

Review on Determination of Doses(Matras) in Pediatric practice

¹Dharmasena, K.N.A. and Leena, I. A. M.

¹Institute of Indigenous Medicine, University of Colombo,
Rajagiriya, Sri Lanka
dr.knadharmasena@gmail.com

The pediatric population represents a spectrum of different physiologies. Substantial changes in body proportions and composition accompany growth and development. This dynamic process of maturation is one of the differences between the pediatric and the adult populations. The developmental changes in physiology and consequently, in pharmacology, influence the efficacy, toxicity and dosing regimens of medicines used in children. Therefore, important to review the relevant changes that take place from birth to adolescence when describing a drug. Ayurveda physicians were using different Matras for different dosage forms and also the dose was fixed according to age; however they changed the dose according to many other factors like Satva (mental ability), Prakriti (constitution), Bala (physical strength) etc. The Matra described in Ayurveda has been correlated to the Posology of the modern pharmacology. The purpose of this review is to increase the awareness and knowledge on correct dose (Matravataushada) on different formulations in pediatric practice. And it gives the detailed survey of the related literature like authentic subject materials, modern medical literature and e-documents. According to the study, Charakawas mentioned only to give smaller quantity of medicines to the children comparing to the adults, Suhruthaacharyawas advocated on giving specific Matra according to the age like ksheerapa, ksheeranna and annada. Dalhana and Sharangadra Acharyas prescribed drugs as according to the age. Kashyapa advocated detailed and well organized dosage (Matra) schedule according to the dosage forms (Bhesaja Kalpana). Many Acharyas mentioned that Matra depends on various factors. Charaka mentioned the Aturabala and the intensity of morbidity (Doshabala), Chakrapani and Sushruta described as per Vyadhibala, Agnibala and the Aturabala. Moreover Sarangadhara analyzed Kala, Agni, Vayah, Bala, Prakriti, Dosh and Desha before considering the Matra.. These factors can be compiled in the Balacatushtaya namely Dehabala, Agnibala, Chittabala and Rogabala. These can be correlated with modern Pharmacology factors like age, weight, surface area, and enzymatic action etc. It is concluded that Ayurveda has scientifically valued dose fixing method related with pharmacokinetic characteristics of medicines at different ages.

Keywords: Dosage forms, Pediatric, Balacatushtaya, Ayurveda