All the four cases of neonatal septicemia caused by *S. senftenberg* reported from India were preterm or small for date. Three of them suffered severe birth asphyxia. The symptoms, predominantly alimentary, appeared between 3-7 days. The organism was sensitive only to gentamicin, amikacin and cephalosporins(2,3).

To the best of our knowledge, the development of carrier state following neonatal septicemia caused by *S. senftenberg* has not been reported so far. The present case continued to excrete the bacillus in the stool for 3 months. No treatment was offered, as symptomatic neonates excreting *Salmonella* in stools ultimately get rid of the infection. Moreover, it is difficult to eradicate the carrier state of most *Salmonella* serotypes(1). Cases of *S. senftenberg* septicemia need to be closely followed up to document the carrier state in view of its epidemiological implications as the index case may be a potent source of infection to the susceptible contacts in community.

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Persistent Pulmonary Hypertension in the Newborn

With reference to the letter entitled 'Persistent Pulmonary Hypertension in the Newborn' (PPHN)(1), we would like to offer the following comments.

Though the most probable diagnosis of the case would be PPHN following meconium aspiration syndrome (MAS), the definitive diagnostic criteria for PPHN include hyperoxia test, hyperoxia-hyperventilationt test, preductal versus post-ductal arterial PO_2, rapidly fluctuating arterial PO_2 or transcutaneous PO_2 demonstrated on continuous recording and use of contrast echocardiography to demonstrate patent ductus arteriosus (PDA) and patent foramen ovale (PFO)(2).

Hence, the full diagnostic criteria have not been established. No mention of the FiO_2 is there in the entire report. For diagnostic purposes, hypoxemia should persist even in 100% oxygen as the first step towards confirmation of PPHN. The most definitive test, hyperoxia-hyperventilation test has not been mentioned. A difference of 15 mm Hg or more from preductal and post-ductal sites are significant of right to left shunting only if both the PaO_2 values are around 100 mm Hg or less. This test has to be done in 100% oxygen or at lower FiO_2 concentrations adequate to prevent cyanosis. Demonstration of shunt via PFO and/or PDA using contrast

echocardiography would have had additional confirmatory value.

The use of high PEEP has been well documented to worsen hypoxemia in neonates, especially in an infant with alveolar overdistension associated with MAS. Alveolar overdistension possibly increases the pulmonary vascular resistance and secondarily increases the intra-pulmonary shunt fraction(3). This would have compounded the baby's problems.

Babies with PPHN are difficult to manage, with a mortality rate around 50%. Too rapid a decrease in the ventilator settings, can be disastrous, because of the "hypoxic flip-flop". Ventilation has to be adjusted to maintain a "critical level of $PaCO_2$" at which the PaO_2 tends to rise. The critical level of $PaCO_2$, though usually under 30 mm Hg, varies with individual babies.

In our neonatal unit, we have successfully managed cases of PPHN with hyperventilation in high oxygen concentrations, meticulous nursing care, minimum handling, use of alkali and occasional use of the pulmonary vasodilator, tolazoline and use of cardiotonic agents like dopamine.

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Reply

We thank Dr. Bhandari and colleagues for valuable comments on our case report. Several points raised by them on the diagnosis and management of neonates with persistent pulmonary hypertension and extensively covered in our review article that appeared subsequently(1).

The comments on the role of PEEP in increasing pulmonary vascular resistance are valid. Lack of reference to FiO^a (which was 1.0) alongwith the IPPV settings given in the report was an inadvertent typographical error.

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Poliomyelitis and Immunization Status

In the article entitled 'Poliomyelitis with special reference to Immunization status' by Mathur *et al.*(1) the observation of high mortality among partially vaccinated children and its interpretation as an