

Average glyceamic control of Type 1, Type 2 and other diabetes forms

in 14 pediatric diabetes centres from 13 countries

- Data from the SWEET project -



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OBJECTIVE

The SWEET Online platform allows presently fourteen European centres from thirteen countries to connect to one unified anonymized diabetes database. Several current Paediatric Investigational Plans (PIP) in type 2 diabetes are facing problems in trial recruitment and question the feasibility of paediatric type 2 diabetes trials in Europe. Diabetes types and metabolic outcomes of this large European pediatric diabetes network was analyzed.

METHOD

Using the sweetconv tool aggregate data from local electronic health records are de-identified and exported for analysis of diabetes type and HbA1c for the current year 2012 from 14 centres in 13 countries (n=5,927 patients).

RESULTS

- the number of patients in the SWEET data base increased from 909 patients in 2006 to 8,814 patient in August 2013 (Tab. 1)

in 2012:

- SWEET data base contains in total 5927 patients and 20,807 visits
- all 14 centres reported overall 5,760 patients with type 1 diabetes with on average 3.5 visits per year
- 12 centres reported 58 patients with type 2 diabetes (2.4 visits per year, 47 below age 18 years)
- 10 centres classified 109 patients with other diabetes types (2.8 visits per year) (Fig. 2)
- median HbA1c was highest in type 1 diabetes (7.9%) compared to type 2 (7.2%) or other diabetes types (6.4%)
- In those patients with a diabetes duration above 1 year the ISPAD target of an HbA1c < 7.5% was reached in 35.1% (n=1,703) patients with type 1 diabetes, 56.4% (n=22) with type 2 diabetes and 67.0% (n=61) with other diabetes types (Fig. 3, Tab. 2)

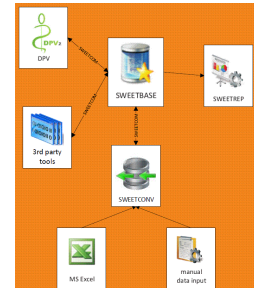


Fig. 1: SWEET Data management system

Tab. 1: Status quo of SWEET data base in 08/2013

• Number of centres	14
• Number of all patients in SWEET- Base (overall)	8,814
• Number of all visits in SWEET-Base (overall)	107,18
• Number of patients in period 01 - 08/2013	6,045
• Number of visits in period 01 - 08/2013	24,195

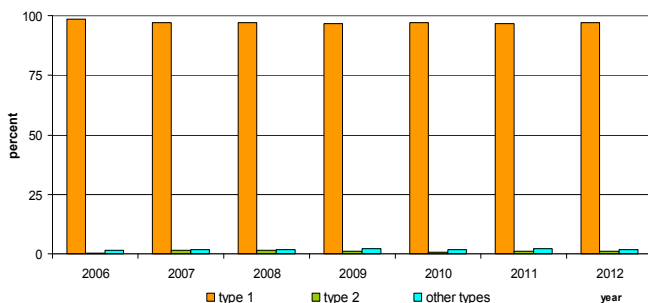


Fig. 2 : Distribution of diabetes types in the SWEET database

Tab. 2: Distribution of HbA1c in patients with < 1 year diabetes duration in 2012

> 1 year since diabetes manifestation	Number of patients	median	< 7.0%	7.0% - 7.5%	7.5% - 9.0%	> 9.0%	Patients with at least 4 measurements
type 1 diabetes	4852	8,1	20,45%	14,65%	40,66%	24,24%	44,23%
type 2 diabetes	39	7,5	43,59%	12,82%	12,82%	30,77%	25,00%
other diabetes type	91	6,5	58,24%	8,79%	26,37%	6,59%	29,47%

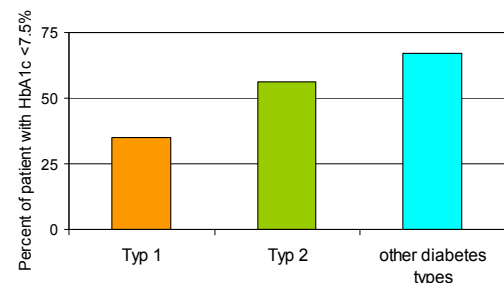


Fig. 3: Percent of patient with diabetes duration > 1 year and HbA1c < 7.5% in 2012

CONCLUSION

The SWEET-database reveals:

- The vast majority of pediatric diabetes patients in Europe are having type 1 diabetes.
- Youth with type 2 diabetes or other diabetes forms are only 1 to 2% of the pediatric patient population.
- Both patient groups have better glyceamic control and fewer annual outpatient visits than those with type 1 diabetes.
- Large networks such as SWEET are needed to identify the necessary trial populations for assessing pediatric medicines for non-type 1 diabetes in Europe.

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SWEET participating countries in 2013 (blue)

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