Tuberculosis Infection in Children: Need to Strengthen and Intensify Control Efforts

Yadav, *et al*. [1] reported the annual risk of tuberculosis infection (ARTI) of 1.2-1.6% and infection prevalence of 6.3-8.2% in tribal children <10 years in Madhya Pradesh. These metrics are similar to those in other tribal populations and in general populations throughout India [1]. They conclude stating: "there is need to strengthen and further intensify TB control measures in the area," implying that current measures are failing. Other recent papers also have illustrated the failure of TB control in spite of long-standing efforts of the Ministry of Health [2,3]. National TB Control Programme (NTCP), started in 1962, was evaluated in 1990-92 and found to have failed [4,5]. The Revised NTCP (RNTCP) was launched in 1992-93 [4,5]. Control status requires reduction of cumulative infection prevalence to <1 in children by 14 years of age and ARTI of ~ 0.07% [3-5]. However, ARTI remains >1% over decades; infection prevalence in orders of magnitude higher than desired [1-4]. Nationally, there is no decline in incidence or prevalence of TB in adults [5].

Why has TB not come under control? Treatment of the infectious form of TB has not been validated sufficient for control [2-4]. Treatment can be given only to persons captured in the diagnostic net, but it does not capture all infectious cases, allowing many to seek private healthcare, wherein non-standard treatment is rampant, and follow up poor, contributing to development of drug resistance. The sensitivity of TB diagnosis is inadequate without micro-biological diagnostic support. Even those captured in RNTCP become non-infectious only after they have shed the bacilli for several weeks. Thus chains of infection continue unabated and ARTI remains high in all studies [1-4].

RNTCP must be revamped, deficiencies covered, interfaced effectively with healthcare (public and private sectors), and supported adequately with laboratory facilities [2-4]. Infection incidence must be regularly monitored in all districts by systematic surveys of ARTI [2-4]. Pediatric TB infection and disease must be given high priority for detection and treatment [2-4]. Such strengthening and intensification of RNTCP will be essential to control TB and convincingly document it.

***T JACOB JOHN AND VIPIN M VASHISHTHA**
439 Civil Supplies Godown Lane,
Kamalakshipuram, Vellore, TN, 632 002, India.
tjacobjohn@yahoo.co.in
**Corresponding author*

REFERENCES

1. Yadav R, Rao VG, Bhat J, Gopi PG, Wares DF. Annual risk of tuberculosis infection among tribal children of Jhabua, Madhya Pradesh. Indian Pediatr. 2011;48:43-5.
2. Vashishtha VM, John TJ. Prevalence of *Mycobacterium tuberculosis* infection in children in western Uttar Pradesh. Indian Pediatr. 2010;47:97-100.
3. John TJ, Vashishtha VM, John SM, Sudarshanam TD. Tuberculosis control must be scientifically defined and soundly designed. Indian J Med Res. 2010;132:4-8.
4. John TJ. Tuberculosis control, without protection from BCG. Indian Pediatr. 2000;37:9-18.
5. http://www.tbcindia.org/perfor.asp. Accessed on 29 January, 2011.

Neonatal Adrenal Hemorrhage Presenting as Intestinal Obstruction

Due to its large volume and vascularity, neonatal adrenal hemorrhage (NAH) is not uncommon. However, there is only one case report of intestinal obstruction due to NAH [1]. A 3-day-old male neonate presented with bilious vomiting, distension of abdomen, lethargy and non-passage of stools for last 24 hours. He weighed 2700 g. The clinical examination revealed mass in the right lumbar region with generalized abdominal distension and absent bowel sounds. There was no pallor or icterus. No birth asphyxia was reported at birth. Hemogram and sepsis work up was normal. *X*-ray abdomen erect showed multiple air fluid levels. The ultrasonography (USG) abdomen revealed right adrenal hemorrhage measuring 65×55×30 mm in dimensions, displacing the right kidney downwards. The left adrenal gland was normal. CT scan of abdomen confirmed right adrenal hemorrhage displacing the right kidney downwards with extrinsic compression of the right hemicolon due to mass effect. Urinary VMA levels were normal. The baby had no hypotension, pallor or signs of adrenal insufficiency. He was treated

conservatively in neonatal intensive care unit. Abdominal distension decreased gradually. He passed stools on day 5 of admission. Repeat *X*-ray abdomen showed no air fluid levels. He was started on feeds gradually and discharged on day 18 of life. His serial USG abdomen showed gradual decrease in right adrenal hematoma with complete resolution by six weeks of age with no calcifications and normalization of size. Baby was thriving well at follow up and is now of nine months age.

