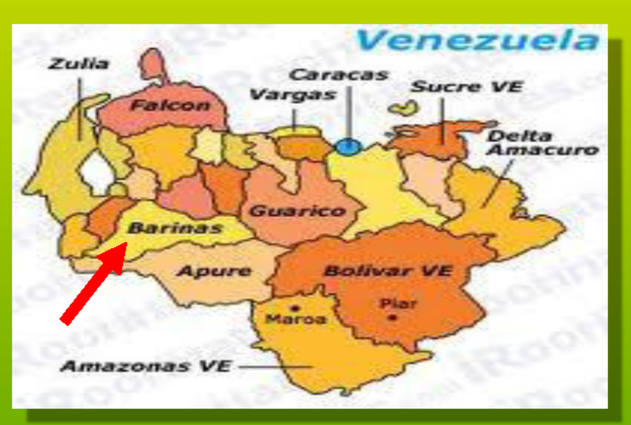
Caries study, oral hygiene and changes on dental surfaces associated with fructose consumption in haemophilic and Von Willebrand patients.

Dr.a Evelyn Gonzalez de Delgado*, Dr. Gianluca Sottilotta°
*Fundación Hemo Hermanos Venezuela, ° Fondazione Hemo Hermanos Italia

Introduction

Caries is tradicionally evaluated, according to the WHO criteria, using the most commons indicators like the *Decay, Missing and Filled Teeth* (DMFT) for adults and children with mixed dentition, and *Decayed, Extracted, or Filled primary Teeth* (DEFT) for children with deciduos dentition. There are other indicators which indicate the state of the enamel surfaces: the International Caries Assessment and Detection System (ICDAS), the O´Leary method for good oral hygiene and the Löe Silness for good oral hygiene and for non visible plaque respectively.



Aims of the study

To observe the oral hygiene conditions and caries presence in 15 patients with haemophilia and Von Willebrand disease; to watch the surfaces conditions of the deciduos molars in 4 children from the sample, and to observe the surfaces one year after the change of consumption of sacarose-glucose for fructose, in Barinas State (Venezuela).

Materials and methods

From december 2010 to december 2011, 86 patiens with haemorrhagic congenital disorders (55 with hemophilia, 24 with Von Willebrand Disease (vWD), 7 with other coagulopathies) were motivated for dental care; 15 patients were attended at least one time. Common sugar diet consumption was changed to fructose in a 3 years old child showing no damaged or altered surfaces in none of his teeth. The other kids maintained the same common sugar consumption habits and there were found stains in the occlusal surface of some of their teeth.

Results

The study obtained a DEFT of 3.5 (moderated) and a DMFT of 6 (high) in children with mixed dentition; a DMFT in adults of 5.7 (high) and a ICDAS of 4.3 for 55 molar; 0.0 for 54 ,64, 65, 74, 75, 84, 85 molars.

Conclusions

There are special needs of dental care and attention to avoid unnecessary risks to the life conditions of haemophilic and Von Willebrand patients. It is strictly recommended to change alimentary habits in order to low risks to dental health. The final goal is to motivate the other 71 patients and help them to improve their live conditions in haemophilia without expecting the risk of dental urgencies.

Table 1: Clinical characteristics of patients

Diagnosis	Degree of severity	N° of patients	Sex	Age (mean)
Hemophilia A	Severe	18	18 M	2-61 (23.2)
Hemophilia A	Moderate	27	27 M	3-47 (22.3)
Hemophilia A	Mild	7	7 M	6-37 (25.7)
Hemophilia B	Moderate	1	1 M	14
Hemophilia B	Mild	2	2 M	24-25 (24.5)
Von Willebrand Disease (vW)	Type 1	21	11 M, 10 F	8-54 (23.4)
	Type 2	1	1 F	15
	Type 3	2	2 F	16-30 (23)
Factor VIII + V deficiency	Moderate	1	1 M	22
Factor X deficiency	Mild	1	1 M	29
Factor VII deficiency	Mild	2	2 F	26-20
Factor XI	Mild	1	1 F	25
Factor XII + vW Type I	Mild	1	1F	8
Factor II	Mild	1	1 M	19
Total				

Table 2: Patients studied

Patient's ID	Age	Diagnosis	O'Leary	Löe Silness
1	16	Hemophilia A Moderate	0.5 %	2
2	14	Hemophilia A Moderate	0.5 %	1
3	41	Hemophilia A Severe	0.5 %	3
4	41	Hemophilia A Moderate	0.4 %	3
5	32	Hemophilia A Moderate	0.7 %	2
6	18	Hemophilia A Moderate	0.4 %	1
7	48	Hemophilia A Moderate	0.6 %	3
8	5	Hemophilia A Moderate	---	0
9	3.5	Hemophilia A Moderate	---	0
10	7.5	Hemophilia A Moderate	---	0
11	4	Hemophilia A Severe	0.5 %	1
12	16	Von Willebrand Type 3	0.5 %	1
13	16	Von Willebrand Type 2	---	0
14	12	Von Willebrand Type 1 + Factor XII Deficiency	0.5 %	1
15	27	Von Willebrand Type 1	0.5 %	1

Table 3: ICDAS

p/du	54	55	64	65	74	75	84	85
P8	0.0	0.0	0.0	0.0	4.5	0.0	4.5	0.0
P9	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0
P10	4.5	4.3	4.3	0.0	0.0	4.6	0.0	4.6
P11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0

Acknowledgements: The authors want to thanks Ana J. Calero, President of Hope and Life Usa Foundation, for her continous encouragement

DOI: 10.3252/pso.eu.WFH2012.2012