Visual Snow syndrome: comparison between an Italian and English population

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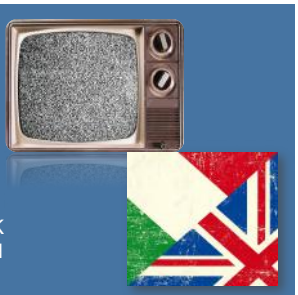

Aim

Our objective was to compare the phenotype of VS in an Italian and British population.

Background

- Patients with Visual Snow (VS) suffer a pan-field, dynamic visual disturbance described as continuous TV-static-like tiny flickering dots (Fig1) (1,2)
- Current diagnostic criteria (1) require at least two additional visual symptoms from: palinopsia [afterimages (Fig 2) and trailing (Fig 3) phenomena], enhanced entoptic phenomena [floaters (Fig 4), blue field entoptic phenomenon (Fig 5), spontaneous photopsia (bright flashes of light), self-light of the eye (colored waves or clouds when closing the eyes in the dark)], photophobia and nyctalopia (impaired night vision) (Fig 6).
- Migraine and tinnitus are common comorbidities of visual snow, reported in up to three-quarters of patients (3).

Fig. 1 Visual Snow phenomenon

Fig. 2. Afterimages phenomenon

Fig. 3. Trailing phenomenon

Fig. 4. Floaters

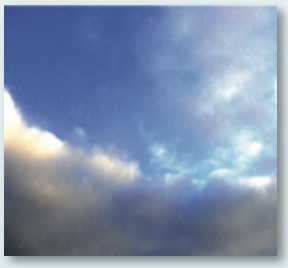

Fig. 5. Blue field entoptic phenomenon

Fig. 6. Nyctalopia

Methods

- VS patients were characterized clinically with regards to the current criteria (1).
- An online survey was prepared in collaboration with the patient group Eye-on-Vision. Patients were directed to the site after they contacted us by email asking to be involved in research.
- The study was approved by the KCL Research Ethics Panel.
- Following data collection, we compared the phenotypic characteristics of British versus Italian patients.
- As we expected more responses from the UK, we matched one-hundred UK patients for gender and age with our Italian sub-population.
- Due to multiple testing over twenty variables, adjusted p-values based on the Bonferroni correction were considered. The significance level was therefore lowered to $p < 0.0025$ (p=0.05/20).

Results

- Patients were enrolled from the UK (n = 100) and Italy (IT) (n = 100).
- Table shows demographic and clinical data.
- The populations had similar demography.
- The majority of VS features were similar between the two groups.

Conclusions

- **This is the first study comparing the phenotype of VS syndrome in two geographically distinct populations.**
- **Our findings suggest that the visual snow phenotype, as well as migraine comorbidity, is similar across the two groups.**

	UK (n=100)	IT (n=100)	p
Age	52	53	0.88
Female	30 ± 10	32 ± 10	0.09
History of disease			
Sudden onset	32	51	0.009
VS age of onset	24 ± 10	22 ± 10	0.44
Disease years	19 ± 14	15 ± 14	0.09
Visual Snow Type			
Black and white	65	58	0.30
Black and white coloured	40	43	0.01
Flashing	50	44	0.39
Transparent	41	54	0.06
Number of Visual Snow types	1.96 ± 1.1	1.79 ± 1.1	0.28
Visual Snow Symptoms			
Afterimages	83	70	0.30
Trailing	66	53	0.06
Blue field entoptic phenomenon	78	76	0.73
Floaters	83	93	0.03
Self-light of the eye	70	65	0.45
Flashes (spontaneous photopsia)	70	52	0.009
Nyctalopia	80	76	0.49
Photophobia	75	87	0.03
Tinnitus	79	63	0.01
Number of Visual Snow symptoms	6.0 ± 1.6	5.9 ± 1.8	0.63
Medical History			
Migraine	68	70	0.84
Previous use of recreational drugs	26	21	0.40

Table. Demographic and clinical data of two populations of patients affected by visual snow syndrome: 100 patients from United Kingdom (UK) and 100 patients from Italy (IT).

References

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