

Molloy University

DigitalCommons@Molloy

Faculty Works: Nursing

Nursing

3-2010

Latent Manifestations in the US Congenital Rubella Syndrome (CRS) Population (Abstract 84.018)

Normadeane Armstrong Ph.D, A.N.P.
Molloy College, narmstrong@molloy.edu

Follow this and additional works at: https://digitalcommons.molloy.edu/nur_fac



Part of the [Nursing Commons](#)

[DigitalCommons@Molloy Feedback](#)

Recommended Citation

Armstrong, Normadeane Ph.D, A.N.P., "Latent Manifestations in the US Congenital Rubella Syndrome (CRS) Population (Abstract 84.018)" (2010). *Faculty Works: Nursing*. 15.
https://digitalcommons.molloy.edu/nur_fac/15

This Article is brought to you for free and open access by the Nursing at DigitalCommons@Molloy. It has been accepted for inclusion in Faculty Works: Nursing by an authorized administrator of DigitalCommons@Molloy. For more information, please contact tochter@molloy.edu, thasin@molloy.edu.

mechanism for controlling EV71 infection. Inflammatory response with induction of toxic inflammatory cytokines has been considered as an essential component of the pathogenesis of EV71, especially the development of neurogenic PE.

Methods: In this study, the role of the type I IFN and proinflammatory cytokine responses on the disease development and mechanisms of viral evasion were investigated by using a murine model with mouse-adapted EV71 strain.

Results: After EV71 inoculation, the animals developed viremia, limb paralysis, pulmonary dysfunction, and emphysema with a significant increase of interleukin (IL)-6, monocyte chemoattractant protein-1, tumor necrosis factor and IFN- γ , but not IL-10, IL-12, IL-13, and type I IFNs in serum and brain. We assumed that sufficient amounts of PE-associated cytokines (i.e., IL-6, IL-13, and IFN- γ) may be required for the development of EV71-induced PE. The results showed that EV71-infected mice with post-treatment of IL-6, IL-13, and IFN- γ developed PE and severe emphysema accompanying with a more severe pulmonary dysfunction than EV71-infected, cytokine non-treated mice. Furthermore, we observed that mice inoculated with EV71 produced a significant lower amount of serum type I IFNs than those inoculated with poly (I:C), adenovirus type V, or Coxsackie B3 virus (CB3). EV71 preinfection abolished both poly (I:C) and CB3 induced-type I IFN production, and decreased the percentage of IFN-producing plasmacytoid dendritic cells in blood of CB3-infected mice. In addition, a pre-incubation of EV71 also reduced poly (I:C) induced-type I IFN production of murine monocyte/macrophage cell line, RAW264.7. The inhibitory effect of EV71 on type I IFN production was contributed by 3C protease that was proven using over-expression systems either in RAW264.7 cell or adult mouse.

Conclusion: In conclusion, EV71 may block type I IFN synthesis through 3C protease to interfere with host innate defence, and on the other hand, trigger proinflammatory cytokine responses to promote PE development.

doi:10.1016/j.ijid.2010.02.647

84.017

The study of epidemiological data of varicella and its complications in Albanian children

H. Hoxha^{1,*}, E. Kallfa-Foto¹, G. Lito¹, R. Petrela¹, A. Simaku²

¹ University Hospital Center Mother Theresa Tirana, Albania, Tirana, Albania

² Institute Public Health, Tirana, Albania

Background: Varicella is a serious diseases especially for its complications and even death, may occur in healthy children. Complication have been estimated at a rate of 29.2 per 10000. The serious problem of varicella are reduced after introduced of the vaccine against varicella. The aims of this study was to show epidemiological data, risk factors and complications of varicella in the Albanian children.

Methods: This was a retrospective study and in this study were included 68 children aged 0 to 14 years old admitted in University Hospital Center during January 2004 to December 2008. Epidemiological data analysed were: sex,

age, origin, length of hospitalization, risk factors and complications.

