

Jain Institute of Vascular Sciences

JIVAS NEWS

Quarterly Newsletter and Vascular Update

Jain Institute of Vascular Sciences

Bhagwan Mahaveer Jain Hospital



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Celebrating 25 years of Excellence

January 2000 -

Department of Vascular and Endovascular Surgery was inaugurated.

March 2002 -

Renamed JIVAS, JAIN INSTITUTE OF VASCULAR SCIENCES

Prelude by Dr. K. R. Suresh

The gambit paid off! Redoubtable choice taken a score and five years ago, was splendidly rewarded! Decision to relocate my vascular practice, from glitzy (and highly paying) Corporate Hospital to then somewhat dilapidated Jain Hospital (BMJH) was scoffed by many. I was surprised when couple of my trusted lieutenants (Dr. Vivekananda and Dr. Raghunandan) joined me without an iota of hesitation. They flourished with the evolution of the department and cut their own swath reaching newer heights, as did Dr. Vinaya who joined us a few months later.

The initial meeting with trustees had very positive "vibes", when they agreed to separate vascular surgery from CTVS, making JIVAS one of the earliest such departments in India. Their "vibes" also suggested that we could build not just a department, but an academic Institution of Excellence within the portals of this hospital with its doors open to rich and poor alike!!

The progressive generations of trustees continue to repose their faith in us till today and this has translated into a unique "Vascular Floor" to house the a newly built dedicated operating theatre complex, with an upgraded, sophisticated cath lab in "Hybrid" theater and wards, both general and private, slated to be completed mid 2026! And bequeathing JIVAS with enviable array of modern tools and equipments, on par with world class vascular departments! Despite these enhancements, we can continue to provide outstanding care, equal or better than corporate hospital at affordable costs across all strata of patients.

The journey of JIVAS (and of BMJH) from those days of yore to present, and hopefully in future, has been truly prodigious, metamorphosizing as the specialty evolved transforming us, the vascular surgeons in to truly holistic Vascular Specialists, embracing newer methods and techniques; acquiring advanced skills for minimally invasive endovascular procedure; facilitating treatment of previously undoable and higher risk patients but without compromising the basic tenet of patient care - that is caring for the patient with compassion.

The success of JIVAS is not just measured in increasing numbers of patients and procedures, but in uncompromising quality of patient care. This progress is even beyond our own optimistic expectations

The present Pole Vault champion from Sweden, Armand Duplantis has broken his own world record multiple times last couple of years, leaving rest of the field behind. Then whom does he compete with? With himself, bettering his own efforts and results virtually every day. So will JIVAS !

email : jainvascular@hotmail.com

For Circulation Among Medical Professionals only

Our Journey

Over these 25 years, our department has grown from humble beginnings into a center of excellence driven by dedication, innovation, and compassion. Every milestone reflects the commitment of our clinicians, staff, and the trust of our patients

A Moment of Gratitude

This celebration is not just about progress in medicine it is about people. We honor the pioneers who built this department, the teams who sustain it, and the patients who inspire us every day.



JIVAS Team 25 years ago



JIVAS :

- Provide holistic, comprehensive approach towards vascular diseases. It comprises of several divisions which work seamlessly to provide comprehensive care for all vascular pathologies.
- Offers a unique blend of skill, cutting-edge technology and innovative research, which only few institutes offer in India.
- Is recognised in India and globally for its high quality care for patients with vascular diseases and diabetic foot problems.
- Is One of the earliest vascular departments to offer minimally invasive endovascular procedures. Now one of the busiest endovascular centres in the country.
- Is the First department to be recognised by National Board Examiners for 18 months Fellowship in Peripheral Vascular Surgery.
- Is the First department recognised in India for super-specialty DNB in Peripheral Vascular Surgery.
- Is the second comprehensive and dedicated vascular department to be established in India.
- Is the first vascular department to have a completely dedicated floor with all categories of wards, operating rooms, hybrid endovascular suite, exclusive ICU, dedicated and specialised nursing staff, along with facilities for extensive patient counselling, "Life Change" programmes, and dedicated "Daycare" facilities.

The Divisions :

- **Vascular Surgery** : Offers complete spectrum of "open" surgical procedures for wide varieties of arterial

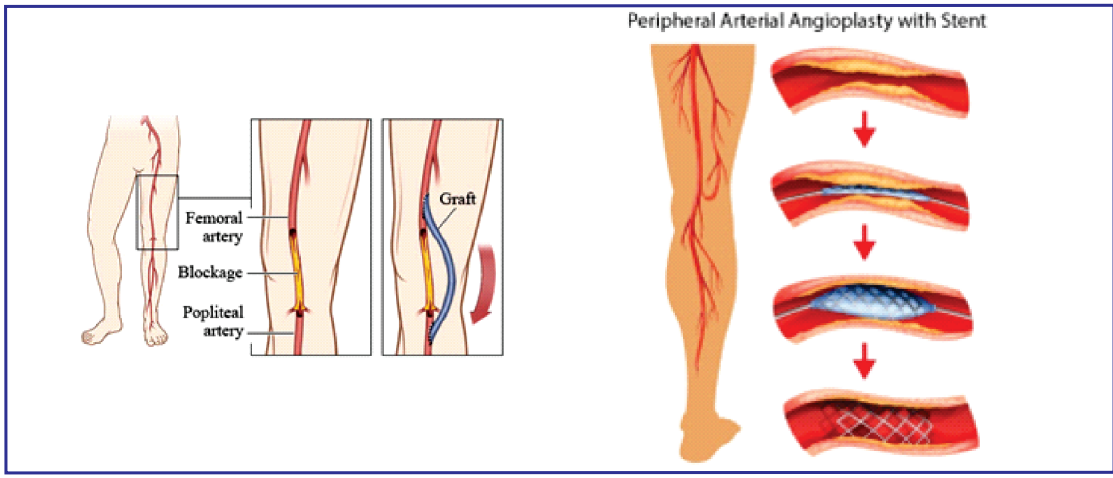
pathologies like occlusive and aneurysmal diseases of lower and upper limbs, abdomen (aortic, mesenteric and renal arteries), chest (thoracic aorta) neck (carotid, subclavian arteries) and vascular trauma.

