The elements of paediatric HIV status disclosure: A qualitative study from Karnataka, India

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Background: With improved access to combination antiretroviral therapy (cART), children with HIV are growing into adolescence and adulthood. If the children are deprived of the knowledge regarding their disease, there would be significant challenges in coping with the disease. Hence this study was conducted to assess the various elements of the disclosure of paediatric HIV status.

Methods & Materials: Focus group discussions were conducted in June 2015 among the caregivers of HIV positive children visiting an Anti-Retroviral Therapy (ART) centre in a Southern coastal city of Karnataka, India. Snowballing method was adopted for recruitment of the caregivers. The groups consisted of 8 members. Anonymity was maintained by giving codes for the participants. The discussions were conducted in Kannada, the official language of Karnataka. The discussions were voice recorded, transcripts prepared in English and analysed. Written informed consent was taken from each participant and Ethical committee clearance was obtained for the study.

Results: All the caregivers opined that the children have to be informed about their HIV status mainly for their knowledge and better adherence to self-care and medications. The caregivers felt that they themselves have to tell the children at the comforts of their homes, when the child was around 7-10 years of age. A majority of the participants felt that the children need to be told as a process over time and not as a discrete one-time event. They would also appreciate the help of the counsellors, especially in answering the children’s questions. Although improved adherence was seen in the older children, there were no benefits among the younger children. The negative aspects of disclosure commonly seen were negative emotional reactions like sadness, worry or anger which subsided over time. The children did not face any stigma or discrimination following disclosure.

Conclusion: As there are more benefits than harm from disclosing the HIV status to the child, disclosure should occur as a slow evolving process over time starting around 7-9 years and done preferably by the caregivers, assisted by the counsellors. Development of culturally appropriate interventions to facilitate disclosure of HIV status to infected adolescents is key to improve retention, adherence and other outcomes.

Development of engineered nanocarrier for controlled delivery of a protease inhibitor

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Background: AIDS is a chronic, progressive syndrome, characterized by intense viral replication and profound immunosuppression, resulting in the development of life threatening opportunistic infections. HIV infection leads to deterioration of immune function.

The objective of the present study was to develop, optimize and characterize engineered nanocarriers for controlled delivery of a protease inhibitor. Lopinavir was the drug of choice as it is an effective antiretroviral drug having specific and prominent anti-HIV action. In the present study, it is envisaged to develop and characterize a controlled delivery system wherein the drug lopinavir (LPV) will be entrapped in engineered nanocarrier.

Engineered nanocarriers targeted towards the prespecified target tissues by coupling with mannose delivers the drug in a controlled manner to the site of action. Thus it results in increased bioavailability and avoids the adverse effects associated with the drug. Overall the approach leads to a safe, economical and effective Anti-HIV formulation.

Methods & Materials: The uncoupled Solid Lipid Nanoparticles (SLN) were prepared by Solvent diffusion method and then coupled with mannose. Characterization studies were done by Scanning & Transmission Electron Microscopy (SEM & TEM). X-ray diffraction (XRD) and Differential scanning calorimetry (DSC) studies were performed along with the in-vitro studies followed by in-vivo studies on albino rats.

Results: In-vitro & in-vivo studies results shows Mannose coated SLNs (MSLN) deliver their contents to macrophage rich organs and tissues, which are the reservoir of HIV. Low elimination and better distribution profile can be achieved by MSLNs. The dose of the antiviral agent can be reduced due to the site-specific delivery from this carrier.

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