

عنوان مقاله:

Use of Razi Bovine Kidney Cell Line for Proliferation of Pneumocystis Carinii

محل انتشار:

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نویسندگان:

Abbas Mahmoodzadeh - Dept. of Microbiology and Research Center of Molecular Biology, Baqyatallah University of Medical Sciences, Tehran, Iran

Massoud Hajia - Research Center of Health Reference Laboratory, Tehran, Iran

.Hassan Morovati - Razi Vaccine and Serum Research Institute, Karaj, Iran

خلاصه مقاله:

Background and Objective: Pneumocystis pneumonia (PCP) has been historically the most prevalent opportunistic infection in patients infected with the human immunodeficiency virus. Culture of the organism has not been faced with suitable success in artificial media, while various results have been reported for cell culture media. The aim of this study was proliferation of Pneumocystis carinii on the Razi Bovine Kidney (RBK) cell line and to compare growth rate with 'Vero' and 'MRC-5' cell lines. Materials and Methods: We used 6 rats (Sprague-Dawley) provided from Razi Institute to infect with Pneumocystis carinii after suppressing the immune system with methylprednisolone acetate (40 mg/kg). Methylprednisolone acetate was used subcutaneously once a week for 8 weeks. Samples were homogenized after separation of the lung tissue. Microscopic examination was applied for prepared smears to confirm the presence of Pneumocystis carinii. Purified trophozoites were then inoculated into the cell line flasks. Growth rate was estimated by counting the trophozoite in each day. Results: Number of cultivated organisms was increased after 5 days incubation in all applied cell lines. Growth rate of Vero, MRC-5 and RBK were 3, 3, and 3.75 times more respectively in comparison with number of the calculated cells in first day. Hence the difference between RBK and two other cell lines was significant ($p = 0.023$). Conclusion: RBK cell line is suitable to proliferate Pneumocystis carinii

کلمات کلیدی:

Pneumocystis carinii, Vero cell, MRC-5 cell, Razi bovine kidney cell

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