- **Endovascular Therapies** : Minimally invasive, catheter based procedures angioplasty, stenting, stent-grafts, emboli therapy for different pathologies (bleeding, vascular malformations etc.). Even high risk patients with complex arterial and/or venous pathologies can be offered these procedures with minimal morbidity. Newer “cutting edge” technologies are frequently applied.
- **Hybrid Procedures** : JIVAS was one of the first to offer “hybrid” procedures in India - these combine minimally invasive endovascular procedure with open surgical procedures at one sitting. This reduces the surgical burden, at the same correcting multiple pathologies. Now with a dedicated “Hybrid Endovascular Suite”, again one of the very few in India with a state of the art” cath lab, we will be able to correct even more complex pathologies with higher precision, lesser morbidity and many can be done in outpatient setting.
- **Venous diseases** : One of the first to offer endovenous laser and radio frequency ablations for varicose veins. A large number of DVT and pulmonary embolus patients are treated, apart from chronic central venous occlusions treated with minimally invasive endovascular procedures.
- **Vascular Medicine** : Another division of JIVAS since majority of vascular patients can be managed by best medical therapy. Those who undergo any procedure need lifelong medical therapy not only for peripheral vascular diseases, but also to prevent other complications since these patients present the highest future risk for heart attack, stroke, amputation etc. Also our strong life style modification programme, appropriate counselling aid in decreasing the future complications of systemic vascular problems.
- **Noninvasive Vascular Laboratory** : All vascular patients are evaluated by physiological studies both pre and post operatively, and screening duplex scan. All patients are under long term surveillance programme.
- **Integrated Foot Care Services** : Our world renowned diabetic foot clinic has treated a rather huge number of patients with diabetic foot problems. The rural charitable services have evaluated nearly 18 lakh patients over the years, free of cost. Perhaps this is one of the very few foot care department in India which offers customised footwear, with a completely equipped orthotic, gait lab and in near future a limb rehabilitation centre, this division will be unparalleled in India and very few centres across the world can boast of such facilities. It is recognised as “Center of Excellence” by World Diabetes Association, Denmark
- **Education** : The first department in India to be recognised by National Board of Examiners (NBE) for 3-year vascular surgery training programme (DNB). Foot Clinic has trained over 200-foot care workers from across India and about 10 from across the world.
- **Research** : JIVAS would be one of the first departments in the country to be approached for any international research studies. Numerous National and International, multi centric clinical trials have been conducted at JIVAS. We have published over 20 research studies, most notable of which was the “Stem cell therapy employed to treat Buerger’s Disease, which received international acclaim
- **AVF (ATHREYA VASCULAR FOUNDATION)** : Resource funding for many activities involved in offering care to the lower income patients

From Scalpel to Stent: The Transformation of Vascular Surgery

Vascular surgery stands among medicine’s most dramatic disciplines - a field forged in wartime necessity, advanced through anatomical audacity, and now reshaped by catheter, wire, and imaging technology into a specialty almost unrecognisable from its origins.

The human vascular tree has 100,000 kilometres of vessels threading every organ, muscle, and tissue, presents a surgical challenge of extraordinary complexity. For much of recorded history, injury to a major artery meant amputation or death. Today, at JIVAS vascular surgeons restore flow to an ischaemic limb via a femoral puncture, discharge the patient the same day, and leave behind nothing but a compressive dressing. The arc between those two realities is the story of one of surgery’s most remarkable evolutions.



While the roots of vascular surgery stretch to antiquity, but the modern discipline was born less than 60 years ago by ambitious surgeons who refused to accept that arteries were beyond repair.

At JIVAS Femoropopliteal bypass using autologous saphenous vein established the fundamental principle of distal revascularisation that limb salvage surgery still relies upon. Prosthetic bypass, using PTFE or Dacron, extended these principles to patients without suitable autologous conduit.

With the endovascular revolution.... The concept of treating vascular disease from within the vessel threading instruments through small percutaneous access points rather than opening the chest or abdomen emerged. The technique is percutaneous catheter insertion using a needle, guidewire, and catheter — the Seldinger technique, single innovation to every endovascular procedure performed. By eliminating the need for arterial cut down.

