



The frequency of wet-age related macular degeneration recurrences is elevated during the months with higher temperature and more sunlight hours



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PURPOSE

To study whether the **recurrences** of exudative age-related macular degeneration (**wet AMD**) are more **frequent during the months with higher temperature and more sunlight hours**.

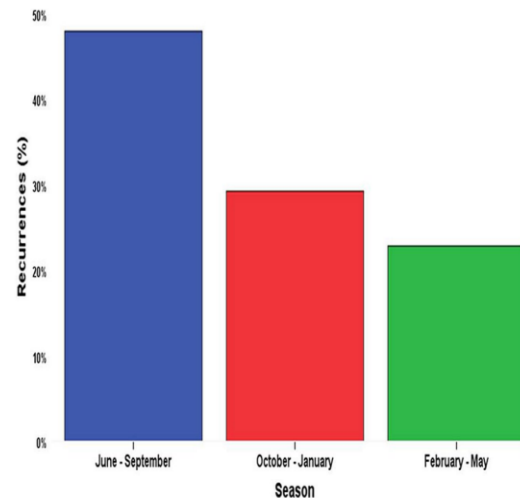
MATERIALS and METHODS

In our study, 147 eyes with 201 recurrences in patients suffering from **wet AMD** were evaluated. We also assessed the basic demographic and clinical data by every participant. All the patients had been treated with intravitreal anti-VEGF injections (either aflibercept or ranibizumab) according to Pro Re Nata treatment regimen. As a “**recurrence**” was defined the re-detection of sub-retinal and/or intra-retinal fluid and/or sub-macular hemorrhage in Optical Coherence Tomography scans, after at least two consecutive monthly examinations with a “dry” macula. Based on the weather conditions prevailing in each month, the year was divided in three 4-month periods (zone A: June-September, zone B: October-January, zone C: February-May). **Mean temperature and hours of sunlight exposure** were recorded.

RESULTS

No significant differences were detected regarding the patients’ age, gender status smoking habits, frequency of hypertension, dyslipidemia, and the values of visual acuity and intraocular pressure ($p>0.05$ for all) among the studied groups. **100 recurrences (49.8%) occurred during the period June-September**, 61 (30.5%) during the period October-January, and 40 (19.9%) during the period February-May (chi square=16.4, **$p<0.001$**). **Mean temperature** was $27.6\pm 1.8^{\circ}\text{C}$, $15.1\pm 4.6^{\circ}\text{C}$, and $16.5\pm 4.4^{\circ}\text{C}$ in zones A, B, and C, respectively. **Hours (h) of sunlight exposure** (average hours/month) were $344\pm 34\text{h}$, $188\pm 42\text{h}$, and $223\pm 57\text{h}$ in zones A, B, and C.

	Group A	Group B	Group C	P value
	June - September	October - January	February - May	
Recurrences (n) (%)	100 (49.8%)	61 (30.5%)	40 (19.9%)	<0.001
Age (years)	78 ± 8	76 ± 7	79 ± 8	0.15
Male Gender (%)	40	36	51	0.35
BCVA LogMAR	0.61 ± 1.30	0.60 ± 1.52	0.65 ± 1.25	0.26
Smoking (%)	62	58	56	0.71
Pseudophakic patients (%)	49	44	41	0.61
Hypertension (%)	76	74	80	0.83
Dyslipidemia (%)	68	74	74	0.70
Intraocular Pressure (mmHg)	16.82 ± 4.10	16.48 ± 3.98	16.18 ± 3.87	0.70



CONCLUSIONS

We demonstrated that the **frequency wet AMD recurrences** is **significantly higher** during the period **June-September**, possibly due to the **elevated levels of UV radiation and mean temperature**.

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ORIGINAL PAPER

Is there any association between the frequency of wet age-related macular degeneration recurrences and the seasons of the year?

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