

## Introduction

CIPII is an alternative route of insulin delivery when injection site issues make difficult subcutaneous insulin administration. In order to bypass the subcutaneous tissue, the second generation Diaport system (DIA), allowing intraperitoneal insulin infusion by an external insulin pump might be a good, less invasive, alternative way to implanted pumps. Here we report the first Italian experience on 5 patients (n°1-4 from Olbia and n°5 from Partinico) using the DIA, all patients were implanted after a period in MDI and CSII.

## Materials and Methods

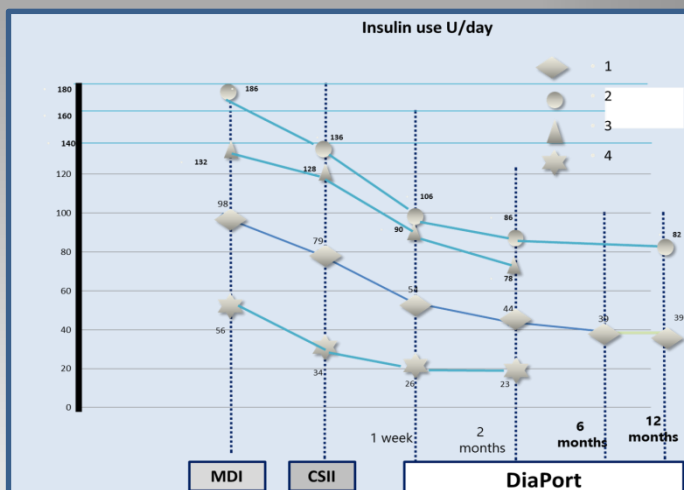
Patients characteristics (n= patient number B=BMI, I/IU = insulin Unit daily, Hypo = severe hypoglycemic episodes, N=NO, Y=YES

N	B	MDI		CSII		CIPII IMPLANT DATE
		I/IU	HbA1c/ HYPO	I/IU	HbA1c HYPO	
1	48.3	108	10.3% N	73	8.6% NO	22/09/15
2	26.6	82	8.4% Y	54	6.9% N/Y	22/09/15
3	44.4	125	9.9% N	102	8.9% N	27/09/16
4	20.1	60	10.4% Y	45	8.6% Y	27/09/16
5	21.9	71	7,8 % Y	59	7,0% Y	8/06/16

### Patient 2 lypodistrophy



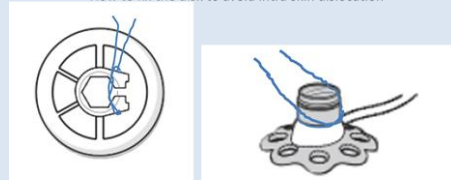
## Results



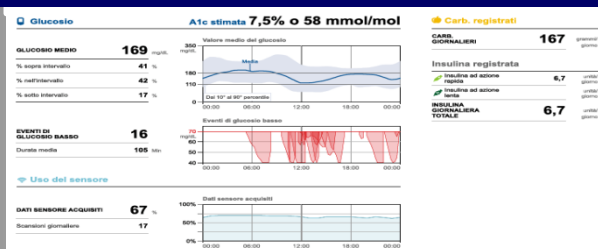
On CIPII a better metabolic control (reduction in HbA1c except for patient 2 and 5 who maintained same HbA1c), less glycemic variability, less insulin daily Units use and reduction in hypos events was evident in all patients. Patient 3 lost 15% body weight in the first three months. After 9 months implantation patient 2 experienced a reduction in catheter flow (obstruction for bolus of 10 IU insulin or more). Catheter was flushed with saline in the Radiology unit restoring the flow, but after two months catheter stopped again and it has been replaced with a new one in the radiology unit. Patient 1 had dislocation of the external port after 1 wk implantation, the system was fixed as shown below for two months and now the problem is solved.



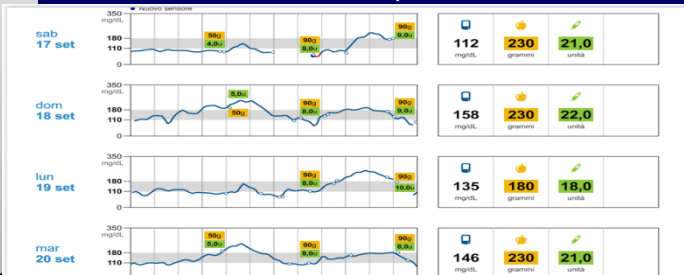
How to fix the disk to avoid intra skin dislocation



### Patient 5 hypoglycemic events before CIPII



### Patient 5 after DiaPort Implantation



## Conclusions

The Diaport system in our experience is a good and easy to manage device in dedicated patients with improvement of clinical condition and excellent acceptability by the patient. Rescue maneuvers are less invasive than with the implantable pumps. Besides the good glycaemic control, the better QoL, the reduction of unexpected hypoglycemic events further research is warranted to determine the influence of IP insulin in T1DM complications on the long period and if this system might be an alternative to SC insulin in closed-loop systems. It is mandatory set up a proper team to manage the patients

## References