This did not replace the scalpel. It offered a second road to the same destination, one that sometimes better served the patient who could not bear the journey down the first

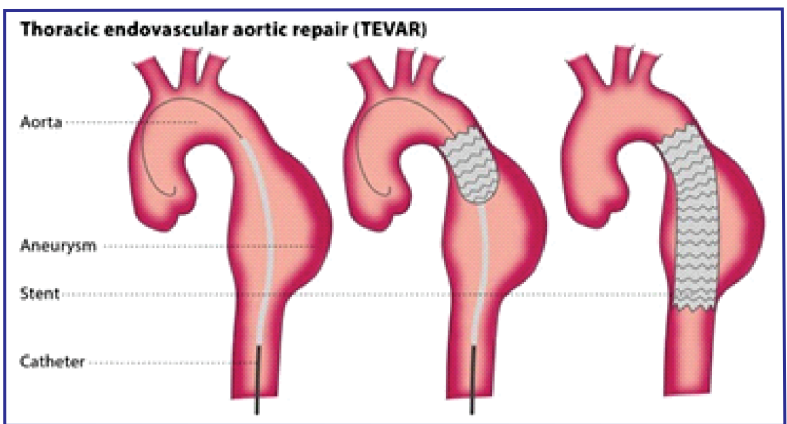
JIVAS further innovations especially in the endovascular segment led to not just placing of stent re-inforced grafts to cover aneurysms – called Endografts but over a period of time these too have been modified to preserve and perfuse important and major branches which otherwise would be covered leading to ischemia with drastic consequences. Thus the development of branched and fenestrated endograft technology for juxtarenal and thoracoabdominal aneurysms are done.

The Hybrid Era : Combining the Best of Both Worlds.

The dichotomy between open and endovascular surgery has given way, over the past two decades, to the concept of hybrid procedures — operations that deliberately combine open surgical techniques with endovascular components in a single setting. The hybrid approach recognises that neither method is universally superior: some anatomies demand open access, whilst others are perfectly suited to percutaneous treatment; many complex cases benefit from elements of both.

Hybrid Operating Theatre.

The physical manifestation of this philosophy is the hybrid operating room — a purpose-built suite combining a full surgical theatre environment with high-resolution fixed fluoroscopic imaging (typically a ceiling-mounted flat-panel C-arm system), advanced haemodynamic monitoring, and anaesthetic capability.



Debranching Procedures.

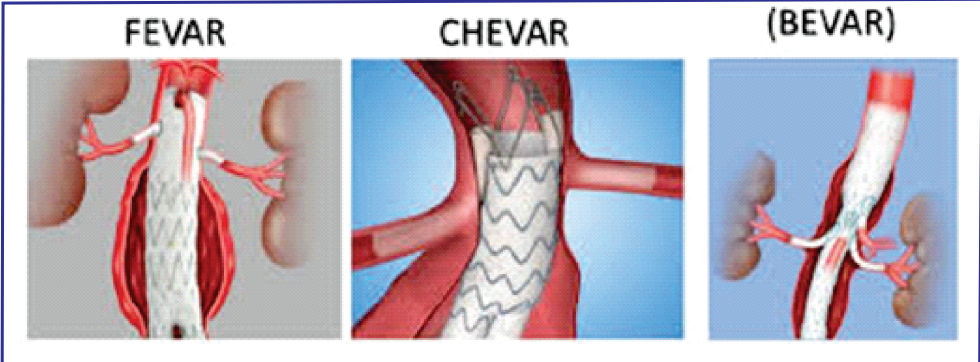
Thoracoabdominal hybrid procedures represent perhaps the most dramatic expression of the combined approach. When an aortic aneurysm or dissection involves visceral segment vessels (coeliac, SMA, renal arteries), the endovascular solution — placing a stent-graft across these origins — would jeopardise visceral perfusion. Hybrid debranching operations solve this: the surgeon first creates extra-anatomical bypasses to visceral vessels (from the iliac arteries or infrarenal aorta), then the endovascular component covers the diseased segment safely, as flow to the critical vessels is now maintained via the new bypass routes.

The Contemporary Frontier: TEVAR, FEVAR, and Beyond.

Thoracic endovascular aortic repair (TEVAR) extended the endovascular principle to the descending thoracic aorta. The technique transformed the management of thoracic aortic aneurysms, type B dissections, and traumatic aortic transections conditions previously requiring a thoracotomy with its attendant risks of paraplegia, pulmonary complications, and high mortality in the unfit patient.

Fenestrated EVAR (FEVAR) and branched EVAR (BEVAR) represented the next frontier: extending endovascular repair to juxtarenal, pararenal, and thoracoabdominal aneurysms by incorporating custom-manufactured fenestrations (apertures) or side branches in the stent-graft body to maintain flow to visceral arteries. The

painstaking planning requiring precise anatomical measurement and often 4 - 6 weeks of manufacturing lead time, has been progressively replaced by off-the-shelf devices with physician-modified options for emergency cases.



Training and the Future Vascular Surgeon.

The transformation of technique has necessitated an equally dramatic transformation in training. The modern vascular surgery trainee must acquire proficiency in open reconstruction, the foundational anastomotic skills that remain essential for complex cases, emergency open conversion, and the majority of distal bypass work, whilst simultaneously developing the catheter skills, wire-handling technique, device knowledge, and radiation safety awareness demanded by an endovascular-dominant practice.

Simulation-based training has assumed increasing importance: synthetic vessel models, virtual reality fluoroscopy simulators, and cadaveric perfusion models allow acquisition of wire and catheter skills outside the operating theatre. Each generation of vascular surgeons has been charged with two duties: to master the tools bequeathed by those who came before, and to forge the tools their successors will need. We are no different.

