

**Coordinated Multispecialty Care: A Need for Critically Ill Newborn Infants**

Neonatal intensive care requires coordinated multispecialty management.<sup>1,2</sup> Many conditions have a prenatal onset and the initiation of treatment in the early neonatal period can make a difference.<sup>3,4</sup> Neonatologists can use important help and guidance from other specialists; this issue highlights the role of pediatric surgeons, infectious disease specialists, hematologists, and experts in the blood banks.<sup>5-8</sup> However, the list of specialists does not stop here. Experts from other subdivisions are frequently needed. The role of technologists for continuous monitoring is also important. Early initiation of care before many infections get established or the congenital anomalies get complicated can make a difference.<sup>9</sup>

Early diagnosis is a key determinant of outcomes in many pre- and early neonatal infections.<sup>10</sup> However, we routinely screen for only a small list of maternal infections.<sup>11</sup> Many of these infections may not so uncommon in the community, but certain genetic and epigenetic predisposing factors can increase the risk of transmission to the fetus.<sup>11,12</sup> Many viral genotypes are also more likely to cause severe disease in young infants.<sup>13</sup> The overall aim of the journal *Newborn* is to highlight problems that a baby might develop *in utero*, the perinatal period, following birth, and the implications of these abnormalities during the first 1000 days after birth. In this 3<sup>rd</sup> issue of our journal, we seek to draw the readers’ attention to the importance of coordinated multispecialty care in NICUs to improve outcomes and establishing a close relationship with the families to improve outcomes.<sup>14</sup>

This issue presents a set of articles that represent each of these subsets. Despite all efforts to standardize the training of personnel who provide care to at-risk newborn infants, birth asphyxia and hypoxic-ischemic encephalopathy (HIE) remain issues of concern.<sup>15</sup> Multiple studies have shown the importance of therapeutic hypothermia (TH) as a treatment modality, but some uncertainty remains.<sup>16,17</sup> Manzar *et al.*<sup>18</sup> describe a full-term infant with low Apgar scores who had a slightly delayed onset of HIE. The paper presents the clinical and diagnostic dilemmas that are typically associated with decisions needed for treatment with TH.

Ethawi and coworkers<sup>19</sup> have reviewed the care of infants born to mothers who are suspected/known to have coronavirus disease-19 (COVID-19). Even though the incidence of COVID-19 and associated mortality seems to be finally decreasing all over the world, concerns remain. Singh *et al.* have contributed two separate articles<sup>20,21</sup> focused on neonatal infections with entero- and varicella-zoster viruses in which they describe known properties of these viruses, the clinical manifestations, and currently available methods of detection, treatment, and assessment of prognosis.

In another study, Arif and her colleagues<sup>22</sup> assembled a global team to review gastroschisis, a congenital defect in the abdominal wall that is typically located to the right of the umbilicus. The intestines, and sometimes parts of the liver and the stomach, may protrude into the amniotic space. Unlike in omphaloceles, these visceral organs do not have a covering sac and are directly exposed to the amniotic fluid. The organs show variable degrees of inflammatory changes and scarring. They have summarized currently available information on the anatomical changes in the intestine that was directly exposed to the amniotic fluid *in utero*, the etiopathogenesis, treatment, and prognosis.

Chaudhary *et al.*<sup>23</sup> have summarized the pathophysiology, etiologies, clinical management, and the opportunities in research in the field of neonatal anemia. Tyagi *et al.*<sup>24</sup> have reviewed the use of fresh-frozen plasma (FFP) in neonates. Nearly 10% of premature and critically ill infants receive FFP transfusions to reduce their high risk of bleeding. However, we have only limited data to identify relevant clinical predictors of bleeding and to evaluate the efficacy of FFP administration. Consequently, there remains a lack of consensus on the optimal use of FFP with most transfusions given to non-bleeding infants. This review presents current evidence focused on the use of FFP in neonatology, and then proposes best practice recommendations for the safety of neonates receiving FFP.

Finally, an international team led by Perez *et al.*<sup>25</sup> has discussed the global issues and challenges advancement of enteral feeding in premature/very-low-birth weight (VLBW) infants. In these infants, the initiation of enteral feedings is frequently delayed and the feeding volumes are advanced very slowly. Clinicians are often concerned that aggressive initiation and advancement of feedings in an immature gastrointestinal tract can result in feeding intolerance and increase the risk of spontaneous intestinal perforation and necrotizing enterocolitis. On the other hand, late initiation and ultra-cautious advancement of enteral feedings is associated with prolonged need for central venous access and increased risk of sepsis, which may increase neonatal mortality. The authors have described that many of the adverse events noted with early feedings are actually with infant formula and not mother’s own milk. Promoting early establishment of full enteral feeding, particularly when maternal or donor milk is available, can improve neonatal outcomes, particularly the incidence of central-line associated bacterial infections, lengths of hospital stay, and survival. This review highlights current evidence for maximizing enteral feeding strategies for VLBW infants in various settings.

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