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Human parvovirus B19 infections have emerged but given a back seat: A Pioneer work from India indicates high disease burden

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Objectives: Parvovirus B19 (B19), family Parvoviridae (discovered 1975) was once listed as newly emerging virus (1981-1987) but could not gain importance due to asymptomatic/self-limiting infections. Myriads of clinical afflictions, not known to many clinicians, limited diagnostic facilities besides unknown disease burden and sinister complications of B19.

Methods: Hence in-house diagnostic methods of DNA extraction from serum, PCR, nested-PCR, IgM and IgG ELISA were standardised by us.

Results: Seroprevalence of B19 was 39.9% among 1000 blood donors; rendering 60% of Indian population (1.2 billion) at risk of B19 infections. Cases of B19 induced pure red cell aplasia and thrombocytopenia and death occurred. Study on 69 children with juvenile rheumatoid arthropathy found B19 infection in over 27.5%. Feto-pathogenic association done on 372 women, found that among 116 women with recurrent spontaneous abortions, 19.8% had anti-B19 IgM antibodies in contrast to 11% among 136 pregnant-women and 5% of 120 non-pregnant women further in 60 high-risk pregnant women with BOH and/or polyhydramnios, oligohydramnios, intrauterine growth retardation anti-B19 IgM positivity was 13.6%. In 35 paediatric haematological malignancies B19 infection was seen in 17.1% (5 ALL, 1 NHL) and two had B19 DNA/giant pronormoblasts (lantern cells). Of 90 multitransfused beta-thalassemia major patients had B19 seropositivity in 81% and anti-B19 IgM positivity in 41% besides transmission through donor units. Novel clinical associations like amegakaryocytic thrombocytopenia, myositis as a complication of erythema infectiosum in a 9 year female and recently non-occlusive ischemic gangrene of stomach and bowel were reported.

Conclusions: Our limited work denotes high/alarming situation of B19 infections, hence B19 is to be looked/recognised and prevented by a licensed B19 vaccine.

Biography

Professor Janak Kishore, graduated in medicine in 1978, did M.D. in 1985 and is now Chief of Molecular Virology and Serology Divisions. He was Associate Editor Indian Journal of Virology, member National Academy Medical Sciences, American Society for Virology, Fellow of JICA, Japan. Dr Kishore taught for over 30 yrs and published over 50 papers. His pioneer work on B19 bagged many award owing to publication of three novel clinical associations and possible Oncolytic property of B19. Dr Kishore, served as reviewer for reputed journals, organized conferences, Chaired sessions and frequently invited to speak at international conferences.

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