RETROVIROLOGY

**POSTER PRESENTATION**                                                                     **Open Access**

# Clinical presentation of influenza a (H1N1) infection in a local emergency department in Greece

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## Background

After the global spread of the new swine-origin influenza virus A (H1N1) the World Health Organization raised the level of influenza pandemic alert up to phase 6, thus declaring a public health emergency of major importance. In response to this declaration many countries, including ours, organized a network for the reporting, diagnosis, and treatment of influenza A (H1N1) infection. Our aim is to report the epidemiological and clinical characteristics of H1N1 infected patients, who presented to our local emergency department and compare their clinical features with patients with common influenza-like symptoms who tested negative for the H1N1 virus.

## Methods

Our study included forty-five patients with influenza-like symptoms who presented to the emergency department of General Hospital of Argos from July to August 2009 and whose medical history was suggestive Clinical examination, blood and x-ray tests were conducted in all patients. In addition, pharyngeal swabs were obtained and tested for detection of H1N1 virus by real-time reverse transcription–PCR (RT-PCR) of H1N1 infection.

## Results

We examined 26(57.8%) males and 19(42.2%) females, with an average age of 30 years old. Eighteen cases (40%) were positive for the H1N1 virus. The patients clinical and laboratory data are presented in Table 1. Forty-one percent of the infected patients came in contact with a verified case of H1N1 infection, 18% had recently traveled abroad and 41% had no whatsoever obvious cause of infection. This study included 3 families of whom 8 members out of 9 were found positive. Statistical analysis showed that the number of white blood cells were significantly higher in patients who tested negative for the H1N1 infection (8.910 ± 4.250 vs 6.670 ± 2.340, $P < 0.05$) compared to the H1N1 infected patients. No significant differences were found between H1N1 positive and negative patients with respect to the patients' age and gender, duration of illness, presence of fever and serious complications.

## Discussion

The clinical characteristics of the new influenza A (H1N1) appeared mild and resembled those of common influenza-like illness. The patients who tested negative for the H1N1 virus had a higher mean value of white blood cells; nonetheless their number remained within the normal reference range of our laboratory. Further studies are necessary in order to verify these results.

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### Table 1 Patients' clinical and laboratory data

| | H1N1(+)<br>N = 18 | H1N1(-)<br>N = 27 | P VALUE |
|---|---|---|---|
| Age (mean ± SD) | 28.3 ± 12.8 | 31.2 ± 13.5 | 0.468 |
| White Blood Cells (mean ± SD) | 6.670 ± 2.340 | 8.910 ± 4.250 | *0.049* |
| Duration of Illness (days) (mean ± SD) | 5.22 ± 1.99 | 5.22 ± 1.99 | 1.000 |
| Gender (male/female) | 9/9 (50%/50%) | 17/10 (63%/37%) | 0.388 |
| White Blood Cells | | | 0.095 |
| Normal | 15 (83.3%) | 22 (81.5%) | |
| High | 0 (0%) | 4 (14.8%) | |
| Low | 3 (16.7%) | 1 (3.7%) | |
| Neutrophilles | | | 0.172 |
| Normal | 13 (72.2%) | 17 (63%) | |
| High | 1 (5.6%) | 7 (25.9%) | |
| Low | 4 (22.2%) | 3 (11.1%) | |
| Lymphocytes | | | 0.816 |
| Normal | 8 (44.4%) | 13 (48.1%) | |
| High | 4 (22.2%) | 4 (14.8%) | |
| low | 6 (33.3%) | 10 (37.1%) | |
| Monocytes | | | 0.393 |
| Normal | 7 (38.9%) | 14 (51.9%) | |
| High | 11 (61.1%) | 13 (48.1%) | |
| Fever | | | 0.420 |
| ≥38 | 14 (77.8%) | 18 (66.7%) | |
| <38 | 4 (22.2%) | 9 (33.3%) | |
| Hospital admission (no/yes) | 15/3 (83.3%/16.7%) | 26/1 (96.3%/3.7%) | 0.134 |
| Complications (no/yes) | 17/1 | 25/2 | 0.807 |
| Bronchitis | 1(5.6%) | - | |
| Pneumonia | - | 2(7.4%) | |