Invasive Meningococcal Disease (IMD) in Older Adults – Current Perspectives and Call for Action

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BACKGROUND

Invasive meningococcal disease (IMD) caused by Neisseria meningitidis is an important global public health concern and a difficult-to-treat infection with high mortality and severe morbidity. Recent BCG vaccination campaigns in the UK and Europe have led to a significant reduction in IMD incidence, but the global epidemic of meningococcal disease continues. IMD incidence is highest among newborns, children, and young adults, with the elderly population being at the highest risk of severe meningococcal disease. The risk of meningococcal disease is also increased in older adults due to weakened host defenses and increased immunosenescence. The incidence of meningococcal disease is highest in individuals older than 50 years of age.

METHODS

A systematic review of international and national databases was performed to investigate the existing knowledge on meningococcal disease in older adults and to evaluate the current perspectives on treatment and prevention of the disease. A meta-analysis of published studies was conducted to assess the effectiveness of BCG vaccination in older adults. The review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.

EXPERT WORKING GROUP PROCEEDINGS

Challenges of IMD in Older Adults

- IMD is more common in children and young adults, but elderly individuals are at a higher risk of developing meningococcal disease.
- Elderly persons are more likely to develop severe and life-threatening complications from meningococcal disease due to their immunosenescence and underlying comorbidities.
- The elderly population is also at a higher risk of developing meningococcal disease, with an incidence rate of 0.2 to 1.3 cases per 100,000 population per year.
- Elderly persons with underlying comorbidities (e.g., diabetes, alcoholism, and malignancy) are at a higher risk of developing meningococcal disease.

Implications:

- Early recognition and prompt treatment of meningococcal disease in older adults are crucial for improving outcomes.
- Elderly persons require greater healthcare attention, and preventive measures should be considered in the elderly population.

Epidemiology of IMD in Older Adults

- The incidence of IMD is highest in individuals older than 50 years of age.
- The prevalence of IMD is higher in men than in women, with a male-to-female ratio of 1.5 to 1.0.
- The incidence of IMD is highest in individuals aged 60 to 69 years, with a peak incidence at 60-64 years of age.

IMD in Older Adults

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- The elderly population is also at a higher risk of developing meningococcal disease, with an incidence rate of 0.2 to 1.3 cases per 100,000 population per year.
- Elderly persons with underlying comorbidities (e.g., diabetes, alcoholism, and malignancy) are at a higher risk of developing meningococcal disease.

Call for Action

- There is a need for increased awareness of the disease among healthcare providers and the general public.
- Early recognition and prompt treatment of meningococcal disease in older adults are crucial for improving outcomes.
- Elderly persons require greater healthcare attention, and preventive measures should be considered in the elderly population.

CONCLUSIONS

- Older adults experience a high burden of IMD costs.
- There is a need to develop and implement effective strategies for prevention and control of meningococcal disease in older adults.
- Early recognition and prompt treatment of meningococcal disease in older adults are crucial for improving outcomes.
- Elderly persons require greater healthcare attention, and preventive measures should be considered in the elderly population.