The Unfinished Revolution.

The answer, in each generation, has been yes. Open surgery did not disappear when EVAR arrived; it adapted, reserving its place for the complex, the hostile, the ruptured, and the failed endovascular case. Endovascular techniques did not make hybrid procedures redundant; they created the conditions under which hybrid approaches became feasible and beneficial.

At JIVAS, each revolution has been on examination, an expansion rather than a replacement

EVOLUTION OF TREATMENT OF VENOUS DISEASE over the last two decades

reflects a major shift from invasive, anatomy-focused procedures to minimally invasive, physiology-driven care. it moved through three major paradigms:

- Destructive (removal of veins)
- Corrective (fixing hemodynamics)

➤ Preservative & minimally invasive (modern era)

1. Initially patients with advance varicose veins who came to us for treatment were offered surgical treatment in the form of high ligation and stripping (the Trendelenburg operation) with perforators ligation. Some of the patients developed neuropraxia, hematomas, pain, suture line infection in the post-operative period. The Endovascular revolution started in the early 2000s in India and this marked a pivotal shift from open surgery to techniques using thermal energy and sealing the vein from within using a catheter inserted through a small, pin hole sized entry point. These venous interventions could be done under local tumescent anesthesia or regional anesthesia, patient could walk soon afterwards and return to normal activities almost immediately. These minimally invasive techniques have dramatically reduced nerve injuries, hematoma, pain etc.

We at JIVAS performed our first Endovenous ablation of varicose veins with a Laser in the year 2007 as time passed along with the laser, other minimally invasive modalities like Radiofrequency catheters and adhesive catheters are done.

Since the last 15 years, we have been performing minimally invasive interventions comprising the whole range of lasers, Radiofrequency ablation and, sclerotherapy.

Selecting the right patient for the right procedure and doing it in the right way is the most important thing and in JIVAS we strive to do the right thing for the patient.

Now as varicose veins treatment becomes more easy to do for the doctors and with faster recovery for the patients, educating the patient about the disease and knowing when the patient actually needs and will benefit from venous interventions is becoming more important to reduce the incidence of unnecessary treatment.



Preparation for LASER surgery and sclerotherapy.

2. Chronic Venous Disease (CVD) Focus

- Broader understanding beyond varicose veins:
 - Venous ulcers.
 - Post-thrombotic syndrome.

3. IVUS : The evolution of IVUS at JIVAS transformed venous disease management from

Underdiagnosed '! Precisely defined '! Image-guided intervention.

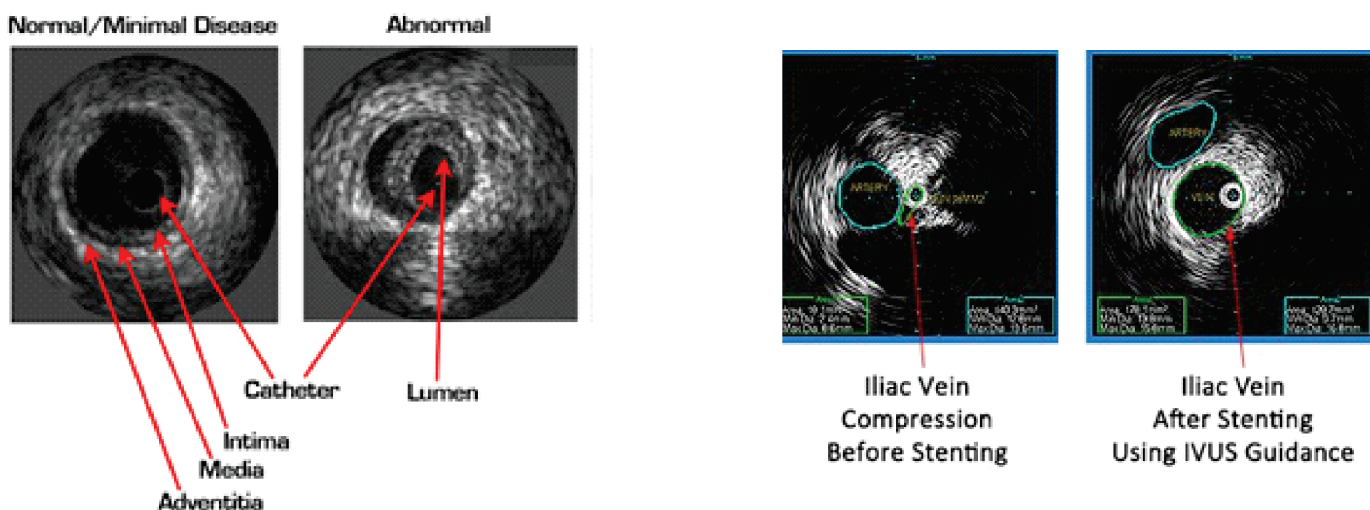
It is now indispensable in venous stenting and has redefined treatment strategies for deep venous disorders, especially obstructive lesions that were previously underdiagnosed.

Earlier we had imaging limitation with Contrast venography of underestimation of stenosis, Poor visualization of vessel wall and intraluminal details, many conditions like iliac vein compression were missed or misinterpreted (like May-Thurner Syndrome).

