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Pediatric impact of the H1N1 pandemic in Istanbul

Emerging in Mexico in April 2009, the swine-originated influenza A H1N1 strain was announced as the pandemic factor of the 21st century by the World Health Organization (WHO) [1]. In order to explore the impacts of pandemic influenza (PI) on the child population in Istanbul, 187 patients presenting with flu-like conditions were investigated for PI in the 2009–10 winter season. These patients had presented to the Pediatric Outpatient Clinic of Cerrahpasa Medical School with complaints of dyspnea, tachypnea, or persistent vomiting. A multiplex polymerase chain reaction (M-PCR) method was used to determine PI from nasopharyngeal secretions at the Virology Laboratory of Cerrahpasa Medical School. We ascertained the existence of PI in 63 cases between 5 November and 15 December 2009.

Thirty-seven patients (58.7%) were male and 26 (41.3%) were female with a median age of 5.3 years (range, 4 months to 17 years). Forty-six patients (73%) had an underlying condition (13 hemato-oncological, 9 asthma, 9 metabolic-endocrinological, 5 nephrological, 3 primary immune deficiency, 2 congenital heart disease, 2 neurological, 1 epidermolysis bullosa, 1 bile duct atresia and 1 prematurity). None of the patients had ever had a flu vaccination. The major symptoms were fever (98.4%), cough (84.1%), rhinitis (49.2%) and sore throat (20.6%). Our data was similar to that of Jain *et al*. [2] (95, 88 and 38%, respectively). The average duration of fever was 2.24 days (range, 1–14 days). One of the patients without fever was diagnosed with Guillain–Barré Syndrome (GBS). Chest X-rays of 29 cases (46%) showed pneumonitis, and 6 of these patients presented with acute asthma exacerbations.

Excluding the patients with hemato-oncological conditions ($n = 11$), lymphopenia ($<1500/mm^3$) was found in 14 (26.9%) of the remaining 52 patients, which was similar to the ratio (27%) found by Coşkun *et al*. [3] in adult PI patients. All patients were administered oseltamivir, except for 4 patients who had no symptoms at diagnosis. All 7 patients who required mechanical ventilation had an underlying condition and 5 of them died. The median age of these patients was 4.9 years (range, 6 months to 16 years) and the median duration of ventilation was 7 days (1–14 days) (Table 1).

According to our data, PI had a peak in November and no more cases were observed after 15 December 2009 (Fig. 1). In a study performed in Turkey for influenza surveillance in the 2007–08 winter season, influenza A had a peak in January and 6.3% of the 337 subjects had H1N1 [4].

As reported by Stowe *et al*., GBS encountered in one case (1.6%) demonstrated that the influenza-linked GBS risk was greater than that associated with the vaccine (relative incidences were 7.4 and 0.76, respectively) [5].

PI caused acute asthma exacerbations in asthmatic children and acute bronchiolitis in babies. We

TABLE 1
Cases requiring mechanical ventilation

Case no	Age	Underlying disorder	Days of ventilation	Antibiotics	Antiviral	Additional finding	Outcome
1	1.5	Asthma	10	Ampicillin/sulbactam	Oseltamivir	ARDS	Recovered
2	1	Niemann Pick	2	Ampicillin/sulbactam	Oseltamivir	Metabolic acidosis	Died
3	0.5	Prematurity	7	Vancomycin, ceftriaxone	Oseltamivir	DIC, metabolic acidosis	Recovered
4	11	Operated astrocytoma	7	Meropenem	Oseltamivir	DIC	Died
5	16	AML relapse	1	Imipenem, teicoplanin, L-amphotericin B, voriconazole	Oseltamivir	Fungal pneumonia	Died
6	4	Lysuniric protein int.	8	Vancomycin, cefotaxime	Oseltamivir	DIC	Died
7	0.5	Operated biliary atresia	14	Vancomycin, ceftazidime	Oseltamivir	Aspiration pneumonia	Died

ARDS: acute respiratory distress syndrome; DIC: disseminated intravascular coagulation; AML: acute myeloid leukemia.

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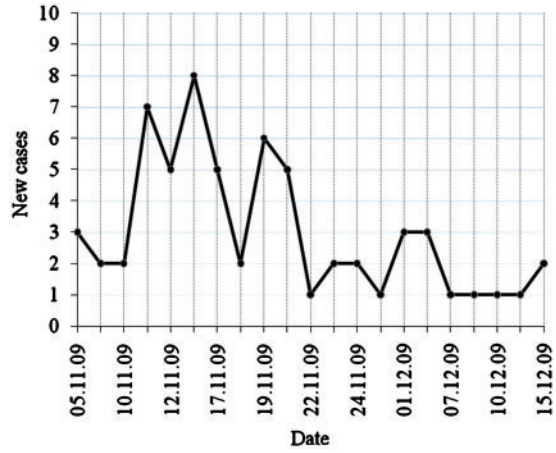


FIG. 1. Distribution of pandemic influenza cases by day.

observed that pneumonitis rapidly improved clinically. PI may follow a severe course in people with an underlying condition and deaths occurred in that group. Whether the deaths are associated with PI or the underlying condition is debatable.

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doi:10.1093/tropej/fmr055
Advance Access published on 15 June 2011

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Emergence of multi-drug resistant Salmonella *enterica serotype Stanleyville infections among children in Yaounde, Cameroon*

Salmonella enterica serotype Stanleyville is commonly found in the environment and seldom infects humans. Rare cases have been described in Cameroon [1, 2] and in other countries worldwide [3–5]. From January 2009 to July 2010, 24 *Salmonella* Stanleyville were isolated in the Pasteur Centre of Cameroon from biological samples (16 stool, 5 blood, 2 cerebro-spinal fluid, 1 urine) of children and an adolescent referred for bacteriological examinations from 2 reference hospitals in Yaounde: 21 from the Mother and Child Centre-Chantal Biya's Foundation (MCC-CBF) and 3 from the University Teaching Hospital (UTH). The number of biological analyses carried out for each child strictly relied on family's income. Twenty-three children aged <2 years were inpatients, while the only adolescent, a 17-year-old teenager was not. The latter notwithstanding, the median age of the children infected by Stanleyville was 34 weeks (IQR: 14–50). Major symptoms observed included fever, diarrhea and vomiting. Ten cases (41.6%) presented with dehydration. Failure to thrive was noticed in seven cases

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