



Reflex Asystolic Syncope: a case controlled study of family history



Trudie Lobban¹, Gordon Bates², Paraic Curran³, Jacqueline Collier⁴, William P Whitehouse^{3,4}

¹Syncope Trust And Reflex anoxic Seizures, Stratford-upon-Avon, UK; ² Child & Adolescent Mental Health Service, Children's Hospital, Birmingham, UK; ³Paediatric Neurology, Queen's Medical Centre, UK, ⁴Academic Child Health, University of Nottingham, UK

Introduction

Reflex Asystolic Syncope, often called "Reflex Anoxic Seizures" or "White Breath Holding Spells", is a common but under reported neurally mediated syncope presenting in infants and toddlers. The child collapses, pale, stiff and typically asystolic, generally in response to a sudden pain or surprise. Ictal recordings show asystole commonly from 6 to 30 seconds^{1,2,3}.

Syncope Trust And Reflex anoxic Seizures

STARS is a parent and carer information and support group set up by families of affected children 10 years ago. The group realised that its members could contribute valuable information about RAS and how it seems to affect families.

Methods

A standard postal questionnaire was sent to all members and those joining the support group. Analysis of seizure semiology, associated features, impact have been previously presented^{4,5}. The data was anonymised and analysed using the SPSS 10 statistical package.

Subjects	Controls	
292/650 (45%) returned	151 returned	
239/292 < 17 years	130/151 < 17 years	(54%)
90/239 (37%) male	52/130 (40%) male	NS
7.9 years (0.25-16.8)	7.5 years (0.4-16.9)	NS

Reported family history

	Subjects (239)	Controls (130)	Odds Ratio	p value
<i>with 1st degree relatives with</i>				
faints	34%	8.5%	5.4	<0.001
needle / injury faints	19%	6.2%	4.3	0.001
pregnancy faints	18%	3.1%	7.2	<0.001
febrile convulsions	9%	4.6%	2.0	0.151
epilepsy	4%	4.6%	3.7	0.083
<i>faints in</i>				
<i>grand parent</i>			5.3	<0.002
<i>parent</i>			6.0	<0.001
<i>sibling</i>			2.7	0.125
<i>needle / injury faints in</i>				
<i>grand parent</i>			7.5	0.052
<i>parent</i>			3.7	<0.001

Discussion

The study was subject to a number of biases, only some families joined the group and returned the questionnaire. It is likely that these were more educated and had more severely affected children than typical cases. However RAS appear to co-segregate in families with report fainting, particularly in parents and grand parents.

Conclusions

RAS co-segregates with other syncopes in families, suggesting the role of one or more autosomal dominant genes with variable penetrance.

References

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Contact: www.stars.org.uk

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