IVUS introduction to our practice Provided : 360° cross-sectional imaging, accurate true lumen measurement with wall pathology. It helps in Proper stent sizing and placement, Identification of trabeculations, Webs, Chronic post-thrombotic changes.

IVUS has become gold standard in iliac vein obstruction, Complex venous reconstructions

Limitations & Challenges: its Cost and availability, Learning curve, Requires expertise in interpretation.



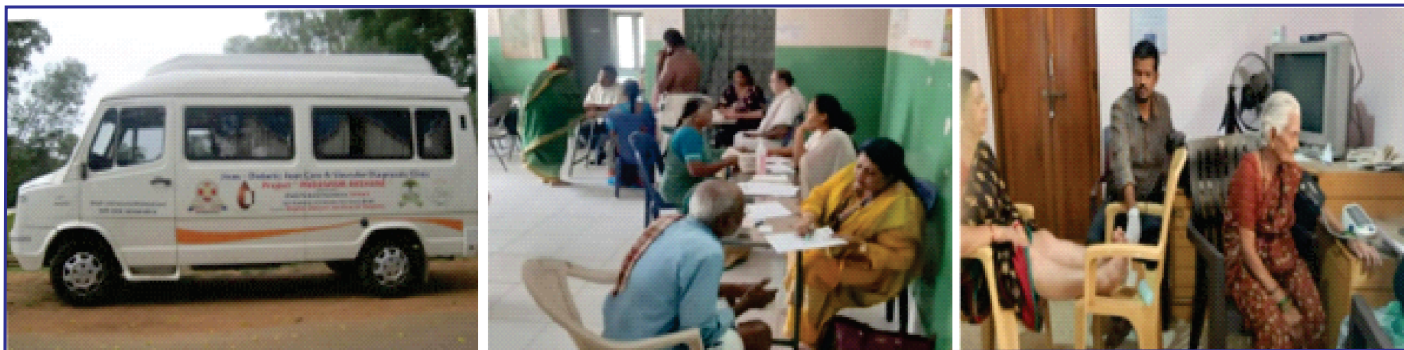
IVUS pictures

4. Thrombolysis for venous disease— Shift Toward Early Clot Removal

In conditions like Deep Vein Thrombosis (DVT) and Pulmonary Embolism (PE), thrombolysis helps preventing clot extension to actively removing thrombus, preserving vein function, and preventing long-term complications.

Traditional systemic thrombolysis carried high bleeding risk. Catheter directed thrombolysis CDT changed that: Delivers drugs like Alteplase directly into the clot, uses lower doses '! reduces bleeding complications, improves vein patency and reduces risk of Post-Thrombotic Syndrome. Especially useful in: Extensive proximal DVT (iliofemoral), Selected PE patients. Not everyone we are doing thrombolysis. Its reserved for: Severe symptoms, Limb-threatening DVT, Submassive/massive PE

JIVAS Started Diabetic foot clinic in December 2000 with 800 sqft at present 2500 sqft.



It's better to light a candle than curse the darkness.....

- Back in time we realized that all the revascularization procedures needed to be followed up with wound care, our patients were ending up with amputations after successful revascularizations. That's when we decided to offer end to end solutions for our patients with wound burden.
- We all know that diabetic population in world is increasing and India leading the way. world over amputations of the foot and leg in diabetics is increasing with India's calculation to the numbers – no less.
- Treating diabetic foot infections is extremely complicated, time consuming, resource drawing and it is usually relegated to junior most staff.
- We realized that preventing diabetic foot infections was far easier than treating it.
- Complex problems need a single solution which works. World over it has proved that wearing diabetics appropriate foot wear can extremely reduce the risk of amputations by 50%.
- Convincing people and breaking social habits of walking barefoot at home and temples was and is still the biggest challenge, that's when we decided to have a public outreach and medical colleges to reinforce preventive strategies of diabetic foot care.
- What started out as a division of vascular surgery has ended up dwarfing the parent unit in preventing amputations. We are really proud of our foot care and foot wear comprehensive diabetic foot solutions. A true case of tail wagging the dog.

JIVAS's urban and rural charitable service have continued are as going since 2027.

Here we are highlighting the activities 2024 and has progressed with more zeal. Here we are depicting only the 2024 activities, omitting many functional details found in previous years reports. Thus omitting repetitions and makes it an easier read of the details and numbers.

THESE HAVE BEEN POSSIBLE THROUGH UNFLIMCHING SUPPORT OF OUR MANY WELL WISHERS AND DONORS. WE, ON BEHALF OF OUR PATIENTS (low income patients), WHO HAVE BENEFITTED IMMENSELY FROM YOUR SUPPORT, OFFER HEARTFELT APPRECIATION AND THANK YOU ON THEIR BEHALF.

- The Surana Family- Late Mr. Gewarchandji and his sons Mr. Dilip and Mr. Anand
- Late Dr. Mohammad Majeed and now his daughter Anju Majeed, of Sami Labs- Nearly all our present rural activity are funded from this through ATHREYA VASCULAR FOUNDATION (AVF)
- Mr. ManuChatlani of "Have a Heart Foundation".
- Mr. Sudarhsan & Mrs. Fiona Karle and teir daughter Eshanya of Karle Homes Pvt.LtD.

