

encourage colleagues to report use of the drug for all to benefit. We share the authors concern on the lack of an effective system of drug regulation and monitoring. The burden of regulation and off label use of drugs rests with the state and the laws of the land, as much as with the conscience of the practising physician. However we agree

that there should be some regulation to check and ensure safety of newborn care, our article clearly discourages the use of sildenafil by the individual practitioner other than in a research setting.

M Malik and R Nagpal
m.malik@maxhealthcare.com

Infant and Young Child Feeding Guidelines: 2010

We have following comments to submit in respect of the Infant and Young Child Feeding Guidelines: 2010 published in *Indian Pediatrics* [1].

1. While discussing HIV and infant feeding, the guidelines mention use of expressed, heat-treated breast milk as one of the alternatives to breastfeeding in infants less than six months of age. Guidelines need to mention a standardized method of heat-treatment of breast milk which should be fulfilling AFASS criteria. It should be borne in mind that it may not be possible to use a thermometer in a domestic setting to decide about the temperature to which the expressed breast milk should be heated.
2. While discussing HIV and infant feeding, the guidelines also mention introducing appropriate complementary foods after 6 months of life and continuing breast feeding for the first 12 months of life. This amounts to mixed feeding for second six months of life. In the same section, towards the end, the guidelines mention that mixed feeding should be avoided (except the short transition period of around a month when breast-feeding is being gradually stopped) as it causes a two fold increase in the risk of postnatal HIV transmission. This contradiction needs to be resolved.

DALJIT SINGH AND R GHULIANI,
Department of Pediatrics,
Command Hospital (SC),
Pune 411040, MS, India.
maapavitra@gmail.com

REFERENCE

1. Infant and Young Child Feeding Guidelines: 2010. *Indian Pediatr.* 2010;47:995-1004.

REPLY

1. Methods such as Pretoria Pasteurization or Flash Heat Treatment can effectively inactivate the virus in breastmilk from HIV-infected mothers [1,2]. These methods can also eliminate potential contaminants and adequately inhibit bacterial growth while retaining nutrients contained in breastmilk [3]. In a developing country set up where thermometer may not be available everywhere, it may be difficult to mention a standardized method, but breastmilk treated in this way is nutritionally adequate to support normal growth and development. However, it is difficult to sustain adhering to this method over a prolonged duration. The role of heat treatment as a truly feasible HIV prevention and child survival strategy is yet not clear [4]. However, this approach (heating to the boiling point) is useful as an 'interim' strategy to assist mothers over specific periods of time.
2. The term "Mixed feeding" is generally referred to feeding of breastmilk and other liquid/solids food prior to 6 months of age. It is hypothesized that when these infants are mix fed, the immature gastrointestinal tract is exposed to antigens and pathogens which may cause inflammation and facilitate acquisition of HIV infection [5] Exclusive breastfeeding may be healthier because it protects the integrity of the intestinal mucosa, a barrier to HIV. Another possible mechanism is that mixed feeding results in suboptimal breastfeeding practices which predisposes to mastitis and cracked nipples, consequently increasing the risk of transmission.

After six months the gut is more mature and better able to handle complex proteins and antigens significantly decreasing the risk of transmission. Thus after six months of age, the nutritional benefits of complementary feeding (which may or may not be milk based) and extended breastfeeding till 12 months outweigh the risk of transmission and is probably the best possible strategy for HIV-free survival. This is all the more true if the mother and baby are on antiretroviral prophylaxis or therapy as the

new recommendations advocate.

Lastly, we wish to reiterate that on these issues the guidelines are dynamic and changing with the availability of new evidences (like NACO and Newer WHO guidelines). The current guidelines have been proposed keeping the Indian context in mind. We would like to re-emphasize that these guidelines do not provide all of the answers but suggest the general course of action that everyone needs to undertake in our day to day practices to improve child nutrition in the Indian subcontinent.

Acknowledgments: Dr Satinder Aneja and Dr Nidhi Chaudhary (WHO) for data acquisition and drafting of the reply.

