SUMMARY

The 2009 flu pandemic is a global outbreak of a new strain of influenza A virus subtype H1N1, first identified in April 2009, which is officially termed novel H1N1 and colloquially called swine flu.

The virus is a mixing (reassortment) of four known strains of influenza A virus: one endemic in humans, one endemic in birds, and two endemic in pigs (swine).

Like other influenza viruses, novel H1N1 influenza is spread by coughing, sneezing, or touching contaminated surfaces and then touching the nose or mouth. Symptoms, which last up to a week, are similar to those of seasonal flu, and can include fever, sneezing, sore throat, cough, headache, and muscle or joint pains.

The overwhelming majority of patients experience mild symptoms", but some persons are in higher risk groups, such as those with asthma, diabetes, obesity, heart disease, or who are pregnant or have a weakened immune system.

The aim of the work is to evaluate cases admitted to hospitals present in Qalubia diagnosed as confirmed cases of A H1N1 (Swine flu).

During the study period, 500 confirmed cases with influenza A (H1N1) were assessed and admitted to the study hospitals. Survivors were 466 (93.2%), 211 (45.28%) were females and 255 (54.72%) were males. Non survivors were

34 (6.8%), 21 (9%) were females and 13 (4.8%) were males. From the total 500 cases, 84 (16.8%) patients were admitted to ICU unit in Abassia Chest Diseases Hospital and death of 34 patients of them represent (40.4%).

There was significant difference between survivors and non survivors for age, as P-value <0.001.

As regard the clinical criteria; there was significant difference for sore throat, cough, expectoration and dyspnea as P-values were 0.001, 0.014, 0.001 and 0.001 respectively. There was non significant difference for fever, headache, bodyache, vomiting, diarrhea and running nose as P-values were 0.334, 0.262, 0.904, 0.308, 0.078 and 0.182 respectively.

The total comorbidities were 105 (21%), 16 (3.2%) cases had D.M and death rate in this group was 4 (25%), 23 (4.6%) cases were pregnant females and death rate in this group was 6 (26%), 20 (4%) cases had cardiac problems and death rate in this group was 9 (45%), 33 (6.6%) cases had chest problems and death rate in this group was 2 (6.06%), 13 (2.6%) cases had other comorbidities and death rate in this group was 7 (53.8%).

As regard the laboratory parameters; there was significant difference for HB%, PLT count, urea, creatinine, ALT and bilirubin as P-values were 0.049, 0.001, 0.013, 0.001, 0.001 and 0.001 respectively.There was non significant difference for TLC, blood sugar, AST and PT as P-values were 0.082, 0.216, 0.089 and 0.792 respectively.

As regard the blood gases and electrolytes; there was significant difference for PH, PaCO2, PaO2 and O2 sat. % as P-values were 0.003, 0.001, 0.001 and 0.001 respectively. There was non significant difference for HCO3, Na+ and K+ as P-values were 0.572, 0.875and 0.273 respectively.

There was significant difference between survivors and non survivors as regard SOFA score where Mean ± SD was 0.415 ± 1.106 for survivors and it was 12.971± 1.000 for non survivors, P-value <0.001*. Also there was significant difference between survivors and non survivors as regard APACHE II score where Mean ± SD was 2.266 ± 3.208 for survivors and it was 20.091 ± 4.238 for non survivors, P-value <0.001*.

At Cutoff >8 for SOFA score, it can differentiate between survivors and non survivors with 100% for all sensitivity, specificity, PPV and NPV with 100% Accuracy. Also at Cutoff >13 for APACHE II score, it can differentiate between survivors and non survivors with 100% sensitivity,99.1% specificity,97.1% PPV , 100% NPV and with 99.7% Accuracy.

Conclusion:

1-Case fatality rate of pandemic 2009 influenza A H1N1 in Qalubia was 15 cases from 348 (4.3%).

2- Case fatality rate in the study sample was 34 cases from 500 (6.8%).

3-Case fatality rate in ICU-admitted patients was 34 cases from 84 (40.4%).

4-Higher death rate was associated with older age, comorbidities, thrombocytopenia, anemia, hypoxaemia, acidaemia, hypercapnea, higher hepatic and renal function tests, higher APACHE II and SOFA scores.

5-Higher APACHE II score and SOFA scores, expectoration, dyspnea, pregnancy and cardiac comorbidities were independently predictor of death.