

MUMBAI

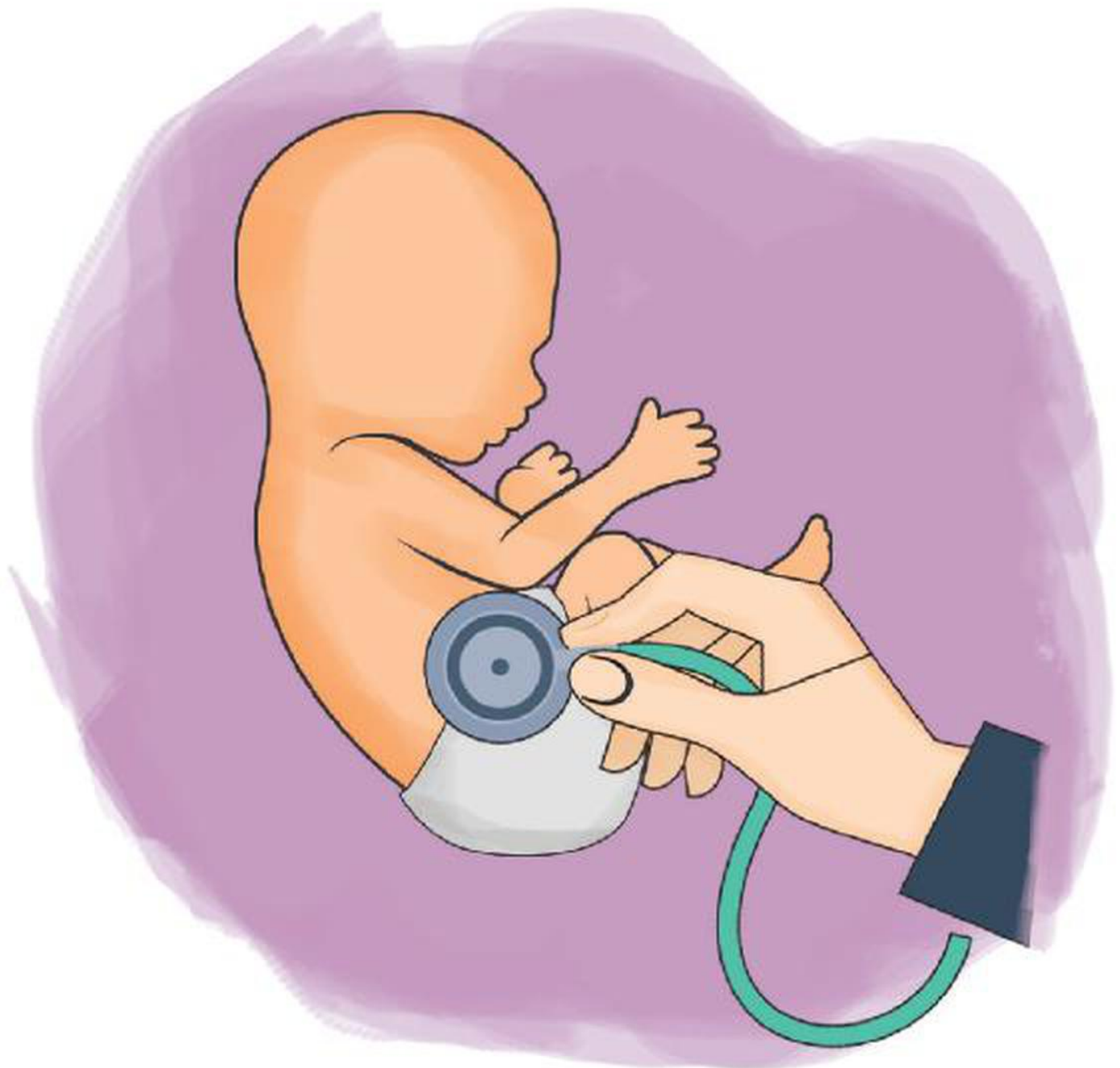
# Indian neonates highly resistant to first-line antibiotics

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**Treating infections in babies up to 28 days old is a challenge for doctors**



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Antibiotic resistance is a growing challenge when it comes to treating neonates with infections. Doctors say that in Indian neonates, the resistance to first-line antibiotics is nearly 90%, which is an alarming sign.

“Most centres have now started using the second-line antibiotics as the first line,” said Dr. Haribalakrishna Balasubramanian, consultant neonatologist with Surya Hospital in Santacruz. First-line antibiotics cover fewer bugs, and have a narrow spectrum of action, while second-line antibiotics have a broader spectrum and can act on many other bacteria. They are preferred in serious infections.

Babies up to 28 days of life are termed neonates. According to the Center For Disease Dynamics, Economics and Policy, nearly one million children die in the first four weeks of life every year in India. Of these, 190,000 deaths are caused by sepsis, a bacterial infection that overtakes the bloodstream. As many as 30% of sepsis deaths are attributed to antibiotics resistance.

Overuse and misuse of antibiotics allow the bacteria to become resistant to the drugs. Doctors say that in newborn babies, the infection spreads quickly and the bacterial load multiplies with great speed.

Dr. Balasubramanian said infections are either gram-positive or gram-negative (a classification of bacteria based on the result of the Gram stain test). “In the Indian setting, gram-negative bacteria is the main concern for newborn babies,” he said. The degree of antibiotics resistance varies from neonates and other children. “The signs of sepsis are also different. For example, fever is uncommon but symptoms like refusal to feed, lethargy, fast breathing, skin manifestations and convulsions could be the signs,” he said. The risk of infections in premature babies is almost 20%. In full-term babies, the risk of infection is less than 5%.

Neonatologist Dr. Jayashree Mondkar from the civic-run Sion Hospital said most babies referred from the periphery (near Mumbai) are already on higher antibiotics. “Doctors may opt for aggressive management because they are dealing with babies but a proper investigation is crucial before putting them on antibiotics,” she said.

A 2017 paper published in the Journal of Pediatric Infectious Diseases Society had concluded that high rates of resistance to World Health Organization-recommended first-line treatment

“There is an urgent need to both enhance antibiotic stewardship and infection prevention and control measures and consider urgently how to repurpose older antibiotics back into routine care in India,” the paper said.

“Antibiotics stewardship is needed to have an umbrella of interventions and control measures,” said Dr. Balasubramanian. “Some interventions are limiting the use of antibiotics, not administering them as prophylactics and stopping the drug as soon as the blood culture is negative. The risk factors can be reduced by hand hygiene, pushing for breastfeeding as it is important to prevent infections, providing human milk instead of formula milk,” he said. Every medical unit should have a policy to prescribe antibiotics with a consensus from a group of doctors and not just one doctor, he said.

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