucosa membrane it may cause redness by vasodilatation by nitrite or nitrate and irritation to nerve ending . So on Skin of penis it cause vasodilatation by nitrite or nitrate so prolonging erection and delaying ejaculation.

Cadmium nitrite has little side effect if only used locally but when crashed may be inhaled so causing many side effects as:
1- Irritation to the nose and throat, to the lung and with repeated exposure may cause bronchitis, pneumonia, pulmonary edema, and cancer on the long run .

3-Damage to the liver and kidney and cancers on the long run. By Eye contact: it causes irritation.

By Ingestion: it causes damage to the liver and (**Yves Collos kidney and cancers , 1998**).

Aim of Work

- 1- Detection of composition of Hagar Al Sada and its role in treatment of premature ejaculation

- 2- To test the effect of topical application of Hagar Al Sada on intervaginal latency time.
- 3-To compare between Hagar Al Sada and different types of treatment in premature ejaculation theoretically.

Subjects and Methods

A)subjects:Our study was from 1/3/2011 to 31/12/2011 and conducted in 2 parts

The first part of the study was conducted in Forensic medicine and clinical toxicology department, faculty of medicine, Fayoum University. In this work we purchased samples of Hagar Al Sada to detect its composition.

The second part of the study was conducted in the outpatient clinic of Dermatology, STDs, and Andrology department, Fayoum University Hospital, Fayoum. for 12 weeks. The study was conducted on 30 male patients after their knowledge of the study and their consent, their age ranged between 28 and 52 years. Male patients were selected from the attendants of the outpatient clinic complaining of premature ejaculation which lead to deterioration of their marriage and necessated urgent treatment. Patients with coexisting ED were excluded. Patients receiving any psychological medications especially SSRIs were also excluded.

B) Methods

Detection the composition of Hagar Al Sada:

a- **Chemical reactions** to detect it contain nitrite

- 1) Substance + HCL dilute → ↑brown gases of N₂oxide.
- 2) Substance in H₂O + ferrous sulphate +2 drops of diluted H₂SO₄ →brown ring .
- 3) Substance in H₂O +Agno₃→buff color.
- 4) Substance + KI +diluted H₂SO₄→brown color as it librates I₂ .Add 2 drops of starch→ blue color.
- 5) Substance +KmnO₄ + diluted H₂SO₄→No color of KmnO₄.

b-**Reinsch's test** to detect the type of metal in samples.

c-**Atomic absorption spectroscopy (AA):** We used atomic absorption spectroscopy to detect the composition of Hagar Al Sada and detect its concentration.

Detection if Psilocin and Bufotenine are present in Hagar Al Sada by:

- 1-Color test
- 2-Thin layer chromatography

THE SECOND PART OF THE STUDY All patients were subjected to the following after their knowledge of the study and their consent

Clinical history

A full medical history

Sexual history

Psychological history:

Examination: General,

Geniturinay, Rectal ,

Neurological Assessment of lower limb and pelvis.

Investigations: Urine Analysis,

Prostatic smear if Prostatitis is expected.

Patients were instructed to record the IELT at the start of the study. Hagar Al Sada was crushed and a drop of water was applied on a small piece, left for 10 minutes and then was painted topically on the penile skin. After 15 minutes the penile skin was washed and the patient was advised to start the sexual relation. The IELT was recorded after 2 weeks, 4 weeks, 8 weeks, and finally after 12 weeks. The collected data was revised, coded, tabulated and introduced to a PC using Statistical Package for Social Science . Data was presented and suitable analysis was done according to the type of data obtained for each parameter. Descriptive statistics in form of Mean, Standard deviation (\pm SD), and range for numerical data. Student T Test was used to assess the statistical significance of the difference means.

RESULTS: As samples of Hagar Al Sada gave positive result in the chemical reactions, that means that Hagar Al Sada has nitrite compound.

