

# Non-invasive treatment of erectile impotence with vacuum tumescence device

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*Vacuum tumescence device is one of the alternatives of non-invasive treatment of erectile impotent patients with various etiologies.*

*Twenty-six cases of psychogenic, 14 cases of diabetic, 4 cases of neurogenic and 5 cases of vasculogenic impotence (total 49 patients) unresponsive to other forms of non-invasive treatment were interviewed to inform about the vacuum tumescence device (Erec Aid) and the device was applied. Satisfactory erections were obtained in all of the cases and the patients were advised to use the device. Only 17 of these 49 patients approved to use this device on a periodic basis.*

*Spontaneous and satisfactory erections started to develop in 5 cases with psychogenic impotence after an application of two months, four patients gave up due to insufficient results. At the end of six months, overall 8/49 (% 16) of the patients who were offered to use this device, were able to use it regularly for 6 months.*

*Although vacuum tumescence device is a non-invasive alternative form of treatment of impotence, its acceptability by the patient is limited due to socio-cultural status of the patients.[Turk J Med Res 1993; 11(5):234-236]*

Key Words: Vacuum therapy, Impotence

With the development of penile implants, restoration of erectile capacity became commonplace, but many men are reluctant to undergo an invasive procedure and there were significant risks of requiring reoperation as well as complications from implants (2,5).

Intracavernous pharmacotherapy has had considerable success in those willing to undergo self injection but there is evidence of decline in use with the time and of penile fibrosis with long term injection therapy (6,10).

There is continuous search for non-invasive treatment modalities as an alternative to invasive treatment for both psychogenic and organic impotence. It is for this reason that treatment with these vacuum tumescence devices have been developed. Infact, the use of external vacuum devices is not a new procedure. The that of the first patient to apply a vacuum device in

USA is 1917(7). However, in recent years, the number of patients using this type of non-invasive impotence treatment has significantly increased.

We used vacuum tumescence device both in psychogenic and organic impotence cases to determine whether it is effective in restoring erectile function and coitus satisfactory for both partners or not and also to determine its acceptability by the patients; in other words "patients compliance".

## MATERIALS AND METHODS

After a detailed research, 26 cases of psychogenic, 14 cases of diabetic, 4 cases of neurogenic and 5 cases of vasculogenic impotence (a total of 49 patients) unresponsive to other forms of non-invasive treatment were interviewed to form about the vacuum tumescence device (Erec Aid, by Osbon) and the device was applied. The patients were between 31-63 years of age and the mean age was 46.4. Eight of the patients were single while the others were married. During demonstration satisfactory erections were obtained in all of the cases and the patients were advised to use the device.

Only 17 of these 49 patients approved to use this device on a periodic basis. The others refused to

Received: May 28, 1993

Accepted: Aug. 26, 1993

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\* This paper was presented in International Congress on Andrology in Turkey, April 21-24,1993. Antalya

Table 1. Patients diagnoses and results

Types of imp	Advised pt.no	Aproved pt.no	RESUTS
Physch	26	6	5 pt. spontaneus errec. 1 pt. problems of partner
Diabetic	26	7	5 pt succesful appl. 2 pt preferred prosth
Neurogen	4		2 pt succesful appl. 1 pt application problem
Vascul	5	1	1 pt succesful appl

use this device due to economical or socio-culturel reason or due to the inattractiveness of the device itself.

The patients who used the device periodically are listed in Table 1 according to their diagnosis and the results obtained.

Out of the 26 cases of psychogenic impotent patients only 6 patients approved to use the vacuum tumescence device periodically. These had "honeymoon impotence" and after an application period of two months, five of them no longer needed the device. One patient had a problem related with the partner. Two diabetic impotent patients could not get satisfactory results and finally preferred the use of prothesis.

Application problems couldn't be solved in a neurogenically impotent patient. At the end of six months, overall 8/49 (%16) of the patients who were offered to use this device, were able to use it regularly for 6 months. Total of eight patients (5 cases of diabetic, 2 cases of neurogenic and one case of vasculogenic impotence) were applying the device successfully. No problem of ejaculation and orgasm was noted. Two patients reported ecchymosis on the penile skin during the first couple of months, and five of the 17 patients complained of light penile pain which is not considerable. No other complication was reported.

## DISCUSSION

External vacuum tumescence devices are increasingly used all over the world in patients with erectile dysfunction. It is reported in the literature that vacuum constrictor devices have been routinely used since 1974 (15). However, the information about the changes in penile hemodynamics caused by these devices is limited. The corporeal smooth muscles do fills both intracorporeal and extracorporeal spaces and erection occurs only in the tissues distal to the constrictor band (4,7). It has been reported that in 92% of the patients out of 1517 an erection-like state could be achieved and 77% of the patients could perform sexual intercourse at least once a week (13).

Various authors suggest that this device mfght be an alternative to surgical treatment in selected patients (8,14). Thirteen of 17 (5 cases of psychogenic and 8 cases of organic impotence with a total of 76.5%) of our patients who accepted to use this device reported satisfactory results. Excellent results were obtained especially in honeymoon impotence cases by decreasing the performance anxiety of the patient and thus breaking the circulus vicious.

Sidi et al have reported that the reasons for giving up the utilization of vacuum tumescence device were early detumescence and loss of rigidity, penile discomfort, painful ejaculation and the discomfort caused by the device itself (11). In our series, the main reason for refusing the use of device is economic and socio-cultural.

Christian et al have proposed that vacuum tumescence device can be advised to those patients with operative risk and limited therapeutic alternatives only; they stated that otherwise the rate of acceptibility for these devices would be low (1). In our cases, the rate of acceptibility were significantly low (34.7%).

In our series, complication rate is 7/17 (%41.17) as ecchymosis and penile pain. But all of them are transient and no longer considered by the patients. The rate of such complications is between %22.7 and %45 in the literature (3).

Although no problems of ejaculation and orgasm were noted in our series, blockage of ejaculation was reported in a rate between 12% and 39% in the literature (9,12).

Although vacuum tumescence device is a non-invasive alternative form of treatment, its acceptibility by the patient is limited due to socio-cultural and economic status of the patients, especially in our country.

Vakum tumesens cihazı ile erektil impotansın non-invaziv tedavisi

*Vakum cihazı; değişik etyolojiye sahip impotan hastaların non invaziv tedavi alternatiflerinden biridir.*

*Diğer non invaziv yöntemlere cevap vermeyen, 26 psikolojik, 14 diabetik, 4 nörojenik ve 5 vaskülojenik nedene bağlı toplam 49 hastaya vakum cihazı hakkında bilgi verilerek vakum cihazı uygulandı.*

*Tüm hastalardan tatmin edici cevap alındı ve cihazı kullanmaları önerildi. 49 hastanın 17'si cihazı periyodik olarak kullandıklarını belirtti.*

*İki aylık uygulamadan sonra, psikojenik impotan 5 hastada spontan ve tatmin edici ereksiyonlar gelişmeye başladı. Tatmin edici olmayan sonuçlardan dolayı 4 hasta cihazı kullanmaktan vazgeçti.*

ti. Altı ayın sonunda; 49 hastadan 8'i (% 16) cihazı 6 ay düzenli kullanabildiklerini ve kullanacaklarını söyledi.

Vakum cihazı empotansın noninvaziv alternatif tedavi metodlarından biridir. Bununla birlikte kullanılabilirliği hastaların sosyo-kültürel yapısıyla bağlantılıdır. [Turk J Med Res 1993; 11(5):234-236]

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