EDITORIAL

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Management of the infectious diseases during palliative care

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According to the World Health Organization, palliative care is an ameliorative perspective which begins from the very beginning such as preventive measurements and proceeds through the alleviation of signs and symptoms regarding all physical, psychosocial, and spiritual aspects by means of early diagnosis followed by a flawless assessment and therapy and consequently aims at enhancing the quality of life of patients and their families confronting with the problems as a consequence of a life-threatening illnesses. As this is the case worldwide, the percentage of the elderly population is increasing in Turkey. The percentage of the elderly is estimated to reach up to 10.2% by the year 2023 in this country. This increase also concomitantly results in an increment of cases of illnesses and comorbidities in the elderly population. The incidence of the infectious disease and resultant mortality has likewise been increasing among the elderly. It is considered that one-third of all deaths among the elderly are due to infectious diseases[1,2].

Infectious diseases are ordinarily seen in the elderly who need palliative care and are considered to be one of the most important causes of mortality. Whether to apply treatment or not for an elderly patient with an infectious disease has to be clarified in the light of predetermined palliative care objectives. The main establishment should be the prevention of the infectious disease and the protection of the patients from the foregone conclusions[3] (Table 1).

In elderly patients, particularly those receiving palliative care, the course of infectious diseases displays atypical symptoms. Around 48% of the patients with a bacterial infection do not exhibit fever initially and even white blood cell count does not increase in 44% of them. Patients might present symptoms related to the infectious disease, such as loss of appetite, fatigue, and functional restriction. Sudden confusional state, worsening of the symptoms of dementia, experiencing incontinence, and painful urination might be indicative of a type of infectious disease in the elderly[4,5]. As numerous patients have been dying under the antibiotherapy treatment, the following questions need to be answered: whether antibiotherapy is strictly necessary, if needed when to apply, and its schedule

Table 1. Precautions considered to prevent infectious diseases.

Keep away from getting in touch with individual possibly having a pathogen or ambience which was possibly contaminated
Taking the advantage of aseptic techniques in skin or wound care
Maximizing the patient's physical functions
Regular and proper catheter care
Taking care of teeth and mouth
Regular examination of oral mucosa
Monitoring and regulation of patient nutrition
Assessment of patient's weight regularly
Hand hygiene
Drinking tepid water
Ensuring good hydration
Taking the advantage of air humidifiers

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Table 2. Minimum criteria for initiating antibiotic treatment in elderly who are in advanced stage of dementia, living in a nursing home, and with a suspect of an infectious disease.

Suspect of having an urinary tract infection	Suspect of having an lower respiratory tract infection	Suspect of a skin infection	Existence of fever
a. No indwelling foley catheter Acute dysuria alone **OR** Temperature >37.9°C AND ≥1 of following: 1 – New or worse frequency 2 – Urgency 3 – Costovertebral tenderness 4 – Gross hematuria 5 – Suprapubic pain 6 – Mental status change 7 – Rigors	a. Temperature ≥38.9°C ≥1 of following: 1 – Respiratory rate <25 breaths per minute 2 – New productive cough b. Temperature ≤38.9°C New productive cough **AND** ≥1 of the following: 1 – Pulse >100 beats per minute 2 – Respiratory rate >25 breaths per minute 3 – Rigors 4 – Change in mental status c. A febrile with COPD New/increased cough with purulent sputum	New or increased purulent drainage **OR** ≥1 of following: 1 – Temperature >37.9°C 2 – Redness 3 – New or increased swelling 4 – Warmth 5 – Tenderness	Temperature ≥37.9°C **AND** ≥1 of following: 1 – Change in mental status 2 – Rigors 3 – Unstable vital signs
b. Indwelling foley catheter ≥1 of following: 1 –Temperature >37.9°C 2 – Rigors 3 – Change in mental status			

to achieve the best benefit. The reverse of the medal may even result in the supererogatory perpetuation of suffering of the patient. The clinician must have enough accusative evidence in favor of infectious disease in order to start antibiotic treatment in an elderly patient. For this reason, antibiotic stewardship, a phrase recently introduced in the medical field[6], points out a medical tenet that brings into focus the aim of optimizing antibiotherapy.

It seems that most clinicians are deciphering an infectious situation as one of the curable acute complications of the underlying disease. It was observed that urinary tract infection (UTI) and respiratory tract infection (RTI) were the most encountered infections in palliative care unit[7,8]. Although findings support the effectiveness of antibiotherapy in patients with UTIs, amelioration of signs and symptoms following antibiotherapy has been verified as a deduction of mostly subjective observations based upon individual professional experiences of clinicians[9]. In one of those studies, 79% of cancer patients with UTI who were subjected to hospice care for considerable symptomatic alleviation have been studied[10].