Akash Bang and Satish Tiwari
drsatishtiwari@gmail.com

REFERENCES

1. Jeffery BS, Mercer KG. Pretoria pasteurization: a potential

method for the reduction of postnatal mother to child transmission of HIV. *J Trop Pediatr.* 2000;46:219-23.

2. Israel-Ballard KA, Maternowska MC, Abrams BF, Morrison P, Chitibura L, Chipato T, *et al.* Acceptability of heat treating breastmilk to prevent mother-to-child transmission of HIV in Zimbabwe: a qualitative study. *J Hum Lact.* 2006;22:48-60.
3. Jeffery BS, Soma-Pillay P, Makin J, Moolman G. The effect of Pretoria pasteurization on bacterial contamination of hand-expressed human breastmilk. *J Trop Pediatr.* 2003;49:240-4.
4. WHO Guidelines on HIV and infant feeding 2010. Principles and recommendations for infant feeding in the context of HIV and a summary of evidence. Available from: http://www.who.int/child_adolescent_health/documents/hiv_aids/en/index.html. Accessed on February 7, 2011.
5. Walker WA, Isselbacher KJ, Bloch KJ. Intestinal uptake of macromolecules: effect of oral immunization. *Science.* 1972;177:608-10.

Rasburicase for Hyperuricemia in an Extremely Low Birth Weight Infant

The frequency of acute renal failure in very low birth weight infants is 6-8% in neonatal intensive care units [1]. Hyperuricemia is a frequent observation in these infants. Few reports have described successful use of rasburicase in infants and neonates for hyperuricemia in different indications [2-4]. A preterm baby with a gestational age of 26 weeks and a birthweight of 780 g was born by vaginal delivery to a 24 year old mother. She had clinical sepsis on 3rd postnatal day, associated with oliguria. She had scleredema, anemia, low platelets and hypotension. Antibiotics, inotropic agents, blood transfusion and intravenous immunoglobulin were given for supportive care. Biochemical parameters were as follows, blood urea nitrogen, 45.8 mg/dL; creatinine, 1.97 mg/dL; sodium, 173 mg/dL; potassium 5.9 mg/dL and uric acid 17.2 mg/dL. She developed acute renal failure and hyperuricemia, furosemide infusion started (0.1 mg/kg/hour) and rasburicase was given as a single dose of 0.2 mg/kg intravenous. Twelve hours after administration of rasburicase, uric acid level decreased to 0.55 mg/dL.

Diuresis occurred and vital signs, biochemical parameters (blood urea nitrogen, 23 mg/dL; creatinine, 1.34 mg/dL; sodium, 143 mg/dL, potassium 5.02 mg/dL), and clinical appearance became normal.

This case demonstrates the use of rasburicase for hyperuricemia in an extremely low birth weight infant with acute renal failure. When the excretory capacity of the kidneys has been exceeded, hyperuricemia occurs. In scenarios such as this, and conditions like tumor lysis syndrome aggressive management of electrolyte abnormalities is required in addition to the measures taken to reduce hyperuricemia with rasburicase.

Fuat Emre Canpolat and Ferhat Çekmez

*Department of Pediatrics, Section of Neonatology,
 Gülhane Military Academy of Medicine, Ankara,
 Turkey. femreacan@gmail.com.*

REFERENCES

1. Coulthard MG, Vernon B. Managing acute renal failure in very low birthweight infants. *Arch Dis Child.* 1995;73:187-92.
2. Roche A, Pérez-Dueñas B, Camacho JA, Torres RJ, Puig JG, García-Cazorla A, Artuch R. Efficacy of rasburicase in hyperuricemia secondary to Lesch-Nyhan syndrome. *Am J Kidney Dis.* 2009;53:677-80.
3. McNutt DM, Holdsworth MT, Wong C, Hanrahan JD, Winter SS. Rasburicase for the management of tumor lysis syndrome in neonates. *Ann Pharmacother.* 2006;40:1445-50.