

My mentor Michael T. Trese

"People do not decide to become extraordinary. They decide to accomplish extraordinary things." – Sir Edmund Hillary

Michael T. Trese is not an ordinary person doing extraordinary things; indeed, he is really special. Why do I perceive him to be so? His unarming smile for one, but that is just the beginning!

George Mallory the well-known British mountaineer is famously quoted as having replied to the question "Why did you want to climb Mount Everest?" with the retort, "Because it's there." Umpteen times Dr. Trese has been asked and even been criticized as to why he does surgery for advanced retinopathy of prematurity (ROP) – he does because it is there, a challenge to revive *nearly dying, but not dead tissues*. Tatsuo Hirose who initiated open sky surgery for ROP decades ago states, "This is the most complex and difficult type of retinal detachment we (retinal surgeons) face." Dr. Trese decided to take this most difficult challenge head-on, and so very successfully. He has retained his focus for decades on the problems of not only ROP Stage 5 surgery but also a lifetime of dedication to creating new knowledge through persistent scientific hard work in the field of pediatric retinal diseases. He has been named as "The Best Doctor in the Midwest, the United States, and Americas. His books and chapters are like the holy books in treating pediatric retinal diseases. He continues to publish extensively in peer-reviewed journals both on clinical and basic scientific aspects. He has spoken all over the world delivering numerous named lectures and has participated in workshops and courses.

What about his medical journey? In 1976, Dr. Trese graduated from the Georgetown University in the United States and completed his residency at the UCLA (University of California, Los Angeles) Jules Stein Eye Institute. He completed his vitreoretinal fellowship at the Duke University in Durham, North Carolina. He was Director of VR Surgery at the University of Kansas. He joined a private practice with the Associated Retina Consultants in 1982 at the William Beaumont Hospital, Royal Oak, Michigan, where he now heads the Pediatric and Adult Vitreoretinal Surgery. He is also a clinical professor at Oakland University and a clinical associate professor at the School of Medicine, Wayne State University. His academic achievements are but a small glimpse of the actual work that he has accomplished and the legacy that he has created through his students and the patients that he has managed both through himself and through the hands he has skilled globally. Brief glimpses are provided below.

His clinical work in ROP and allied pediatric retinal diseases includes familial exudative vitreoretinopathy, Coats disease, persistent fetal vasculature, and retinoschisis; he also does retinoblastoma care – an area of focus where he has strived to improve surgical outcomes. Techniques of lens-sparing vitrectomy for ROP, buckling for ROP, and using adjuvants such as babies' own plasmin (went on to ocriplasmin) are some of his innovative refinements both of old techniques and the new ones he has introduced to pediatric retinal surgery. He also designed instruments, including the versatile Trese's irrigating spatula for ease of dissection in closed chamber

pediatric vitrectomy. This by itself is doing something so incredibly special. Handling babies and young children as such puts off many surgeons. Then dealing with poor prognostic diseases and facing queries from worried parents such as "Will my child see?" "When will they see?" take years to find out. It may take up to 4 to 5 years or more for retinal outcomes and visual gain to manifest. Retinal reattachment after Stage 5 ROP surgery can take a year or more; slowly the babies start seeing lights, then shadows, then colors, and many go on to see the outlines of objects; finally they get decent ambulatory vision and sometimes even reading vision by school-going age. A private practitioner taking on exclusively such seemingly "poor prognostic" and "unrewarding" outcomes shows the humility, spirituality, and determination to do the extraordinary by Dr. Trese. In a scenario where eye surgeons have a fixed timeline of 6 weeks to study the surgical outcomes, this long-long waiting period requires deep commitment and patience, which is what Dr. Trese keeps on sharing with the parents and teaches his students.

The 3 months as his student in 1998 has been a life-changing experience for me personally, as it has been for so many of his ever-increasing global community of students. In the United States, it was not all that easy for a clinician to provide clinical and surgical exposure to international students. This needed convincing patients and taking consent that a "foreigner" would also do the clinical evaluation hands-on and scrub in as an assistant or even be an observer to watch the surgery. He would also drive me to the Oakland University laboratory, where exciting research in ROP genetics, wound healing, and plasmin were ongoing. His love, sincere efforts, and deep commitment to spreading skills and knowledge to doctors from countries where the burden of pediatric retinal blindness is increasing are to be seen to be believed. He would keep on doing case after case. I would see patients coming from Italy, Mexico, the Philippines, and every state of the United States – literally all over the world. He would operate from morning till evening without a break. During lunchtime, he would hand over money to us, his fellows, for lunch and say, "Eat what you like and get a sandwich for me." The bond does not end with training. He had the foresight to initiate a large ROP telemedicine program encompassing his students extending into far Asia, at a time when teleconsultation aroused huge suspicion of efficacy and acceptance! Today, it has become the norm!

