

## DIAGNOSTYKA I LECZENIE ZAKAŻEŃ WIRUSEM CYTOMEGALII

**Agnieszka Kaczmarek, Dorota Mikołajczyk, Anna Budzyńska  
Krzysztof Gierlotka, Eugenia Gospodarek**

Katedra i Zakład Mikrobiologii, Collegium Medicum im. L. Rydygiera w Bydgoszczy  
Uniwersytet Mikołaja Kopernika w Toruniu ul. M. Skłodowskiej-Curie 9, 85-094  
Bydgoszcz, tel. 052 585 44 80, e-mail: kizmikrob@cm.umk.pl

*Wpłynęło w maju 2005 r.*

1. Wstęp. 2. Wykrywanie wirusa cytomegalii w hodowli komórkowej. 3. Badania serologiczne. 4. Wykrywanie antygenów - antygenemia. 5. Detekcja kwasów nukleinowych. 6. Strategie leczenia. 6.1. Postępowanie profilaktyczne. 6.2. Leczenie wyprzedzające. 6.3. Leczenie cytomegalii pełnoobjawowej. 7. Immunoterapia bierna i czynna. 8. Leki przeciwwirusowe. 9. Podsumowanie

### **Diagnostics and therapy of human cytomegalovirus infections**

*Abstract:* Human cytomegalovirus (HCMV) infections can cause severe complications in patients who are immunocompromised due to cancer-related chemotherapy, human immunodeficiency virus infection or immunosuppressive therapy following solid-organ or bone marrow transplantation. Early diagnosis of HCMV infections in high-risk patients is essential to start and monitor response to antiviral therapeutic strategies. The HCMV assays presently available and frequently used include conventional and "shell-vial" culture, serological methods, the HCMV antigenemia assay, PCR, hybrid capture assay for HCMV DNA and detection HCMV RNA by nucleic acid sequence-based amplification. The ideal diagnostic test should be sensitive to detect infection at an early stage before clinically significant disease has occurred. The low sensitivity and low reproducibility of conventional cell culture and shell-vial assays limit their role in the management of HCMV infection. Antigenemia assay is a fast, quantitative test for detection of HCMV antigen pp65. However, this method has some disadvantages. It requires immediate processing, is time-consuming and cannot be automated. Moreover, it has a low sensitivity for detecting early HCMV infection or disease. Methods of molecular biology have improved the ability to diagnose HCMV disease quickly and accurately. Quantitative nucleic acid detection assays are the most likely to be useful in this way because they combine analytic sensitivity with the ability to define threshold levels that could be used to initiate treatment.

1. Introduction. 2. Detection of cytomegalovirus in cell culture. 3. Serological diagnostics. 4. Detection of antigens - antigenemia. 5. Detection of nucleic acids. 6. Treatment strategies. 6.1. Prophylaxis. 6.2. Preemptive treatment. 6.3. Treatment of cytomegalodisease. 7. Passive and active immunotherapy. 8. Antiviral drugs. 9. Summary

**Słowa kluczowe:** wirus cytomegalii, diagnostyka, leki przeciwwirusowe

**Keywords:** cytomegalovirus, diagnostics, antiviral drugs

Polskie Towarzystwo Mikrobiologów

PL ISSN 0079-4552

Tom 44 Zeszyt 4 2005 CODEN: PMKMAV 44 (4) 2005

<http://www.pm.microbiology.pl>