Right adrenal gland is more affected (70%), as against bilateral (5-10%) affection [2], because the right adrenal gland is more likely to be compressed between liver and spine and, the right adrenal vein drains directly into the inferior vena cava. The various etiological factors attributable are difficult or traumatic delivery, perinatal asphyxia, and prematurity, apart from disorders of hemostasis [3]. The usual presentation is asymptomatic to anemia, hypotension, hyperbilirubinemia, bluish discoloration of scrotum and palpable abdominal mass [4].

Most cases of NAH can be managed successfully by conservative measures [4]. Shrinkage develops over weeks, and later corresponds to the shape and size of the normal adrenal gland. Although uncommon, neonatologists and radiologists are likely to encounter a newborn with NAH presenting as intestinal obstruction due to mass effect and need to be aware that it can be managed conservatively.

MANDAR B PATIL
Sangeeta Hospital for Children,
Kolhapur, Maharashtra, India.
drmandarpatil@hotmail.com

REFERENCES

1. Levine C. Intestinal obstruction in a neonate with adrenal hemorrhage and renal vein thrombosis. Pediatr Radiol 1989;19:477-8.
2. Jacobsson H, Kaiser S, Granholm T, Ringertz HG. Neonatal adrenal haemorrhage at bone scintigraphy: a case report. Pediatr Radiol. 1998;28:896-8.
3. Emery JL, Zachary RB. Hematoma of adrenal gland in newborn. Br Med J. 1952;2:857-9.
4. Heij HA, van Amerongen AH, Ekkelkamp S, Vos A. Diagnosis and management of neonatal adrenal hemorrhage. Pediatr Radiol. 1989;19:391-4.

Epidermal Nevus Syndrome with Neuronal Migration Defect

Epidermal nevus Syndrome (ENS) describes the association of epidermal hamartomas and extracutaneous abnormalities [1]. Epidermal nevi follow the lines of Blaschko. The majority of the extracutaneous manifestations involve the brain, eye and skeletal systems. Several subsets with characterized clinical features have been delineated including the Nevus sebaceous syndrome, Proteus syndrome, CHILD syndrome, Becker Nevus syndrome, nevus comedonicus syndrome and phakcomatosis pigmentokeratotica [1]. Epidermal nevi have been associated with benign and malignant neoplasms. A rare case of ENS with CNS abnormalities is reported.

A 4-years-old boy presented with uncontrolled seizures of tonic type and severe retardation. His vision and hearing seemed intact. There were no abnormalities in skull, spine or eyes. A facial nevus involved the right side of the mid and lower face and extended down onto the right side of the neck where it appeared much darker with thickening of the skin. However, the nevus did not cross the midline.

Brain MRI revealed right hemimegaencephaly and polymicrogyria in the right parietal region with poor grey-white differentiation and increased signal intensity in the right hemispheric white matter in T2 weighted sequences. A diagnosis of ENS, most likely of Nevus Sebaceous type was made as brain malformations are not typical in the other subtypes of ENS.

Solomon, *et al*. [2] proposed the term to describe the association of epidermal hamartomas and extracutaneous abnormalities; 50% of patients with ENS have neurologic involvement [3]. Ocular choriostomas and colobomas are the most common ocular findings associated with ENS [4].

ENS had been reviewed by Sugarman [1] and more recently by Brandling-Bennet and Morel [5]. Diagnosis is essentially clinical and histological differentiation between the different subgroups of ENS are not always possible. We did not perform biopsy as consent of parents was not obtained.

A CHAKRAVARTY AND *M MUKHEREJEE
*Departments of Neurology and *Pediatrics,*
Vivekananda Institute of Medical Science,
*and *KPC Medical College,*
Calcutta, India.
saschakra@yahoo.com