Results: The mean length of hospitalization was 5.2 days. Age-group most affected was 1-6 years old with 30 cases or 44.12%, followed by children aged 7-14 years old with 22 cases or 32.3%. 47 cases or 69.1% were male and there were no difference for origin. We observed this complications: bacterial overinfections: 22 cases or 32.36% (skin and soft tissue infectious caused by *S. aureus* and *S. pyogenes*) 4 osteoarthritis, neurological complications: 6 cerebellitis, 2 encephalitis, 3 status epilepticus, 1 neuritis, 12 varicella pneumonia, 1 hepatitis, 1 thrombocytopenic purpura, 1 hemolytic anemia. 18 cases or 26.45% under one years old presented enteritis. Acyclovir was used in 26 cases or 38.2% (mainly complicated). We observed risk factors in 8 cases or (11.8%) as: 3 leukemia, 5 atopic dermatitis.

Conclusion: Varicella still remains a frequent infection of childhood, which often is followed by serious complications. The results of this study can contribute to evaluating the options for varicella vaccination.

doi:10.1016/j.ijid.2010.02.648

84.018

Latent manifestations in the US Congenital Rubella Syndrome (CRS) Population

N. Armstrong

Molloy College, Rockville Centre, NY, USA

Background: Since rubella and congenital rubella syndrome (CRS) have not been globally eradicated and populations who do not vaccinate continue to persist, increasing knowledge about adults with CRS remains of great importance. This study investigated the latent CRS manifestations of 174 adults with CRS in the United States, born before 1987.

Methods: Cross sectional design. In this study, Helen Keller National Center's (HKNC) registry was used to identify individuals born with CRS in the United States. Established through an Act of Congress, HKNC is mandated to maintain a national registry of persons who are deaf-blind. The national database, located at HKNC in New York contains personal (race, marital status, residential status, education and employment) and medical (etiology, diagnostic and comorbidities) information on more than 10,000 deaf-blind individuals with birth dates ranging from 1930-present. According to HKNC, there are approximately 1000 deaf blind individuals 21 and older who are listed as having CRS (HKNC, 2006). According to the CDC, this cohort is the result of the 1963-1965 rubella epidemic. In addition, the registry lists 113 CRS children, ages birth to 21.

Results: The survey reported the prevalence of medical disorders including diabetes, cardiac and thyroid dysfunction and glaucoma. Additionally, psychological symptoms such as autisticlike behavior, mood disorder and aggressive behavior were reported

Conclusion: CRS is characterized by multiple defects, particularly to the heart, eyes, ears and brain. In utero, the rubella-virus can damage the immune system and vessels which is a harmful starting point for several diseases once the CRS-individual ages. CRS individuals are develop-

ing both new medical and psychological symptoms as they age. However, there has been very little information written about this phenomenon, although late onset medical problems have been documented, particularly in the Australian Rubella population born in the 1940s. The results of this study are helpful in understanding both medical and psychological symptoms of the CRS adults, and anticipate potential diseases and behaviors.

doi:10.1016/j.ijid.2010.02.649

84.019

Inhibition of high risk HPV-31 in human cervical epithelial cells in vitro by the PC-PLC inhibitor LMV-601

E. Amtmann^{1,*}, F. Mayer², H. Pink¹, W. Baader¹

¹ German Cancer Research Centre (DKFZ), Heidelberg, Germany

² Lumavita AG, Basel, Switzerland

Background: Expression of early genes and episomal DNA replication of human papilloma virus (HPV) is dependent from an active AP1 complex. Activation of AP1 was shown to be precluded by inhibition of phosphatidylcholine specific phospholipase C (PC-PLC). We studied the effect of the PC-PLC inhibitor LMV-601 on HPV-31 infected 9E cervical epithelial cells (CIN 612 9E).