1. The rural charitable “Project ANVESHINI” continues as outlined in last year’s report.

	Jan 24-Dec 24	Total (2007-Dec 24)
Number of villages covered	281	3166
Number of population screened	13482	3071002
Number of new diabetics detected	18411	57076
Total known diabetics	28978	135764

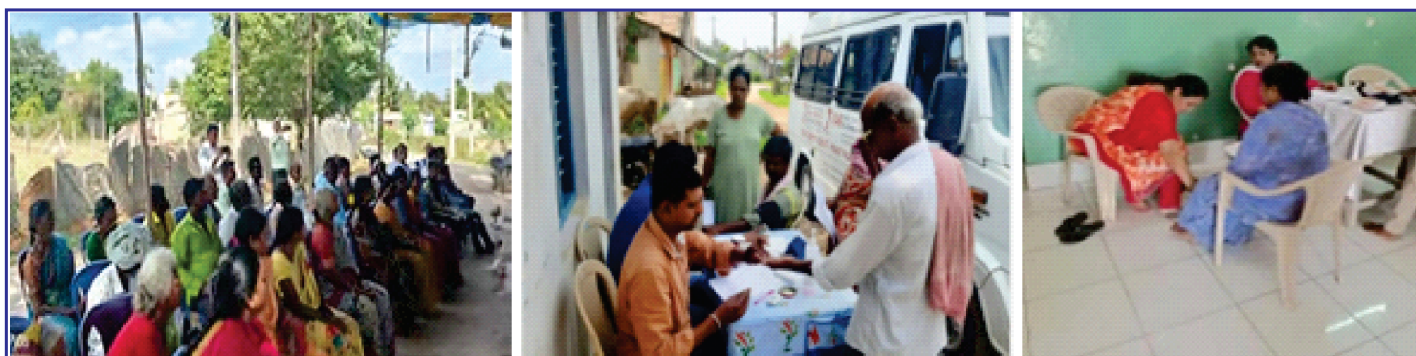
The well-equipped and staffed mobile van visits rural areas to provide screening and care for diabetic patients, mostly for foot and vascular problems. The

visits cover numerous impoverished rural areas within 150 kms of Bengaluru. On an average the mobile unit conducts these “clinics” 22 time a month, apart from screening camps totaling 178 visits. 52483 patients were screened/evaluated in Jan 24-Dec 24.

	Jan 24-Dec 24	Total (2007-Dec 24)
Number of mobile clinic visits	178	2885
Number of patients seen	52483	190563
Number of diabetics	6218	68442
Newly diagnosed diabetics	2101	13501

We have partnered with several NGOs and other organizations for regular visits and screening camps. The outlines are given below and complete details are provided in the annexure.

- With Grameena Abhyudhaya Seva Samsthe (GASS) head quartered in Doddaballapur covering Doddaballapur/ Gowribidanur / Korategere taluk with Health care workers from NGO GASS, through Athreya Vascular Foundation. (12 camps a month)
 - a. Total Number of camps - 138
 - b. Total Patients screened - 14,781 patients



- **SKDRDP** : Sri Kshetra Dharmastala Rural Development Programme

SKDRDP	Camps	Male	Female	Patients seen
Jan 24-Dec 24	76	10282	3200	13482

- **BAIF**: Bharatiya Agro Industrial Foundation, Founder Mani Bai Desai:

We are doing camps and in BAIF camps from last 15 years in Tiptur and Lakkehalli

BAIF	Camps	Patients seen
Jan 24-Dec 24	16	10411

- **Rotary Club Shivamoga (mid-town):**

IDDM Children camp for 80-120 children regularly on 1st Sundays of every month, we evaluate their foot and give foot wear to IDDM children (handmade).

Rotary club shivamogga	Camps	Patients seen
Jan 24-Dec 24	1	128

- **ORDER NGO**: Organization for Resource Development and Environment Rejuvenation, Karnataka JIVAS free foot camps are organized with order NGO in Tumkur District and Hassan District villages.

ORDER NGO	Camps	Patients seen
Jan 24-Dec 24	13	1230

➤ **ISHA Arogya Ale:**

Isha foundation jointly with farmers' association we jointly do camp with former Association foot education is done in Interior village of Coorg, Kushalnagar, Napoklu, Bettada pura, Tumkur, Tiptur.

Foot screening for general public and mass education programmes.

ISHA Arogya Ale	Camps	Patients seen
Jan 24-Dec 24	7	878

➤ **Shivalli Ramakrishna Ashram:**

We go every 2nd Sunday to Shivalli Ramakrishna Ashram health camp from last 17

years for screening Diabetic foot patient's and foot education.

Shivalli Ramakrishna Ashram	Patients seen
Jan 24-Dec 24	482

➤ **MASS CAMPS:** are organized with requests 2024-camps Malavalli/Melukote/Mandya/K R Pete/Kadri/ Gulbarga / Dharmavaram / Tiptur / Kolar / Bangarpet / Madavapalli / Dharmavaram / Chikkanayakanahalli / Indian bank, Canara bank, Mass camp Chamrajnagar.

Jan 24-Dec 24	Patients seen
	12182

➤ **Financial literacy counsellor (FLC), Tiptur**

FLC	Camps	Patients seen
Jan 24-Dec 24	30	3975



SO FAR THE NUMBER OF PATIENTS SEEN (NEW AND REVISITY) SINCE INCEPTION OF THESE PROJECTS IS OVER 1.2 CRORE.

Advancing Vascular Medicine care for 25 years.

