

An example of clinical inertia in geriatrics

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ABSTRACT

Background: As we know that close contact is the main reason of the contagious diseases, caregivers are at higher risk for diseases that we can prevent by vaccines. In present study, we aim at revealing an example of clinical inertia in geriatrics, which shows us the status of vaccination both in a group of older patients and their caregivers. **Materials and Methods:** Both the caregivers and their dependent geriatric patients were included, and the selection of the participants was designed on a random and volunteer basis. We performed the study with a phenomenological design and asked the participants their vaccination status. For the participants that were not vaccinated, the reasons were questioned with a demographic form. Correlations between parameters were analyzed with an independent t-test and analysis of variance. SPSS (IBM SPSS for Windows, ver.24) was used to analyze the data, which were saved in excel files. **Results:** A total of 144 caregivers with 21 men (14.6%) and 123 female (85.4%) were included in the study. A total of 111(77.1%) caregivers had never been vaccinated before, while 21 (14.6%) caregivers were vaccinated occasionally, and finally, 12 (8.3%) caregivers were vaccinated on a regular base. The vaccination status of the older adults was as follows: 42 patients (29.2%) had never been vaccinated before, 60 (41.7%) had been vaccinated occasionally, and 42 (29.2%) patients had been vaccinated regularly. **Conclusion:** The vaccination rates of caregivers and older patients were lower than we expected, so primary-care providers need to plan more vaccination awareness studies in social media and communities. Clinical inertia might be an essential reason in the lower vaccination rates of the caregivers and older adults' population.

Keywords: Adult, caregivers, communicable diseases, vaccine

Introduction

Clinical inertia for the vaccination of the older population and their caregivers should be addressed to have better public health outcomes when we are under threat of COVID-19. Because of population density and unhealthy lifestyles, older people and their caregivers are at risk of infectious diseases much more than before we had. Healthcare workers should be aware of the clinical inertia, which would be fixed by effective educational interventions. Many diseases, including hypertension, dyslipidemia, and diabetes mellitus, can progress silently. Furthermore, they are not treated

due to the clinical inertia attitudes and behaviors of healthcare professionals, so the start of treatment is delayed, which leads to other comorbidities.^[1] Although Phillips *et al.* defined clinical inaction as not applying healthcare professionals to current guidelines, it can also be defined as a phenomenon of inadequate intervention in initiating or modifying medical therapies with multiple etiologies.^[2,3] In a study, Berlowitz *et al.* stated why patients with diabetes were late for hypertension treatment and why clinicians were not more aggressive in treating hypertension in patients with diabetes mellitus.^[4]

We are now under threat of coronavirus pandemic for this era, so we have to be careful with the viral infection diseases specifically in older adults since they are vulnerable to diseases. It has been so crucial for physicians whether they ask the caregivers and older patients for their vaccination status. We need to be alert for viral

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infections in older adults since, for a physician being proactive for an upcoming threat could be a solution to some extent. The geriatric population's vaccination rate should be investigated regularly through the studies, and the effective methods to make the older adults aware should be shared with other nations to collaborate. For the governments, to support the vaccination campaigns in public and the education of healthcare providers about the importance of vaccinations would be a solution to increase the rate of vaccinations.

With this study, we tried to reveal the vaccination rate in a small population of older adults and caregivers. Then we criticized the clinical inertia in the protection of older patients and caregivers.

Materials and Methods

We conducted this study in our hospital with caregivers and older patients aged 65 or over that charged in the intensive care unit. The sample size of the study was found to be 144 using G*Power version 3.1.9.7. that was employed with a 5% type-1 error and 85% test power.

Inclusion criteria

The inclusion criteria of the study were participants who were 18 years or over and had the ability to understand and answer all the items in the forms.

Exclusion criteria

The exclusion criteria of the study were those who did not meet the inclusion criteria or suffered from mental illnesses such as schizophrenia or mental retardation were excluded.

We performed the study with a phenomenological design and asked the participants their vaccination status. We asked older patients and their caregivers randomly whether they were vaccinated so far. In the case of the participants answered that they were not immunized before we asked the reason. When we had the sample size, we finished the interviews. SPSS was used to have mean, percentages, and numbers. Only participants who volunteer were included in this study, and after informed consent was gained, the questions were asked. Approval for this study was obtained from the ethics committee of The University of Health Sciences İzmir Bozyaka Education and Research Hospital (Date:11.03.2020, Decision No:01).