LMV-601 is (-)-exo/exo-O-Tricyclo-[5.2.1.0(2,6)]-dec-9-yl-dithiocarbonate potassium salt. Tricyclo-[5.2.1.0(2,6)]-dec-9-yl-dithiocarbonate potassium salt consists of 8 isomers (4 diastereomers, each having 2 enantiomers) and became known under the code D609, first synthesized in 1984 by Merz and Co in co-operation with the German Cancer Research Centre (DKFZ). The pure (-)-exo/exo isomer was first isolated in 2006 and is developed by Lumavita AG as an antiviral drug.

Methods: 9E HPV-31 infected cervical epithelial cells were from L.A. Laimins, Chicago.

(a) Short term study: After 72 h treatment, effect on cell growth, HPV-31 specific DNA (Southern Blotting) and RNA (Northern Blotting) was assessed.

(b) Long term treatment (9 passages): After each passage, viral RNA and DNA levels, and cell morphology were assessed.

Results: (a) Short term study: LMV-601 displayed a dose dependent inhibitory effect on cell growth (IC₅₀ 16 !g/mL), HPV-31 specific RNA expression (IC₅₀ 10.69 !g/mL) and DNA content (62.5% reduction at the highest dose tested, *i.e.* 32 !g/mL).

(b) Long term treatment: The number of passages required to reduce the amount of HPV-31 specific RNA by 50% (T50RNA) was 2.23 at 3.3 !g/mL LMV-601 and < 1 at 10 !g/mL LMV-601. The corresponding T50DNA values were 3.28 and < 1, respectively.

After six passages the growth rate of the cells was reduced and the morphology of the cells changed from the spindle form to a normal phenotype. After passage 9, cells were enlarged, became senescent (identified by expression of the senescence marker beta-gal), and ceased to grow.

When human, non-HPV immortalized HaCat keratinocytes were treated with the same concentrations of

LMV-601, neither cumulative inhibition of growth rate nor induction of senescence could be observed.

Conclusion: LMV-601 inhibits HPV-31 specific RNA expression and DNA replication. Furthermore, these results support the hypothesis that chronic treatment with LMV-601 "cures" pre-cancerous 9E keratinocytes by elimination of HPV genomes.

doi:10.1016/j.ijid.2010.02.650

84.020

The pain topography caused by misdiagnosed zoster

K. Duraku¹, N. Como^{2,*}, E. Meta¹, D. Kraja³, A. Kica¹

¹ HUC, Tirane, Albania

² University Hospital Centre "Mother Theresa", Tirana, AL, Albania

³ Faculty of Medicine, Tirane, Albania

Background: In Herpes Zoster, the pain precedes dermatome manifestation from 10–12 hours to 2–5 days even to 10 days. Zosterian pain last, however it's intermittent. Our goal in this study is in highlighting the topographic variety of Zosterian pain and initial misdiagnose related with it.

In this study we have included 202 cases of Herpes Zoster. 97 of the them were initially not identified as Herpes Zoster. The group age was 19–78 years old, time period from 1998–2009. 37 of them were HIV positive. In our cases pain precedes exantematic manifestation from 18 to 68 hours.

Methods: The cases were assessed based on correlation between neurotics zosterian pain and initial nosology.

Results: According to pain location we distinguished these initial misdiagnoses:

Location	Diagnosis	Number of cases
Head	migraine	8
sinusitis	frontal	2
otitis	2	
ophthalmitis	3	
arthritis temporo – mandibular		
odontalgia	2	
Thorax	angina pectoris	3
pericarditis	2	
pleuritis	13	
pneumonia	11	
Abdomen	abdominal colic	6
kidney colic	4	
hepatic colic	4	
cholecystitis	2	
mezenterial thrombosis	1	
orchitis	2	
Upper extremities	cervical racialgja	
cervical spondylarthrose	7	
thorax racialgja	6	
scapulo-humeral bursitis	2	
Lower extremities	ischialgja	7
discal hernia	1	
angiopathies	2	
polymialgja rheumatica	1	
coxo-femoral arthritis	2	

Conclusion: 1) Zoster cases identified wrong initially were 48.02%.