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INTRACAVERNOUS INJECTION THERAPY IN POST-PRIAPISM CAVERNOSAL FIBROSIS

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ABSTRACT

We report a case of priapism and extensive corporeal induration following diagnostic intracavernous injection. This patient has used intracavernous injection therapy successfully for 9 months. (*J. Urol., 140: 828–829, 1988*)

Virag[1] and Brindley[2] independently suggested in the early 1980s that vasoactive compounds injected intracavernously could be used diagnostically and therapeutically for evaluation of erectile failure. Zorgniotti and Lefleur then reported a series of patients who used intracavernous injection therapeutically with the drug combination of papaverine hydrochloride and phentolamine mesylate.[3] Since their initial report intracavernous injection has emerged as a therapeutic alternative to a penile prosthesis in patients with erectile failure on the basis of vascular and neurological diseases, and diabetes.[4] The usefulness of injection therapy in patients with other causes of erectile failure is uncertain. Although fibrosis and scarring have been reported to occur in patients on injection therapy,[5] the extent of fibrosis that makes injection therapy ineffective is unknown. We describe a patient in whom priapism developed after an injection of vasoactive medication, necessitating a Winter procedure.[6] The priapism resulted in corporeal fibrosis and globally poor erectile function that was treated successfully with intracavernous injection.

CASE REPORT

A 53-year-old man sought evaluation for intermittent erectile dysfunction at a local urological clinic. As part of the evaluation he received an injection of papaverine and erection developed. The erection did not subside and the patient did not seek treatment until almost 36 hours after the injection. Pharmacological reversal and irrigation were attempted unsuccessfully and a Winter procedure was performed on September 25, 1986. Postoperatively the patient noticed complete inability to obtain a rigid erection, although some tumescence with chordee to the right side of approximately 45 degrees was present.

He presented to our clinic for evaluation of globally poor erectile function in December. Examination revealed extensive induration of the corpora bilaterally, which was worse on the right side. Hormonal profile and glucose tolerance testing were normal. Penile brachial index was 0.75 and penile plethysmography revealed a normal wave form. Nocturnal penile tumescence study with Snap-Gauges† indicated poor erections on 2 consecutive nights. He broke no snaps on the first night and only 1 snap on the second night. Diagnosis was organic impotence secondary to corporeal fibrosis from the priapism.

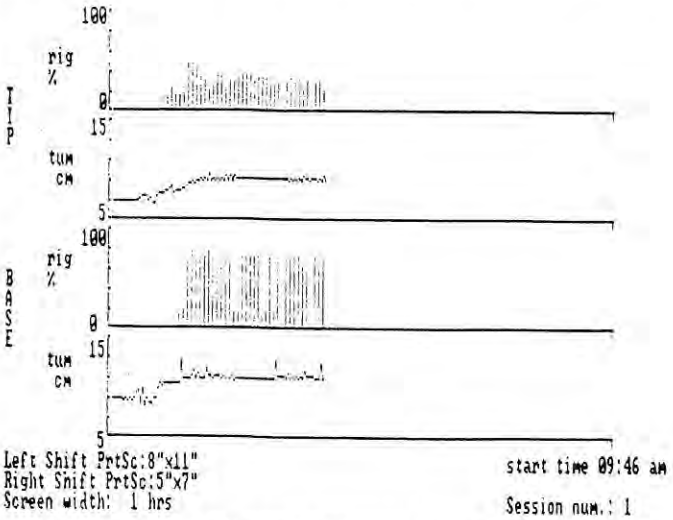
Although it seemed unlikely that the patient would respond to additional intracavernous injection, this was attempted because of his desire to avoid a penile prosthesis. The intracavernous injection consisted of 2 ml. of 50 mg. papaverine hydrochloride plus 1.66 mg. phentolamine mesylate and the procedure was monitored with a Rigiscanner† (see figure). A satisfactory erection for coitus developed and chordee to the right side of about 30 degrees was noted. The erection subsided in about 3 hours. The patient elected to try the injections at home and he was given instructions.

A dose of 0.3 to 0.4 ml. per injection (25 mg. papaverine hydrochloride plus 0.83 mg. phentolamine mesylate per ml.) produces a satisfactory erection for coitus with no evidence of tachyphylaxis to the medications to date. He has used injection therapy approximately twice a week for about 9 months (approximate total number of injections to date is 70). The patient achieves a satisfactory erection with injection into either corporeal body and usually he rotates the injection sites. Regular followup palpation of the penis reveals no change in the amount of induration present.

DISCUSSION

Scarring and fibrosis may occur with therapeutic intracavernous injection, which may lead to loss of effectiveness if the degree of fibrosis is significant.[5] However, the extent of fibrosis that will result in ineffectiveness of injection remains unknown. Our patient had corporeal fibrosis secondary to drug-induced priapism and he is currently using therapeutic intracavernous injection with good results.

This case suggests that the degree of fibrosis necessary to make injection therapy ineffective is considerable, and that patients who have intracorporeal fibrosis from whatever etiology are also candidates for injection therapy. They should be offered this option if they are interested, wish to avoid a penile prosthesis and are capable of using the technique. Such patients should be informed that fibrosis and scarring may worsen on injection therapy, which could make future implantation of a penile prosthesis difficult. This case also emphasizes the im-



Rigiscan recording after intracavernous injection indicates adequate tumescence and rigidity at tip and base of penis.

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† Dacomed Corp., Minneapolis, Minnesota.

portance of early pharmacological reversal of prolonged erection after intracavernous injection for diagnosis or therapy to avoid surgical intervention and fibrosis.

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