By Reinsch's test and the atomic absorption spectroscopy to detecte the compound of Hagar Al Sada and its concentration: The compound of Hagar Al Sada in our samples is cadmium with a

concentration of 100 mg/g and with the presence of resin.

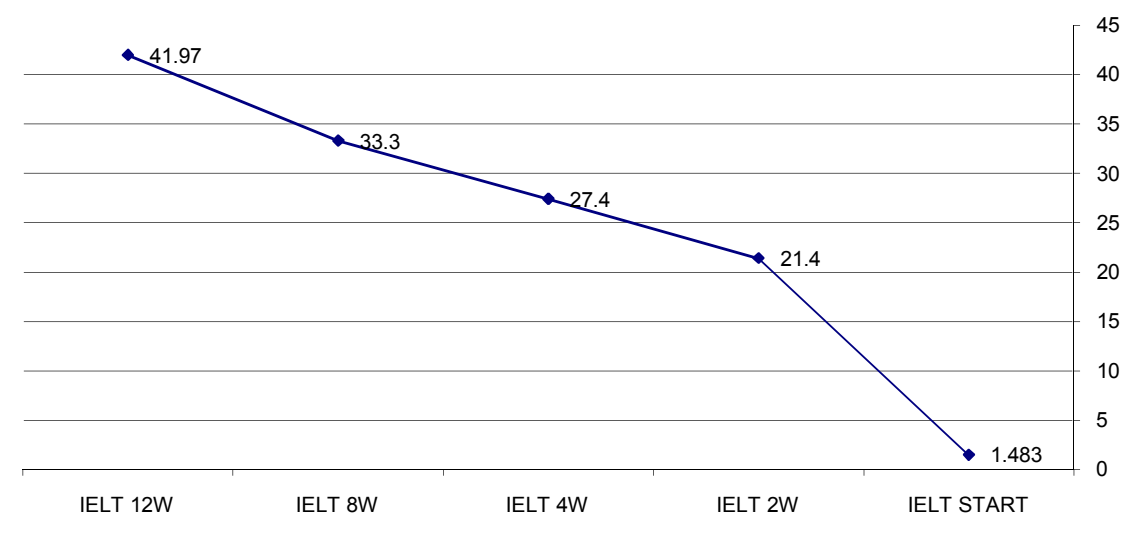
By comparing the substance in Hagar Al Sada with stander of Psilocin and Bufotenine, we found that Hagar Al Sada dose not contain both as was published previously.

Hagar Al Sada' composition which we purchased from fayoum is mainly cadmium nitrite with resin. This resin is the cause of darkly brown red color of Hagar Al Sada.

In previous searches it was found that Hagar Al Sada contains nitrite or nitrate with lead, arsenic or silver. Our finding and previous searches support what was published that Hagar Al Sada is a tree sap.

THE SECOND PART OF THE STUDY The use of Hagar Al Sada in our patients showed a progressive elevation of intravaginal ejaculatory latency time IELT from a mean of 1.48 minutes to 21.4 minutes after 2 weeks to 27.4 minutes after 4 weeks to 33.33 minutes after 8 weeks and finally to 41.97 minutes after 12 weeks. The progressive elevation shows a significant elevation $P=0.000$. No side effects were reported during the study period. To our knowledge, no previous studies were done on the use of Hagar Al sada on PE patients.

IELT of the study group before
and after the use of Hagar Al
Sada



Disease	Number of Patient	Percentage
DM	8	26.7%
Hypertension	12	40%
Kidney Disease	3	10%
Liver Disease	7	23.3%
Heart Disease	4	13.3%
Neurological Disorder	0	0%

Table 1 General Medical History Of Study Group

Table (2) Sexual history of Study Group.

Sexual history	Number of Patient	Percentage
Previous sexual	8	26.7%

relations		
All of the study group patients practiced masturbation during their early sexual life.	30	100%
active extramarital sexual activities	5	16.7%
patients' partners are not satisfied with their sexual function	28	93.3%
Patients are not satisfied with their sexual function	30	100%
Sexual problems lead to marital problems	21	70%

Table (3) Psychological history of Study Group.

