

COST-BENEFIT ANALYSIS OF VACCINE REJECTION: A TETANUS CASE

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Background

The incidence of tetanus in Spain is one of the highest in the developed world, especially among men over 60 in rural areas. Tetanus is a notifiable disease. Vaccine rejection can lead to serious illness; some 50 cases are recorded yearly in this country.

Purpose

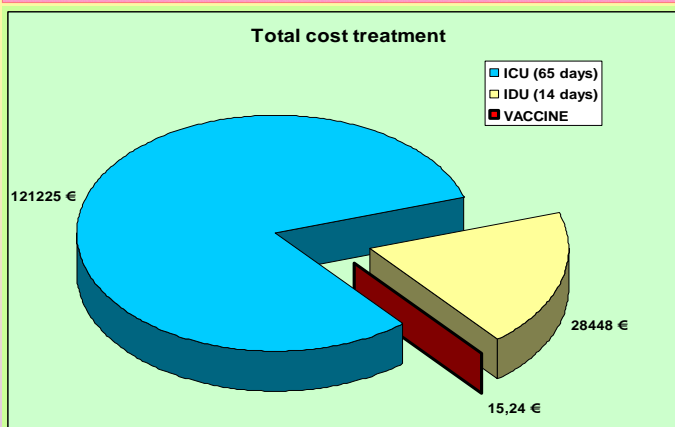
Cost-benefit analysis associated to caring for a patient who has rejected voluntary vaccination when reporting a dirty wound.

Material and methods

A 82-year-old man reported to emergency with an incised wound on side of left hand carried for 15 days from a rabbit scratch; no anti-tetanus prophylaxis due to voluntary rejection of vaccination. Patient was admitted from 14/04/2015 to 01/07/2015. On arrival in intensive care unit (ICU), the patient presented ii/iii grade tetanus (difficulty in swallowing liquids and solids, sardonic laugh, increased muscle tone in the phalanges of left hand). Economic calculations were based on apd for medication management, data from the clinical management and documentation unit and silicon for electronic prescriptions, and web reporting for Pyxis[®] data trails.

Results

The patient spent 79 days in hospital: 65 in ICU, 14 in the infectious diseases unit (IDU). The cost amounted to 121225 € (ICU) and 28448 € (IDU). Pharmacological treatment cost 8938 € (ICU) and 228 € (IDU), including tetanus-specific drugs such as midazolam, cisatracurium and pralidoxime. Once diagnosed with tetanus, the patient was given the tetanus vaccine with gamma globulin (15,24 €).



Conclusion

Total cost treatment: 149673 €, against 15.24 € for preventive vaccine with gamma globulin. Vaccination compliance, including top-ups every 10 years, or complete vaccination at the moment of the accident would have drastically reduced the risk of contracting tetanus. Evidently, vaccination schedule must be strictly adhered to, even in adulthood, and primary care services must stress the social and economic importance of repeat vaccinations.

References and/or Acknowledgements