ELDERLY PATIENT AND SURGERY. A CASE OF PROFESSIONAL LIABILITY?

Francesco La Sala[1], Bartolo Caggiano[2]
[1]Department of Prevention, ASL Avellino, Avellino, Italy - [2]Department of Medicine and Health Sciences, University of Molise, Campobasso, Italy

ABSTRACT

Introduction*: In advanced healthcare systems, increasing attention is being placed on controlling potential medical assistance-related risks. In Western countries it is estimated that the over-65 population will grow steadily in the coming decades and consequently a greater number of the patients undergoing surgery and medical treatments will be elderly and therefore at greater risk.*

Case presentation*: An 80-year-old man underwent a right knee replacement due to severe osteoarthritis. After surgery, he manifested post-operative delirium. He received benzodiazepine treatment with poor results and subsequently did not regain adequate cognitive functions, dying two years later in a nursing home. The case had legal implications concerning medical professional liability in post-operative management.*

Discussion*: Risk management in elderly patient therapy is a growing challenge for Western Healthcare Systems. The percentage of elderly patients undergoing orthopedic surgery who experience delirium varies from 28-41%. Elderly patients with delirium are more prone to functional decline, institutionalization, and death. Treatment plans must consider advanced age represents a significant risk factor to maximize patient safety.*

Keywords: *Clinical risk management, elderly, medical liability, guidelines.*

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Introduction

In advanced health systems, increasing attention is being placed on controlling potential medical assistance-related risks[1-6]. Italy is no exception and has particular issues related to this aspect.

The latest report from the National Institute of Statistics[7] shows that the average survival rate is going to increase in the coming years, and by 2065, the average life span could increase by more than five years for both genders, reaching 86.1 years and 90.2 years for men and women respectively. These forecasts show an associated change in the composition of the population by age. A peak in the aging population is expected to affect Italy between 2045-2050, resulting in an over-65 population of approximately 34% and an average age of approximately 50. The demographic destiny of other developed countries and the rest of Europe appears to be similar[8].

The potential consequences of this demographic trend include the fact that a greater number of the patients undergoing operations and treatments will be elderly and therefore at greater risk, requiring a proactive approach to risk containment and possibly to the treatment of the consequences of medical and care-related activities.

The case we present shows the clinical story of an 80-year-old man who experienced unexpected consequences from surgery and did not receive appropriate treatment following the onset of said consequences.

Case presentation

The case in question concerns an 80-year-old patient who underwent a right knee replacement due to severe arthritis on 03.02.2018. Prior to surgery, the patient a normal neurological status and competent to consent to surgery. Following surgery, performed with no adverse events, the patient manifested delirium. He received benzodiazepine treatment without improving neurological status. The following days he was constantly agitated and experimented loss of contact with reality, with a state of confusion. Subsequent neurological tests revealed rapid and progressive cognitive decline with the onset of aggression. The patient was therefore unable to return home after orthopedic rehabilitation but was transferred to a nursing home where he spent 2 years before his death.

The case had legal implications concerning medical professional liability as benzodiazepine therapy was not indicated, and patient re-orientation activities should have been performed but they did not result in clinical record. Expert consultant suggested that although mild cognitive impairment could be hypnotized before surgery, failure to take adequate care resulted in rapid deterioration, so the patient, who had previously been reported autonomous, had to be transferred to a care facility after hospital discharge.

Discussion

The percentage of elderly orthopedic surgery patients who experience episodes of delirium varies from 28-41%[9]. Elderly patients who experience delirium are more prone to negative consequences such as functional decline, institutionalization, and death. Included among the predisposing factors are advanced age, the presence of comorbidities, drug therapy, malnutrition, and male gender.

It is known that delirium is three times more frequent in subjects suffering from dementia than in subjects with no cognitive impairment. However, even cognitively intact patients present with delirium during hospitalization in approximately 50% of cases. Post-operative delirium in the elderly is a recognized risk factor for the onset or deterioration of cognitive impairment.