Psychological history	Number of Patient	Percentage
anxiety	5	16.7%
several stressors	10	30%
wrong beliefs and taboos about sex	12	40%
depression.	0	0%

DISCUSSION Hagar Al Sada is applied on skin of penis when needed, causes vasodilatation which lead to prolonged erection and thus delaying ejaculation (**Wipharat et al., 2004**). Comparing with SSRIs (sertraline, paroxetine, fluoxetine, dapoxetine and escitalopram) and Clomipramine inhibit serotonin reuptake into the presynaptic cell, thus increasing serotonin level in the synaptic cleft which plays a central role in modulating ejaculation (**Kim and Seo, 1998**). The use of Hagar Al Sada in our patients showed a progressive elevation of intravaginal ejaculatory latency time IELT The progressive elevation shows a significant elevation $P=0.000$. No side effects were reported during the study period. To our knowledge, no previous studies were done on the use of Hagar Al sada on PE patients. Dapoxetine on-demand treatment cause increasing in mean geometric IELT approximately three fold , vs. an estimated nine fold increase with daily paroxetine, five fold increase with daily clomipramine and four fold increase with daily sertraline and fluoxetine. This is in keeping with a hypothesis based on pharmacodynamic considerations that SSRIs with short half-lives, such as dapoxetine, are likely to have much lower ejaculation-delaying effects compared with traditional SSRIs (**McMahon et al., 2009**).

The side effects of Hagar Al Sada is little if only used locally, as by crushing it may be inhaled causing many side effects which includes: irritation of the nose and throat , irritation of the lung and with repeated exposure may cause bronchitis, pneumonia, pulmonary edema, cancer and damage and carcinogenic effect to the liver and kidney on the long run (**Yves Collos , 1998**). Other types of treatments have no effect on respiratory system except mouthwash spray which can cause irritation of the nose and throat, irritation of the lung and with repeated exposure may cause bronchitis, pneumonia, pulmonary edema and cancer (**Henry and Morales , 2003**). If by mistake Hagar Al Sada is ingested it may cause damage to the liver and kidney and may lead to cancer (**Yves Collos, 1998**).

This is similar to **Papakostas (2008)** who found that SSRIs are well absorbed from the gastrointestinal tract and are metabolized by the liver and excreted by the liver and kidneys. Therefore, the dose should be adjusted downward in men with hepatic or renal impairment. Also Clomipramine rarely cause liver damage of the cholestatic type and hepatitis (**Althof et al., 1995**).

In our study Hagar Al Sada was applied locally and no systemic side effects was noted but with SSRIs treatment and clomipramine many systemic side effects (Rasmussen and McAlpine, **2007**). Cadmium nitrite (the main composition of Hagar Al Sada) causes irritation in case eye and skin contact (**Wipharat et al., 2004**). Comparing Hagar Al Sada with topical treatment may cause local mild burning sensation and penile numbness and that their partners

complain of vaginal or clitoral anaesthesia. (**Waldinger et al., 2008**). Hagar Al Sada is safe and should be used under medical supervision under supervision of ministry of health and as pharmaceutical product with determination of its dose , how to use and its composition. **Conclusion**

Hagar Al Sada' composition which we purchased from fayoum is mainly cadmium nitrite with resin and it is tree sap. The use of Hagar El Sada in our patients showed a progressive elevation of IELT from a mean of 1.48 minutes to 21.4 minutes after 2 weeks to 27.4 minutes after 4 weeks to 33.33 minutes after 8 weeks and finally to 41.97 minutes after 12 weeks. The progressive elevation shows a significant elevation $P < 0.000$. No side effects were reported during the study period.

Recommendation 1- Other studies are needed with a larger number to fully evaluate the effect of Hagar Al Sada on PE patients .
2- Other studies are needed with a larger number to fully evaluate the effect of Hagar Al Sada on PE patients.

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