Methods

The objective of this study was to estimate the total economic impact (lifetime direct and indirect costs) based on deliveries per 100,000 on society due to CMV infection based on incidences. Additionally this study shows the positive monetary impact of screening (serologic testing and treatment in case of primary infection) as secondary prevention. Direct costs comprise all treatment costs of symptoms appearing at birth or later on. Indirect costs comprise the changed job situation of parents, work absenteeism, nursing leave, lost human capital of dead people, costs of special schools and nursing homes. All costs represent data from 2008. The incidences of sequelae were derived from literature. Symptoms after birth with the highest incidence are: petechiae (0.44), hearing loss (0.40), IUGH (0.36), icterus (0.34), hepatosplenomegaly (0.33) etc. Remote damages are: hearing loss (0.22), mental retardation (0.22) etc.

Results

The total discounted costs of CMV infection in Germany from a societal perspective were 2434m€ per 1000 deliveries (941m€ undiscounted), whereas 225m€ p.a. (879m€ undiscounted) are indirect costs. Total costs corresponding to 766,444€ per child (2.97m€ undiscounted). Total costs for diagnosis and prevention are 50.46m€. CMV screening and treatment of primary infected mothers by CMV specific hyperimmunglobulin reduce total societal costs to 152m€ (444m€ undiscounted) and prevents infection in 640 children. The budget impact amounts to 91m€ (497m€ undiscounted).

Conclusion

The conclusion based on this calculation is that a secondary prenatal strategy being highly cost effective, leads to cost savings for the whole society, reduces significantly the number of children with sequelae and decreases the disease burden for parents and their children.

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