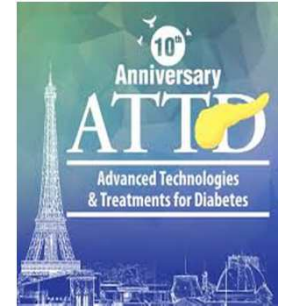


SHORT TERM CONTINUOUS SUBCUTANEOUS INSULIN INFUSION THERAPY (CSII) SIGNIFICANTLY IMPROVES ERECTILE DYSFUNCTIONS IN PATIENTS WITH TYPE-2 DIABETES MELLITUS

Abstract no. ATTD7-0171



Kiran Pal Singh; Preet Ekta Rai²; Surbhi Karol; Palak Gupta
Fortis Hospital, Mohali 2. Parexel International, Chandigarh, India
drkp1292@gmail.com; k.singh@fortishealthcare.com



Introduction

Erectile Dysfunction (ED) is a common complication of Type II Diabetes Mellitus and its prevalence varies- 30 to 60 % in different studies. There is a limited treatment available for this complication and that too with poor response rate. HbA1c remains high in significant number of diabetic population despite MDI and insulin pump therapy is a good alternative to achieve target HbA1c. Effect of Subcutaneous Insulin Pump Therapy on ED has not been studied. Our study is the first attempt to observe the effect of CSII therapy on ED.

Objective

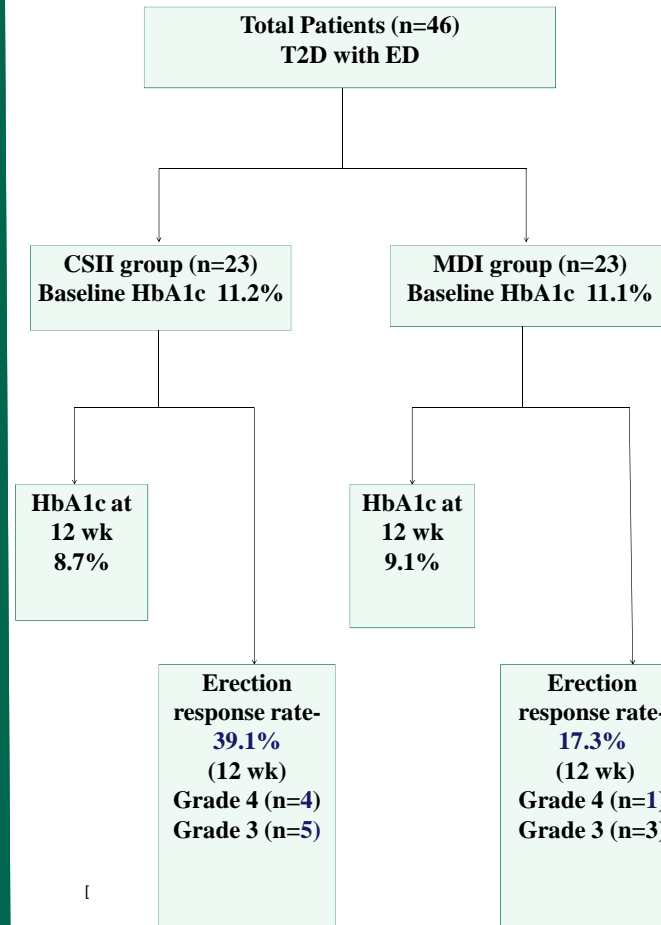
To determine the efficacy of 12 weeks CSII Vs MSI (multiple subcutaneous injection) among uncontrolled T2D patients with ED.

Methods

This is a 12 week comparative study on 46 T2D patients (mean age 43.8 y) with uncontrolled hyperglycemia (HbA1C>10.0%) & ED and were on multiple oral hypoglycemics. These patients had ED as graded on the Erectile Hardness Grading Scale 1- 4 (EHGS) [European Association of Urology]. All the study patients had EHGS grading of 1 to 2 only. The patients were randomized into 2 treatment groups, 23 on MDI while another 23 on CSII. Patients in both the groups were matched in terms of duration of diabetes & complications, BMI, HbA1c, creatinine clearance, S testosterone, FT4 TSH & prolactin levels. Stamp test & International Index of Erectile Function (IIEF-5) were recorded. EHGS scale was recorded by patients in their diary at -7 day, baseline & weekly till the end of study.

Results

Baseline HbA1c in CSII group was 11.2% and 8.7% at the end of study while in MSI group it was 11.1% and 9.1% respectively. In CSII group, 4 patients achieved Grade 4 erections, 5 achieved Grade 3 erections (response rate 39.1%) while in MSI, one achieved Grade 4 & three recorded Grade 3 response (17.3%).



Discussion

Usage of CSII is increasing in T2D for better control, though its effects on ED (a commonly associated complication) have not been studied. Diabetes, characterized by endothelial dysfunctions and defective insulin mediated vasodilation may explain ED. CSII by improving endothelial dysfunctions may explain improvement of vasodilatory functions of Corpora Cavernosa. Our study, first time observed that CSII is clinically significant & effective for improvement of ED.

Conclusion

- Short Term CSII therapy significantly improved ED as achievement of Grade 4 erections was four times higher in this group (4/23 patients) compared to MDI group (1/23) as well as the overall response rate (Grade 3 and 4 erections) was 2.25 times higher in CSII group.
- Both the groups showed significant reduction in HbA1c, more marked in CSII group.

References

- Rosen RC, Riley A et al. The International Index of Erectile Function (IIEF). A multi dimensional scale for assesmen of erectile dysfunction. Urology 1997;49:822-30
- Susan Mayor. European Association of Urology susanmayor@mac.com
- Mulhall JP, Levine LA et al.. Erection hardness: a unifying factor for defining response in the treatment of erectile dysfunction. Urology. 2006;68;17-25

Authors disclosure

none

Acknowledgement

Authors are thankful to Ashima Duggal, Jyotika Manan, Palak Gupta, department of Endocrinology, Fortis hospital, Mohali and India Medtronic for technical support.