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P0012 Risk factors associated to complications of influenza virus infection at Son Espases Universitary Hospital (HUSE), Palma de Mallorca, from season 2012-2013 to 2015-2016

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Background: Seasonal Influenza virus infection causes mild to severe illnesses, even death. In Spain, the rate of incidence from 2012 to 2016 is 2074 cases/100.000 inhabitants/season, and the average of severe hospitalizations is 1956.

Our objectives: To know the rate and risk factors associated to complications of patients admitted with influenza virus infection. To verify the severity criteria established by National Network for the Epidemiological Surveillance (NNES) as a predictor of complications and to evaluate the clinical usefulness of CURB65 and SMRT-CO scales.

Materials/methods: A retrospective, observational study of adult patients with influenza virus infection admitted from season 2012-2013 to 2015-2016. Included patients were those declared as severe cases by NNES and those with positive samples from Microbiology Department of HUSE. Complicated cases were considered: ICU admission, septic shock, mechanic ventilation and death. A medical chart abstraction was performed using a standardized case report. SPSSv17 was used to analyze results.

Results: 711 patients were included with mean age 64.73 years, 51.3% men. 78 were nosocomial acquired and 10 from nursing home. By seasons the complications percentage is: 23% 2012/13, 6.8% 2013/14, 19% 2014/15, 15,2 2015/16, (p 0.0379). 113 (15.89%) patients had complications: ICU 11%, mechanical ventilation 10%, septic shock 7.1%, death 5.8%.The obesity, pregnancy, radiological infiltrates, urea and albumin were finally included in the multivariate logistic regression model AUC 0,824.

Severity criteria of NNES have: sensitivity 62.8%, specificity 78.6%, positive predictive value 35.6%, negative predictive value 91.7% to predict complications.

The area under the ROC curve for CURB65 is 0.624 (IC 0.566–0.683) and for SMRT-CO 0.683 (IC 0.627-0.739).

Conclusions: An important percentage of patients admitted for influenza virus infection get worse during hospitalization, and the risk factors of poor prognosis are multilobar radiologic infiltrates, obesity, pregnancy and analytic alterations like elevation of urea and hypoalbuminemia. Severity scales have limited utility, being more useful SMRT-CO than CURB65 scale.

	OR Univariate	95% C.I.	OR Multivariate	95%C.I.
Pregnancy	8.127	1.342-49.202	9.565	1.583-58.914
Obesity	1.746	1.050-2.904	1.841	0.918-3.696

Unilateral infiltrate	3.099	1.837-5.226	2.313	1.184-4.521
Bilateral infiltrate	13.901	8.047-24.013	7.373	3.569-15.232
Urea	1.020	1.013-1.026	1.013	1.005-1.021
Albumin	0.843	0.803-0.885	0.902	0.854-0.953
Confusion	5.241	3.060-8.976		