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Intracavernous injection of prostaglandin E1 is effective in patients with erectile dysfunction not responding to phosphodiesterase 5 inhibitors.

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Abstract

We report on 64 patients who did not achieve erections adequate for satisfactory sexual intercourse from among a total of 243 patients who were prescribed PDE5 inhibitors for erectile dysfunction (ED). Intracavernous injection (ICI) of PGE was performed in this non-responder group. An ICI of 20 or 40 mcg of PGE1 in 1 ml saline was performed and the responses evaluated. Forty-nine out of 64 (77 percent) cases responded to 20 mcg of PGE1. Forty mcg of PGE was injected into the 15 non-responding cases, and 9 patients responded favorably. The overall effective rate was 58/64 (91 percent). No major adverse effects were observed.

KEYWORDS: prostaglandin E1, intracavernous injection, erectile dysfunction, PDE5 inhibitors

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Short Communication

Intracavernous Injection of Prostaglandin E₁ is Effective in Patients with Erectile Dysfunction Not Responding to Phosphodiesterase 5 Inhibitors

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We report on 64 patients who did not achieve erections adequate for satisfactory sexual intercourse from among a total of 243 patients who were prescribed PDE5 inhibitors for erectile dysfunction (ED). Intracavernous injection (ICI) of PGE₁ was performed in this non-responder group. An ICI of 20 or 40 mcg of PGE₁ in 1 ml saline was performed and the responses evaluated. Forty-nine out of 64 (77%) cases responded to 20 mcg of PGE₁. Forty mcg of PGE₁ was injected into the 15 non-responding cases, and 9 patients responded favorably. The overall effective rate was 58/64 (91%). No major adverse effects were observed.

Key words: prostaglandin E₁, intracavernous injection, erectile dysfunction, PDE5 inhibitors

Erectile dysfunction (ED) is a not uncommon condition caused by psychiatric and physical disorders. Since their introduction, Phosphodiesterase 5 (PDE5) inhibitors have become the first choice of treatment for ED, and have efficacy rates of 68-79% [1-3]. However, there are still non-responders and contraindications for this oral therapy. The intracavernous injection (ICI) of prostaglandin E₁ (PGE₁) is a safe and effective treatment option for such patients. The referred effectiveness of ICI of PGE₁ is 68-88% [4-6]. A study of ICI of PGE₁ carried out in our institute is reported.

From March 1999 to March 2004, PDE5 inhibitors were prescribed to 243 ED patients in the outpatient clinic at the Okayama University Hospital. There were 64/243 (26%) cases in which PDE5 inhibitors were not effective

in achieving erections adequate for satisfactory sexual intercourse. We performed ICI of PGE₁ in this group of 64 patients. Their ages were between 23 and 84 (mean 54.5) years. ICI of 20 mcg of PGE₁ in 1 ml saline was performed and the response was evaluated 20 min later. The therapeutic effects were evaluated according to the criteria laid down by the International Society for Sexual and Impotence Research (ISSIR), and patients who obtained responses 2 and 3 were considered responders. We performed ICI of 40 mcg of PGE₁ in the failed group of 15 cases.

Forty-nine patients responded to 20 mcg of PGE₁ and 9 patients needed 40 mcg. The over-all effective rate was 58/64 (91%). Responses 2 and 3 were obtained in 21 and 37 cases respectively; no prolonged erection was observed. In the responder group, 10 had functional ED and 48 organic ED. In the final non-responder group of 6 cases, all patients had organic ED, including 5 who were diabetic. No critical adverse effects were observed in any of the patients.

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Shabsigh *et al.* reported success rates of 85.1–89.6% by intracavernous alprostadil alfadex in at-home therapy after sildenafil failed, and the most common side effect was penile pain in 29.4% of the patients [8]. In our study, ICI was performed by doctors in the out-patient clinic and not by self injection at home, but our results were similar to those of Shabsigh *et al.* PGE₁ therapy can be used effectively and safely in patients who fail to respond to PDE5 inhibitors. At present in Japan, self ICI of PGE₁ is not permitted by the Ministry of Health, Labour and Welfare. Therefore, a long-term evaluation of the effects of ICI of PGE₁, including self injection in Japan, is needed. Virag *et al.* described an efficacy of 84.8% in an 8-year self-ICI study. There were no significant differences in the results of ICI therapy for ED between other countries and Japan. Therefore, we conclude that this treatment can be successfully carried out in Japan.

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