A recent study found that the incidence of post-discharge dementia in a group of 309 hospitalized patients over the age of 60 was 32% in those who experienced delirium during hospitalization compared to 16% in those who did not. The authors believe, therefore, that delirium is associated with a double risk of developing dementia[10]. Another study on the elderly population found that those hospitalized for surgery have a 40% increased risk of developing dementia compared to those not hospitalized[11].

In the event of delirium, the combined approach of supportive measures and potential drug treatment is considered effective in the prevention and treatment of this syndrome.

International Guidelines released in 2015[12] established that patient's cognitive functions should be carefully assessed at the time of admission and monitored for the entire duration of treatment. Important factors such as patient hydration and oxygenation must be addressed promptly if affected.

When pharmacological intervention is necessary, the first-choice drugs are haloperidol and atypical antipsychotics. Benzodiazepines, on the other hand, can increase the risk and duration of delirium, especially in the elderly.

In the case in question, there was a failure to plan and act adequate preventive measures to avoid the onset of post-operative delirium despite the patient having multiple risk factors for the onset of such a syndromic presentation.

Following the onset of delirium-related symptoms, attention to pain was poor. Nonpharmacological measures recommended in the guidelines, such as behaviors and suggestions for orienting the patient, were not adopted even if they were useful in a patient competent to informed consent. No specific indications were given to family members to improve the sleep-wake cycle. No request was made for neurological or geriatric counseling to assess the patient's neurological and psychological status and to prescribe the appropriate drug and behavioral therapy.

To our opinion, management of the patient's post-surgical delirium failed to comply with the indications provided in International Guidelines. It could be argued that if the patient had been treated appropriately, his cognitive functions may have been partly restored and his cognitive deterioration may have been slower and milder, improving quality of

interpersonal relationships and minimize post discharge disability and social impairment[13,14].

In conclusion, the increase in the average age of the hospitalized population is a significant factor in assessing healthcare system-related risks. Aware of this critical change in care needs, both facilities and operators need risk prevention, patients communication programs by means of training and refresher courses[15-20]. Treatment plans must consider advanced age represents a significant risk factor to maximize patient safety and ensure a person-centered care.