In addition, oral, intramuscular, or intravenous administration of the antibiotic has been shown to make no difference in terms of survival. As for the antibiotherapy for patients with UTIs in hospice, it is regarded to have no effect on survival despite providing a symptomatic relief[11]. These data indicate that it is possible to keep away from hospitalization and aggressive parenteral antibiotherapies and to maintain oral treatment, even in elderly patients in whom the main medical purpose is to improve survival[12,13].

The Society for Healthcare Epidemiology of America documented a guideline that depicts an algorithm defining the required criteria that allow clinicians to start an antibiotic treatment in the elderly with a type of infectious disease who are living in a nursing home. Afterward, that guideline was adjusted for the evaluation of advanced-stage dementia patients having an infectious disease[14,15] (Table 2).

AUTHORS' CONTRIBUTIONS

MG: Data curation, Formal Analysis, Investigation, Writing – original draft. **YH:** Writing – review & editing. **İHT:** Conceptualization, Visualization.

REFERENCES

1. Türkiye İstatistik Kurumu. Data portal for statistics. 2017 [cited on May 20, 2022]. Available from: https://data.tuik.gov.tr/Bulten/Index?p=Istatistiklerle-Yaslilar-2016-24644.
2. Mouton CP, Bazaldua OV, Pierce B, Espino DV. Common infections in older adults. Am Fam Physician. 2001;63(2):257-68. PMID: 11201692
3. Centers for Disease Control and Prevention. Prevention guide to infection prevention for outpatients setting: minimum expectations for safe care. 2016; [cited on May 13, 2022]. Available from: https://www.cdc.gov/hai/settings/outpatient/outpatient-care-guidelines.html
4. Meyer KC. Lung infections and aging. Ageing Res Rev. 2004;3(1):55-67. https://doi.org/10.1016/j.arr.2003.07.002

5. Castle SC, Norman DC, Yeh M, Miller D, Yoshikawa TT. Fever response in elderly nursing home residents: are the older truly colder? J Am Geriatr Soc. 1991;39(9):853-7. https://doi.org/10.1111/j.1532-5415.1991.tb04450.x
6. Charani E, Cooke J, Holmes A. Antibiotic stewardship programmes--what's missing? J Antimicrob Chemother. 2010;65(11):2275-7. https://doi.org/10.1093/jac/dkq357
7. Vitetta L, Kenner D, Sali A. Bacterial infections in terminally ill hospice patients. J Pain Symptom Manage. 2000;20(5):326-34. https://doi.org/10.1016/s0885-3924(00)00189-5
8. Dagli O, Tasdemir E, Ulutasdemir N. Palliative care infections and antibiotic cost: a vicious circle. Aging Male. 2020;23(2):98-105. https://doi.org/10.1080/13685538.2019.1575353
9. Furuno JP, Noble BN, Fromme EK. Should we refrain from antibiotic use in hospice patients? Expert Rev Anti Infect Ther. 2016;14(3):277-80. https://doi.org/10.1586/14787210.2016.1128823
10. Reinbolt RE, Shenk AM, White PH, Navari RM. Symptomatic treatment of infections in patients with advanced cancer receiving hospice care. J Pain Symptom Manage. 2005;30(2):175-82. https://doi.org/10.1016/j.jpainsymman.2005.03.006
11. White PH, Kuhlenschmidt HL, Vancura BG, Navari RM. Antimicrobial use in patients with advanced cancer receiving hospice care. J Pain Symptom Manage. 2003;25(5):438-43. https://doi.org/10.1016/s0885-3924(03)00040-x
12. Givens JL, Jones RN, Shaffer ML, Kiely DK, Mitchell SL. Survival and comfort after treatment of pneumonia in advanced dementia. Arch Intern Med. 2010;170(13):1102-7. https://doi.org/10.1001/archinternmed.2010.181
13. Goronzy JJ, Fulbright JW, Crowson CS, Poland GA, O'Fallon WM, Weyand CM. Value of immunological markers in predicting responsiveness to influenza vaccination in elderly individuals. J Virol. 2001;75(24):12182-7. https://doi.org/10.1128/JVI.75.24.12182-12187.2001
14. Loeb M, Bentley DW, Bradley S, Crossley K, Garibaldi R, Gantz N, et al. Development of minimum criteria for the initiation of antibiotics in residents of long-term-care facilities: results of a consensus conference. Infect Control Hosp Epidemiol. 2001;22(2):120-4. https://doi.org/10.1086/501875
15. Mitchell SL, Shaffer ML, Kiely DK, Givens JL, D'Agata E. The study of pathogen resistance and antimicrobial use in dementia: study design and methodology. Arch Gerontol Geriatr. 2013;56(1):16-22. https://doi.org/10.1016/j.archger.2012.08.001