Over the past quarter century, the field of vascular medicine at has undergone a remarkable transformation—one that has profoundly improved patient care, outcomes, and quality of life. As we celebrate 25 years of our vascular department, we reflect not only on our journey, but also on the evolution of an entire specialty.

Modern vascular medicine emphasizes collaboration of physician, vascular Surgeons, counsellors and specialized nurses/educators now work together to provide comprehensive care. At the same time, there has been a growing focus on prevention—managing risk factors like diabetes, hypertension, and smoking to reduce disease burden.

Majority of patients with vascular diseases may not need intervention surgical or endovascular, especially if they are diagnosed early and referred to vascular surgeon without delay. Even those who undergo interventions, will need “Best Medical Therapy” before and after any procedure. This medical care should be continued for “life” in most of

the patients to prevent failure of procedures in mid and long term, prevent recurrences and to address the comorbid conditions. Hence JIVAS has integrated medical therapy within its realm and has been providing this care to all its patients, seamlessly combining with other divisions, to provide “holistic” care to these patients.

This division provides our patients several facilities :

1. Noninvasive vascular diagnostic laboratory: Physiological studies and Ultrasound/duplex imaging.
2. Evaluation and best medical management of our patients with arterial and venous disease. Non-surgical and non-interventional therapies for various vascular problems, including vasculitis.
3. Life change programmes: Risk factors modifications that contribute to atherosclerosis such as dyslipidemia, hypertension, diabetes, smoking cessation and disorders of coagulation that leads to thrombosis
4. Extensive counseling services to all the patients.

1. Noninvasive vascular diagnostic laboratory :

- Ankle brachial index(ABI) today is the most important determinant of future peripheral vascular, cardiac events in patients at risk, even if they are asymptomatic. when performed in all patients at risk and if less than 0.9, these patients will undergo lifestyle modification counseling and best medical therapy to prevent future cardio vascular events. Now JIVAS is one of the few vascular departments in the country which is equipped with a modern “Vascular Physiologic Lab” which along with ABI evaluates the physiologic diagnostic studies of the upper and lower extremities, such as segmental blood pressure measurement, pulse volume recordings with waveform analysis providing important data about patient’s vascular status. This would be very useful in following patients’ response to therapy and is extremely useful in diagnosing those with nonspecific leg specific symptoms through exercise (stress) testing with pre and post- exercise pressure measurement to assess hemodynamic responses and functional capacity. It is recommended modality for pre and post intervention surveillance, important to recognize a failing graft before total occlusion This further complemented by equipment for Transcutaneous oxygen measurements.
- Two portable duplex machines completes this center called aptly NIVAAC (Non Invasive Vascular Academic Center), which has been instrumental in starting a nation-wide training program for vascular surgeons under the aegis of Vascular Society of India. Duplex scan, an important component of non-invasive vascular diagnosis, provides anatomical details of the disease is extremely useful not only for diagnosis, but can be used as the sole diagnostic test to guide the therapy. It is recommended modality for post intervention surveillance, which is important to recognize a failing graft before total occlusion. Duplex surveillance is routinely performed at JIVAS.

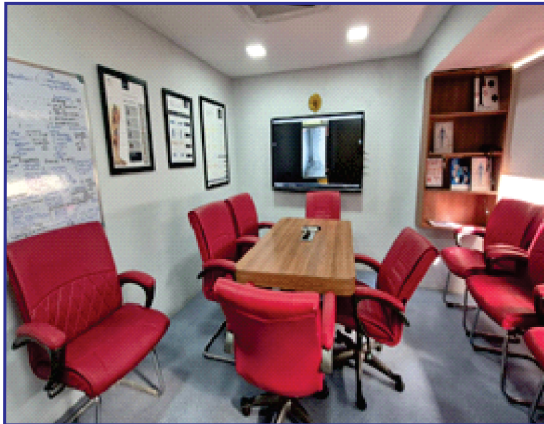


NON INVASIVE LABORATORY

2. Evaluation and medical management of broad spectrum of vascular diseases:

- We recognize atherosclerosis as a systemic disease and all patients are on appropriate therapy prior to and after the intervention. The commonest symptom of PAD disabling claudication, is initially treated medically and Intervention reserved for those who fail this or show progression of disease.
- Management of Vasculitis including thromboangitis obliterans, Takayasu’s arteritis, ulcers associated with connective-tissue diseases, vasospastic disease (Eg: Raynaud’s phenomenon) are done in collaboration with rheumatologist.
- Identifying and treating VTE (venous thrombo embolism) which includes DVT and pulmonary embolism; evaluation of any associated hypercoagulable disorders/thrombophilia (like Protein C, Protein S, anti-phospholipid antibodies, factor V Leiden, antithrombin III) connective tissue disorders.

**VASCULAR
COUNSELLING
ROOM**



**PATIENTS
INSTRUCTION
LEAFLETS**

3. “Life change” program involves extensive counseling about modification which would help in disease treatment, help understand the procedures they undergo and post OP instructions. People and patients who have risk factors like diabetes mellitus, hypertension, hyperlipidemia which can lead to diseases of the blood vessels in different parts of the body.