References

1) Bolcato M, Fassina G, Rodriguez D, Russo M, Aprile A. The contribution of legal medicine in clinical risk management. BMC Health Serv Res 2019; 19(1): 85.
2) Bellandi T, Tartaglia R, Sheikh A, Donaldson L. Italy recognises patient safety as a fundamental right. BMJ 2017, 357, j2277, doi:10.1136/bmj.j2277.
3) Bolcato M, Russo M, Trentino K, Isbister J, Rodriguez D, Aprile A. Patient blood management: The best approach to transfusion medicine risk management. Transfus. Apher. Sci. 2020, 59, 102779, doi:10.1016/j.transci.2020.102779.
4) Coppeta L, Somma G, Ippoliti L, Ferrari C, D'Alessandro I, Pietroiusti A, Trabucco Aurilio M. Contact Screening for Healthcare Workers Exposed to Patients with COVID-19. Int. J. Environ. Res. Public Health 2020, 17, 9082.
5) Bolcato M, Fassina G, Sanavio M, Anna A. Seventeen-year Medical Professional Liability Experience in a Level III University Hospital. Curr Pharm Biotechnol. 2020 Oct 15. doi: 10.2174/1389201021666201015145311.
6) Bolcato M, Rodriguez D, Aprile A. Risk Management in the New Frontier of Professional Liability for Nosocomial Infection: Review of the Literature on Mycobacterium Chimaera. Int J Environ Res Public Health. 2020 Oct 7; 17(19): 7328. doi: 10.3390/ijerph17197328.
7) Rapporto ISTAT. Il futuro demografico del paese. Previsioni regionali della popolazione residente al 2065. Available online: https://www.istat.it/it/files//2018/05/previsioni_demografiche.pdf
8. United Nations. Revision of World Population Prospects 2019. Available online https://population.un.org/wpp/Download/Probabilistic/Population/
9v Whitlock EL, Vannucci A, Avidan MS. Postoperative delirium. Minerva Anestesiol. 2011 Apr;77(4):448-56.
10) Garcez FB, Apolinario D, Campora F, Curiati JAE, Jacob-Filho W, Avelino-Silva TJ. Delirium and post-discharge dementia: results from a cohort of older adults without baseline cognitive impairment. Age Ageing. 2019 Nov 1; 48(6): 845-851. doi: 10.1093/ageing/afz107.
11) Saczynski JS, Marcantonio ER, Quach L, Fong TG, Gross A, Inouye SK, Jones RN. Cognitive trajectories after postoperative delirium. N Engl J Med. 2012 Jul 5; 367(1): 30-9. doi: 10.1056/NEJMoa1112923.
12) American Geriatrics Society Expert Panel on Postoperative Delirium in Older Adults. American Geriatrics Society abstracted clinical practice guideline for postoperative delirium in older adults. J Am Geriatr Soc. 2015 Jan; 63(1): 142-50. doi: 10.1111/jgs.13281.
13) Marcantonio ER, Flacker JM, Wright RJ, Resnick NM. Reducing delirium after hip fracture: a randomized trial. J Am Geriatr Soc. 2001 May; 49(5): 516-22. doi: 10.1046/j.1532-5415.2001.49108.x.
14) Vasunilashorn SM, Fong TG, Albuquerque A, Marcantonio ER, Schmitt EM, Tommet D, Gou Y, Travison TG, Jones RN, Inouye SK. Delirium Severity Post-Surgery and its Relationship with Long-Term Cognitive Decline in a Cohort of Patients without Dementia. J Alzheimers Dis. 2018; 61(1): 347-358. doi: 10.3233/JAD-170288.
15) Bolcato M, Trabucco Aurilio M, Di Mizio G, Piccioni A, Feola A, Bonsignore A, Tettamanti C, Ciliberti R, Rodriguez D, Aprile A. The Difficult Balance between Ensuring the Right of Nursing Home Residents to Communication and Their Safety. Int J Environ Res Public Health. 2021 Mar 3; 18(5): 2484. doi: 10.3390/ijerph18052484.
16) Mennini FS, Marcellusi A, Gazzillo S, Nardone C, Sciattella P, Migliorini R, Trabucco Aurilio M, Amore M, Brugnoli R. Economic Impact of Schizophrenia from a Hospital and Social Security System Perspective in Italy. Clin Drug Investig. 2021 Feb; 41(2): 183-191. doi: 10.1007/s40261-020-00991-7.
17) Bolcato M, Trabucco Aurilio M, Aprile A, Di Mizio G, Della Pietra B, Feola A. Take-Home Messages from the COVID-19 Pandemic: Strengths and Pitfalls of the Italian National Health Service from a Medico-Legal Point of View. Healthcare (Basel). 2020 Dec 25;9(1):17. doi: 10.3390/healthcare9010017.
18) Trabucco Aurilio M, Mennini FS, Gazzillo S, Massini L, Bolcato M, Feola A, Ferrari C, Coppeta L. Intention to Be Vaccinated for COVID-19 among Italian Nurses during the Pandemic. Vaccines 2021, 9, 500.
19) Bolcato M, Sanavio M, Rodriguez D, Aprile A. Proposal for the application of a quality indicator to medico-legal consultations in the field of medical liability. Curr Pharm Biotechnol. 2020 Dec 10. doi: 10.2174/1389201021666201211104611. Epub ahead of print.
20) Marchetti, D., Sgarbi, I., Feola, A., Marsella, L. T., Caricato, M., & La Monaca, G. The breach of the Informed Consent and its compensation in the Jurisprudence of the Civil Court of Rome (years 2012-2016). Riv It Med Leg 2019; 41, 601-19. ISSN 2499-2860

Corresponding Author:
Dr. Francesco La Sala, MD
Department of Prevention, ASL Avellino
Circumvallazione Street, 83100 Avellino, Italy;
Email: dott.fra15@gmail.com
(Italy)