Results

We had 288 participants in the present study and separated them into groups: geriatric patients charged in the ICU and their caregivers. A total of 144 caregivers with 21 men (14.6%) and 123 female (85.4%) were included. 111(77.1%) caregivers had never been vaccinated during their caregiving period, 21 (14.6%) caregivers were vaccinated occasionally, and 12 (8.3%) caregivers were vaccinated for influenza and pneumococcal in a regular base. The 42 (29.2%) elderly patients had never vaccinated before, 60

(41.7%) patients were vaccinated occasionally, and 42(29.2%) patients were vaccinated for influenza and pneumococci regularly. On a phenomenological design, the reasons of why caregivers were not vaccinated according to their answers were as follows: I have no time (9.5%), I have no money (3.2%), I am afraid of vaccines (11.1%), I do not trust immunizations (8%), no one said to me that I was in need to be vaccinated (36.5%) and there would not be any difference in my health if I was treated (7.9%), I were not protected since I was not ill (23.8%).

Discussion

As the geriatric population rises numerically and proportionally with increasing life expectancy, it is expected that the population aged 60 and over will double and reach 2.1 billion by 2050.^[5] Rates of infection diseases increase with age. The infectious diseases lead the older people to have difficulties in their daily life activities, trigger the onset of vulnerability, and perhaps most importantly cause the older adults to lose their freedom to live independently and alone.^[6,7] Furthermore, as it knows that we will see surge in geriatric disorders besides many other chronic diseases with comorbidities, they are the risk factors of vaccine-preventable diseases.^[8] Healthy aging and maintaining the quality of life can be partially achieved through protection from infectious diseases. In the USA, influenza outbreaks cause for about 100,000 hospitalizations and 36,000 fatal cases every other year, especially in the geriatric populations.^[9,10] Pneumococcus is known as one of the leading causes of community-acquired pneumonia.^[11] Notably, 50% of herpes zoster infections that increase due to immune aging or immune suppression are noticeable in people aged 80 years and older.^[12] Age-related deterioration of immunity plays a role in response of antibodies to molecular parts of vaccines in many older adults, as a result of these changes, aging limits vaccines' immunogenicity and effectiveness to some extent.^[13] So the improvement in vaccination is a cornerstone of public health strategy.^[14] The immunization is a successful and cost-effective intervention in public health, and almost all ages, it can prevent people from infection diseases.^[15] For many nations, the vaccination coverage rates were aimed at being higher than the level of 95% among adults. But for many countries, these desirable goals have not been reached yet for some reason.^[16] We learnt from a survey (Poland, 2004-2005) that most of the participants believed in they were resistant to influenza or were not qualified for vaccination, and some had not been vaccinated due to financial difficulties.^[17] But many other studies showed us that reimbursing influenza vaccination costs increased vaccination coverage.^[18] In older patients, the polypharmacy is also another problem that would be a confusing parameters for severe infections since in a study, the level of procalcitonin was found to be lower in patients with polypharmacy.^[19] But the association of polypharmacy and immunization is a topic to need to be studied because of upcoming older problems related to vaccinations. As we had the reasons why caregivers were not vaccinated in the present study, we decided to plan some vaccination awareness studies in our hospital. Because the results of this study indicated, the essential reason caregivers were not vaccinated in a high proportion was

that no one informed them that they need to be vaccinated for the close contact with their elderly patients. It is another example of clinical inertia since many physicians notice the situation of caregivers who are at risk of infectious diseases because of their close contact with geriatrics patients all the time they do not react in place. There is also a type of clinical inertia called therapeutic inertia, that is defined as the attitude of the primary-care physicians that do not commence or intensify therapy in time despite recognizing the problem.^[20-22] We should propose some solutions to solve this critical public health problem with the primary-care physicians, patients, and health care systems. We can partially overcome the clinical inertia by introducing interventions, including a patient education.^[23,24]

Conclusion

To overcome the barrier of clinical inertia and highlight the protective and therapeutic function of immunization, it would be rational to carry out awareness studies among the primary-care professionals and patients about vaccination in the elderly.

Author contributions

All the authors contributed to the writing, review, and editing of the article.

Ethics statement

All the procedures in the study that involved participants were conducted in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Approval for this study was obtained from the ethics committee of The University of Health Sciences İzmir Bozyaka Education and Research Hospital (Date: 11.03.2020, Decision No:01).

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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