Influenza immunization: Universal or Selected?

Jacira Pisani Zanettini, João Otávio Zanettini, Marco Tulio Zanettini
Eletrocor Laboratório Cárdio Diagnóstico, Centro, Caxias do Sul, RS, Brazil

Dear Editor,

Martins et al[1] recommend measures for increasing influenza and pneumococcal immunization based on the reduced rates detected in patients with heart failure in the city of Teresopolis. We understand that, in spite of the benefit of this strategy at the population level to prevent infections and complications, we must evaluate mass vaccination and immunization extended to special groups such as immunologically susceptible individuals and those with comorbidities[2].

Even vaccines made from inactivated agents may trigger important and unpredictable reactions, such as, for instance, Guillain-Barre syndrome.

Keywords

Immunization; influenza vaccines; heart failure; pericarditis.

We recently reported a case series of symptomatic pericardial effusion with increased incidence in patients who received influenza vaccine. The patients, mostly elderly and individuals with compensated diseases, showed viral symptoms, increased incidence in the peri-immunization period and resolution of the clinical draw with anti-inflammatory drug use[3]. Post-vaccination myopericarditis has been reported and may be underdiagnosed and sub-notified[4,5].

And what about the popular culture? Why so many people are afraid about influenza vaccination? Wouldn't it be due to the fear about the frequent, often undisclosed and non-benign reactions?

A definitive and consistent position depends on further and unbiased phase-4 studies, designed for special groups subject to vaccination, in spite of any economic impact produced by eventual results.

Mailing Address: Marco Tulio Zanettini •
Endereço: Olinto Mario Luchese, 318, Santa Catarina - 95032-250 - Caxias do Sul, RS
E-mail: marcotz@cardiol.br, marcotz@eletrocorcardiologia.com.br
Manuscript received May 08, 2011; revised mansucript received May 31, 2011; accepted May 31, 2011.

References

1. Martins WA, Ribeiro MD, Oliveira LB, Barros LSN, Jorge ACSM, Santos CM. Vacinação contra influenza e pneumococo na insuficiência cardíaca: uma recomendação pouco aplicada. Arq Bras Cardiol. 2011;96(3):240-5.
2. Nichol K, Nordin J, Mullooly J, Lask R, Fillbrandt K, Iwane M. Influenza vaccination and reduction in hospitalizations for cardiac disease and stroke among elderly. N Engl J Med. 2003;348(14):1322-32.
3. Zanettini MT, Zanettini JP, Zanettini JO. Pericardite: série de 84 casos consecutivos. Arq Bras Cardiol. 2004;82(4):60-4.
4. de Meester A, Luwaert R, Chaudron JM. Symptomatic pericarditis after influenza vaccination: report of two cases. Chest. 2000;117(6):1803-5.
5. Desson E, Leprèvast M, Vabret F, Davy A. Péricardite aiguë bénigne après vaccination antigrippale. Presse Med. 1997;26(9):415.

Reply

Dear Editor,

Our recently published article in the Brazilian Archives of Cardiologia[1] aimed to evaluate the implementation of vaccination against influenza (INF) and Pneumococcus virus (pneumonia) in a specific subgroup of patients with heart failure (HF), due to consensus recommendation of the North-American, European and Brazilian guidelines on HF. The increased susceptibility to respiratory infections in patients with heart failure is attributed to pulmonary congestion. Respiratory infections stand out among the three most frequent causes of decompensation in patients with HF. Each episode of decompensation adversely affects the life expectancy of patients with HF. Epidemiological evidence points to a major benefit of vaccination in the elderly population and there is no consistent evidence against vaccination in susceptible subgroups, such as those with chronic diseases, especially in HF.

No health intervention is completely risk-free. The decision for the inclusion of a specific vaccine in clinical practice requires a cost-effectiveness analysis from the clinical and epidemiological points of view. The adverse events

following immunization (AEFI) are the object of investigation by the Epidemiological Surveillance. In Brazil, between 1999 and 2009, 152,218,727 doses of vaccine were administered against seasonal INF[2] and 1,395 AEFI were reported, of which 89.4% had no serious outcome – reactions at the injection site, headache, myalgia, arthralgia and fever[3]. During this eleven-year period, there were 16 reported cases of Guillain-Barre syndrome (0.00001% of administered doses) and one death (0.000001% of immunizations). There was a progressive increase in the number of individuals vaccinated against INF in the last decade, which shows a higher degree of adherence by health professionals and patients.

The confirmation of the etiologic diagnosis in acute pericarditis is a difficult clinical challenge, and the observation of post-immunization pericarditis reported by Zanettini et al[4] deserves the attention of future prospective and controlled clinical trials. The cases of pericarditis reported by the colleagues seem not to be included in the AEFI recorded by the Ministry of Health, probably because they were the result of a retrospective analysis based on clinical suspicion after the vaccination event. In spite of the possibility of pericarditis as AEFI, it normally has a benign course, as opposed to respiratory infections in patients with HF.

In our clinical practice in the HF Clinics of Centro Universitário Serra dos Órgãos (Teresópolis-RJ) and Universidade Federal Fluminense (Niterói-RJ), we have recommended the routine vaccination of the 350 patients treated there, with no record of occurrences. Hence, we have observed a decrease in the number of hospitalizations, obviously within the context of many other implemented actions. We reaffirm that, in light of current evidence, especially the amount of more than 150 million doses given since the program was initiated in Brazil, vaccination against PNM and INF has shown to be safe and effective and thus it is recommended for the subgroup of patients with HF, as shown in the III Brazilian Guidelines on Chronic HF.

Sincerely,

Wolney de Andrade Martins

By the authors

References

1. Martins WA, Ribeiro MD, Oliveira LB, Barros LSN, Jorge ACSM, Santos CM. Vacinação contra influenza e pneumococo na insuficiência cardíaca: uma recomendação pouco aplicada. Arq Bras Cardiol. 2011;96(3):240-5.
2. Ministério da Saúde. Secretaria Nacional de Vigilância em Saúde. [Acesso em 2011 maio 28]. Disponível em http://portal.saude.gov.br/portal/arquivos/pdf/prot_de_vig_epi_e_adventos_adversos_pos_vac.pdf. Acesso em 28/05/2011.
3. Ministério da Saúde. Datasus. [Acesso em 2011 maio 28]. Disponível em http://www2.datasus.gov.br/DATASUS. Acesso em 28/05/2011.
4. Zanettini MT, Zanettini JP, Zanettini JO. Pericardite: série de 84 casos consecutivos. Arq Bras Cardiol. 2004;82(4):60-4.