TELEMEDICINE CONSULTATION IN PATIENTS WITH TYPE 1 DIABETES MELLITUS TREATED WITH CONTINUOUS SC. INSULIN INFUSION (CSII): ANALISYS OF EFFICIENCY AND EFFICACY AFTER TWO YEARS.

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Introduction

Telemedicine systems are increasingly common and have proven to be safe, effective and no inferior to regular visit. Most of the analysis of virtual assistance in diabetes mellitus (DM) have failed to demonstrate superiority over physical visits regarding metabolic control.

Our objetive is to evaluate the results of a telemedicine consultation after two years of experience.

Materials and Methods

83 patients with type 1 DM on CSII therapy. 39 of them accepted to participate in a telematic (TM) consultation. The control group (CG) was composed by the other 44 patients. Changes on HbA1c, frequency and severity of hypoglycemia, medical staff time spent, Emergency Room assistance and hospital-staying days were studied in both groups from March 2014 to February 2016.

Data are expressed as arithmetic mean and median ± standard deviation. The data, depending in normal or not normal distribution, were analysed by T- Student and the Mann-Whitney test, respectively.

Results

	TM group	Control group
Number of patients	39	44
Sex (% female)	82	59 *
Age	41.8 ± 10.38	39.9 ± 13.5
Evolution (years)	22.97 ± 11.29	20.7 ± 9.75
Time on CSII (years)	5.5 ± 3.19	5.07 ± 4.1
Basal HbA1c	7.61 ± 0.89	7.51 ± 1
HbA1c decrease	-0.26 ± 0.79	- 0.025 ± 0.65

*$p < 0.05$
There were no statistically significant differences between TM and CG in age, DM1 evolution, HbA1c at baseline, HbA1c decrease nor in frequency and severity of hypoglycemias

The average time per patient spent in monographic consultations vs telematic review is estimated in 18 vs 12 minutes respectively.
As expected, time spent in TM group was significantly greater than in control group

	TM group	Control group
Telemedicine consultations (downloads)	9.5 ± 8.8	-
Total consultations (face-to-face + TM)	6.42 ± 7.02	5.36 ± 3
Time spent by medical staff (minutes)	138 ± 114	90 ± 54,5

Only one patient in TM group needed assistance in Emergency Room (ER) and no hospitalization due to acute diabetic complications was needed along these two years; while control patients needed 6 ER visits and 7 hospitalizations, with 21 in-hospital days.
So, estimated hospital costs have been 180 € for TM group and 31,348 € for control group. Expressed as €/patient/year would be 2.31 in TM group vs 356.23 € in CG.

Conclusions

TM in patients with DM1 and CSII implies greater investment of time by medical staff.

This more constant control do not achieve glycemic control improvement, but decreases ER visits and hospitalizations, reducing hospital costs.