

Celebrating Excellence

Thirty years ago, Mudhole village was a brown speck in the dry and deciduous Deccan landscape north of Hyderabad. Mudhole was one of the thousands of Indian villages whose development indicators were a cause for concern. It was here, three decades ago, that LVPEI established its first secondary care facility--the Bhosle Gopal Rao Patil Eye Centre--what many at that time considered an impossible dream. The region had no medical facilities, let alone eye care. Access was difficult. The area was marked by instability, discontent and armed conflict. Yet Mudhole became the proving ground for a bold idea: that high-quality, equitable eye care could thrive in rural India.

Today, Mudhole offers many reasons to celebrate and this month, the Bhosle Gopal Rao Patil Eye Centre achieved yet another milestone: offering over 100,000 surgeries since inception. Within the LVPEI network—now a large-volume, high-functioning system delivering over 2.6 million services and over 200,000 surgeries annually--it is easy to lose sight of the significance of this number.

The 100,000 surgeries performed at Mudhole represent far more than scale. This figure is testament to a vision that was articulated at its founding. The LVPEI model has long aspired for rural, secondary centres performing approximately 250-300 surgeries per month. These centres then would be sufficient to address both the incidence and the backlog of care, particularly for cataract. Mudhole has sustained this steady cadence for 30 years. The impact has been transformative. Today, blindness and vision impairment in the population serviced by this centre have declined by 26%, while the effective cataract surgical coverage rate (eCSC) has increased from 10% to 45%.

A model like no other

In 1997, a young, 23-year-old Rajashekar Varada joined LVPEI to train for his first job. Soon after, he accompanied the LVPEI team led by Dr Nag Rao to Mudhole, becoming the centre's first administrator. Growing up near Hyderabad, Mudhole was his first exposure to rural Adilabad and its many challenges. The centre opened on 20 December 1996. Two months later, the Operation Theatre was ready. On the day of the first surgery, the resident ophthalmologist, Dr Rajan Shonek, and Rajashekar faced an unexpected crisis—the OT team, freshly trained at LVPEI in Hyderabad, did not make it to Mudhole! They swung into action, scrubbing and setting up the OT themselves. One surgery was performed—everything worked flawlessly. Soon, the team arrived, and by the end of the first year, Mudhole had performed 1000 surgeries.

One day, a large crowd of curious villagers from Khanapur turned up at the centre. It was time for the post-surgery follow up of one of their residents. The man, a banana seller, was bilaterally blind with cataract and was resigned to a life of destitution. The cataract surgery was nothing short of a miracle—the crowd from Khanapur had travelled the 100-odd kilometres to witness the magic of a blind man gaining sight.

Over the years, Bhosle Gopal Rao Patil Eye Centre also emerged as a site of clinical excellence. My colleagues, Milind Naik and Somasheila Murthy (now at the Shantilal Shanghvi Eye Institute in Mumbai), performed the first orbit surgery and the first corneal transplant in a rural setting here. In fact, the centre now offers partial-thickness corneal transplants, a procedure that even many urban centres in India have yet to adopt widely.

The centre has been shaped by the contributions of many distinguished ophthalmologists, including Ashok Nanda, Umang Mathur, Partho Mandal, and Ashi Khurana to name a few. Several members of LVPEI's senior leadership also worked at Mudhole, including Rohit Khanna (who now heads our public health arm), Swathi Kaliki (who heads LVPEI's Institute of Excellence on childhood eye cancer), and Ramesh Kekunnaya (who heads our innovation arm, and our Child Sight Institute).

Excellence in a true sense

Excellence is measured not just by the complexity of surgery but by outcomes. Of the many things that could go wrong at rural centres, the most dreaded is endophthalmitis—infection and the resultant inflammation after cataract surgery—resulting in pain, distress and a loss of vision.

The centre has had a good run with negligible endophthalmitis rates over the decades (with a decade and more of zero cases). Further, a study by my colleagues Varsha Rathi and Rohit Khanna found that more than 91% of patients treated at the Mudhole centre achieved visual acuity of 6/12 or better—outcomes comparable to the best global standards. The 100,000 surgeries at Mudhole were performed on approximately 60,000 patients—nearly 60% of whom were women. Close to 60% of these surgeries were provided free-of-cost, serving a catchment area extending deep into southern Maharashtra and northern Telangana. This is the excellence in a true sense and the reason for all of us to be proud of the centre and the entire team.

The Bhosle Gopal Rao Patil Eye Centre is ultimately a story of vision — not only restored sight, but the foresight, courage, and commitment that made such transformation possible.

More celebrations

Cataract surgery remains one of the most frequently performed surgical interventions worldwide. There are many service delivery models that focus on tackling the condition, and yet, it continues to be the leading cause of vision loss. The transparency of the eye's lens is maintained by *crystallins*, a class of structural proteins essential for optical clarity. With age, cumulative oxidative stress damages these proteins, leading to lens opacification and cataract formation. As populations live longer, the incidence of cataract naturally increases.

Prof D. 'Balu' Balasubramanian, a biochemist by training, made pioneering contributions to our understanding of *crystallins* and the molecular mechanisms underlying cataract formation. Equally significant was his role in fostering a vibrant community of researchers dedicated to advancing this and other eye and vision science research areas.

Last week, the Centre for Cellular and Molecular Biology (CCMB) in Hyderabad, an organization he had led, honored Prof Balu on its Founder's Day celebrations. In a day-long symposium, his former students and colleagues—now celebrated scientists—reflected on his scientific legacy and profound influence on their careers. Many noted with admiration that his professional contributions continued to flourish *after* he formally retired, and particularly when he joined us and headed research at LVPEI.

My congratulations to Prof Balu and to the dedicated, long-standing team at the Bhosle Gopal Rao Patil Eye Centre in Mudhole. Our gratitude extends to all the donors and supporters who made our Mudhole story such a success: the late PG Michael of CBM (Christoffel Blindenmission); Mr Nagarajan of Sightsavers, the local community organization, GRAM; and Mr Narayan Rao Patil of Bhainsa.

- Prashant Garg