The Gulf Journal of Dermatology (1994) **1**: 30-31

Isoprinosine Therapy in Varicella

MOHAMAD A. ALMISHARI, MD
CONSULTANT DERMATOLOGIST, PRIVATE CLINIC, KUWAIT

SUMMARY

Fifteen patients with varicella were treated by isoprinosine syrup in a dose of 50mg/kg/day in divided doses for 10 days.

A significant clinical improvement was achieved. The early the administration of the drug, the best is the result.

Varicella is a highly infectious disease, mainly affecting children. It is characterized by vesicular eruption of the skin and mucous membranes. Varicella is the result of a primary infection with the varicella zoster virus. The site of entry of the virus is the respiratory tract "droplet infection" Contagiousity is high from the first day before onset of the exanthem until the sixth day of the rash.[1,2]

Isoprinosine gave an excellent result in the treatment of many diseases of viral origin. Isoprinosine has antiviral action within the host cell[3], and it has an immunological stimulation on the T-dependent system.[4]

Materials and Methods

Fifteen patients randomly selected patients participated in this study. All the patients had varicella. The fifteen patients (11 children and four adults) were divided into three groups, each group formed of five patients. The first group received the treatment from the first day of onset of the vesicular eruption while the second group started the treatment from the second day, and the third group started the treatment from the third day of onset of the vesicular eruption.

All patients were given isoprinosine syrup in a dose of 50mg/kg/day divided in four doses. The duration of treatment was 10 days. Before starting the treatment, the vesicular eruption in the trunk was counted. A daily counting of new lesions was done for 10 days.

Results:

In the first group, vesicular eruption was increased by 12% while it was increased up to 32% and 56% in the second and third group respectively. No side effects were observed.

Discussion:

Isoprinosine is a synthetic compound of inosine and p-acetamidobenzoic acid salt of N,N-dimethylamino-2 propanol (DIP-PAcBA) in a ratio 1:3. Isoprinosine has a direct antiviral action, it inhibits the replication of various RNA and DNA viruses. It is said that the substance adheres to the ribosomes of the infected cell resulting in a steric modification which gives the advantage to the cellular mRNA as in their competition for binding to the ribosomal sites.

It is thought that the drug penetrates lymphocytes infected with influenza virus as a comlex, and protects the host cell through two mechanisms: 1) Direct antiviral mechanism : isoprinosine inhibits viral growth by suppressing synthesis of viral RNA; 2) Indirect antiviral mechanism: isoprisone potentiates lymphocyte RNA synthesis which is depressed following the infection. The indirect antiviral mechanism is by potentiation of the host's immune response[5].

In this study, we found that the vesicular eruption has increased by 12% in the first group of patients in which they started isoprinsine therapy from the first day of onset

of the vesicular rash. In the second group in which the therapy started from the second day, the vesicular eruption increased by 32%, while in the third group in which the treatment started from the third day, the vesicular eruption increased by 56%.

From these results, it can be concluded that isoprinosine is an effective therapy for vericella if used in a dose of 50mg/kg/day in four divided doses for 10 days. The best results are obtained if the patients receive the drug as early as possible. No side effects were observed.

References:

1) HUFF J C ; Antiviral treatment in chickenpox and herpes zoster. JAAD 1988; 18: 204.

2) SHULMAN S T ; Acyclovir treatment of disseminated Varicella in childhood malignant neoplasm Am. J. Dis child 1985; 139: 137.

3) GORDON P, BROWN E R , The antiviral activity of isoprinosine, Cand J. Microbiol 1972; 18: 1463.

4) HADDEN J W, HADDEN E M , COFFEY R G, Isoprinosine Augmentation of phytohemagglutinis induced lymphocyte proliferation. Infect immun 1976; 13: 382.

5) SIMONE C D, Use of methisoprinol in the treatment of Viral diseases. Medicalnews 1985; 71 (October) : 7.

Correspondence:
Mohamad A. Almishari, MD
P.O.Box 96, Safat 13001
Kuwait