Any surgeon with a passion would do the clinical management and the teaching assignments as mentioned above. But Dr. Trese goes beyond that. He heads one of the rare academic private practices where he also does extensive basic science and surgical technique research to find cures. Not only that, he has also been a rare person to recognize that a doctor's care of a baby or a child with retinal disease does not end with surgery. It extends to the community. The parents must overcome too many hurdles that their child faces during the growth period. These include hurdles of integration into society, economics, education, and careers, while at the same time struggling to make the best use of the residual functional vision that often needs services of low-vision and rehab specialists. Low-vision aids being expensive and not readily available is another challenge. Not only did Dr. Trese

integrate low-vision specialists and vision trainers in his team, but he also published on the need and outcomes. Dr. Trese need not have gone beyond the already amazing work as a clinician, but he moved beyond his comfort zone of clinics and surgery into the community from where the patients came. He was the founder president of ROPARD (Retinopathy of Prematurity and Allied Retinal Diseases) in 1990 that helped parents get empowered to cope with the hurdles and raise funds for research into these quite rare disorders. Twenty years later, this has bloomed into an amazing center that ROPARD funded – the PRRF (Pediatric Retina Research Foundation) at the Oakland University. It is the first of its kind – solely dedicated to research and mentoring fellows in pediatric retinal diseases from benchtop to bedside. The Ophthalmic Biobank, the first database to bank all relevant tissues from pediatric retina patients and use them for amazing research to get cures, again needs dedicated time during surgery to collect all the materials meticulously. While being immersed in writing about his work, I also need to highlight the tremendous enthusiasm he has for fishing and for going out on the Great Lakes. I missed that on my short trip, and that is a pending agenda with him in the future.

The “guru prasadam” has been at the core of saving sight of thousands of babies globally. It has had a huge multiplier effect – each trained person has gone back and trained others resulting in thousands of babies getting benefitted. Also, some

students, including myself and Anand Vinekar, went on to collaborate with the basic scientists, which we learned from our guru. His presence at the world’s first hands-on pediatric surgical workshop at L V Prasad Eye Institute in 2016 was the crowning glory for pediatric retina trainees in India [Fig. 1]. A true clinician-scientist-teacher with entrepreneurial skills in private practice is a difficult guru to emulate. Humbly, my gratitude and “bow” on behalf of thousands of students, children, and families that reciprocate the smile that Dr. Trese has spread globally. I close with yet another quote from Sir Edmund Hillary who went on to conquer the formidable Mount Everest: Dr. Trese you taught us “It is not the mountain we conquer but ourselves.”

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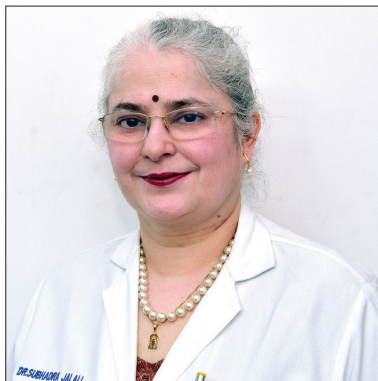


Figure 1: Rd. Michael Trese at the first hands-on Pediatric Retina Surgical workshop at L V Prasad Eye Institute, Hyderabad, India, with enthusiastic students from across India

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Dr. Subhadra Jalali was educated at Government Medical College Jammu, (1986, medical school) PGI, Chandigarh (1989, MS Ophthalmology), fellowships at LVPEI, Hyderabad (1993, Retina and Comprehensive Ophthalmology), NEI, Bethesda (1995, Ocular genetics, Electrophysiology and Uveitis) and at William Beaumont Hospital (1998, Retinopathy of Prematurity) in USA. She was amongst the first group of pioneering Women Retinal surgeons in India. At LV Prasad Eye Institute she focusses on research and on surgeries in Pediatric Retina. She has 750 presentations including named orations, 200 publications and 70 awards. Her crowning glory are the uniquely one-month hands-on trained ROP fellows from all over. In 2014, she conducted the first ever pediatric-retinal surgery hands-on workshop. The IJO-platinum award was for publication on outcomes of a city-wide ROP program, the first one in India. She is on Government of India ROP National Taskforce and a WHO expert. She loves dancing and enjoying various global cultures.