- Realizing the importance of medical therapy and the need for extensive counseling required for these patients, JIVAS has developed a comprehensive program with a dedicated vascular counselor.
- The patients are counseled at all levels with audio, visual support:
 1. For tobacco consumers/patients and their families with audio & visual support. They would be counseled about various ill effects, diseases & disadvantages caused by smoking, help them quit smoking.
 2. For Diabetes Mellitus and Hypertension: Patients and their families will be counseled about the Importance of optimizing blood pressure and diabetes control and its ill effects. Their primary doctor will be responsible for their drug therapy.

3. This does not replace treatment from patients own doctor, with whom he/she should continue the treatment for various ailments like Diabetes, high Blood pressure etc.

Education: JIVAS is one of the few vascular centers in the country committed to education



JIVAS 25 years Alumni Vascular Surgeons

1. Fellowship in Vascular Surgery through Rajiv Gandhi University of Health Sciences (RGUHS), was offered from 2002 to 2007 and trained 5 Vascular Surgeons in this period, who are practicing this field in Karnataka. Fellowship offered under National Board of Examinations (NBE), New Delhi from 2003 to 2007-2 surgeons have been trained in this 2year program.
2. These have been replaced by 3 year DNB program in 2007. JIVAS was the first vascular department to be awarded this program by National Board of Examination, Delhi. **Four of our student got the gold medal in their DNB Program : Dr. Hemil, Dr. Piyush, Dr. Praveen & Dr. Siddharth.**
3. JIVAS also offers 1 month rotation to general surgery post graduate students across the state and so far more than 200 students have been tutored in basics in vascular diseases.
4. We have also conducted a large numbers of CME programs and continue to do so, across the state through IMA and other professional societies, medical colleges and several hospitals.
5. Senior members of our staff are regularly invited to prestigious international conferences, as a guest faculty, deliver lectures on chosen topics.

Numerous presentations, in the form of invited lectures and free papers, have been made in several national societies like Vascular Society of India, Diabetic Foot Society (DFSI) of India. JIVAS is also the registered office of the



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prestigious DFSI. Several workshops, with national international faculty, have been conducted by JIVAS both in vascular techniques and diabetic foot therapies.

Research :

JIVAS is probably the most sought after vascular department in India for any International clinical trial pertaining to vascular diseases and diabetic foot that comes to the country. We have successfully completed several Phase II and III randomized, multicentric studies. At a given time, there were at least 3 such on-going research activities. Some have been landmark studies that would change the way the vascular diseases are treated. An important clinical study is the stem cell therapy for limb ischemia. JIVAS perhaps has the largest experience in India in "AUTOLOGOUS BONE MARROW DERIVED STEM CELL THERAPY" for non reconstructable CLI (Critical Limb Ischemia). Limb salvage with this therapy is about 80% in Buerger's disease! The largest published series in a peer revived journals (Journal of Vascular Surgery) is from JIVAS. There are important studies that are being conducted from the data within the department, which would shed some light on epidemiology vascular diseases in India and also the outcome of various therapies.

Athreya Vascular Foundation Education and Research:

Vascular Diseases affects all classes of people. Diabetic and some age related degenerative vascular problems do seem to occur more in middle and upper class of the population. But diabetes is gradually crossing the economic borders and increasing number of lower income and poor patients are being affected by varied vascular problems. Athreya Vascular Foundation (AVF), a trust with tax exempt status, was created for this group of patients and also to assist in educational & research activities of JIVAS. Funds are also utilized for CME's and other Education Programs.

In keeping with the philosophy of Bhagwan Mahaveer Jain Hospital and commitment of JIVAS to provide care to all sections of society, we intend not to turn away any poor patient for lack of finances. Even complex surgeries are performed in these patients. for any amount they can afford, thanks to continuing significant assistance form several philanthropists from Bangalore and outside, over last 2 years, more than 300 surgeries have been performed in low income patients.

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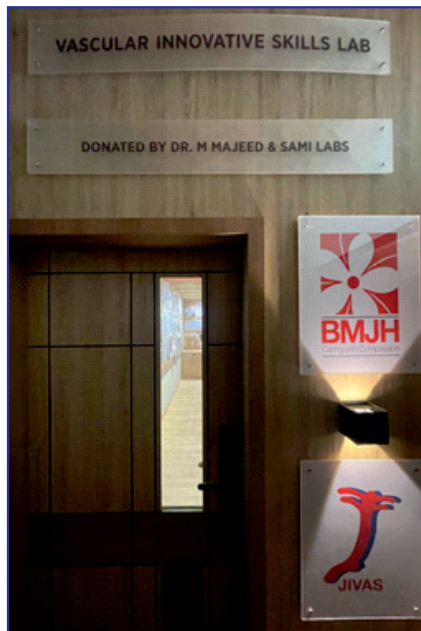
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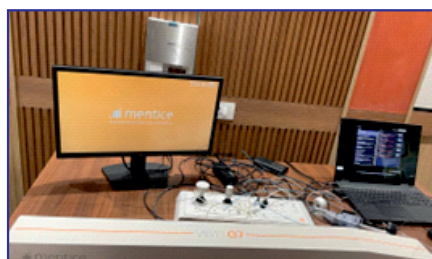
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We have a unique, perhaps the only one of its kind, "Vascular Innovation Skills Lab" to teach the post graduate students about techniques in open and endovascular procedures :



Wall of Vascular Doyens and History



Mentice – Computerized endovascular stimulator



Module for aortic surgery



Femoral popliteal tibial bypass surgery



Mannequin for Endovascular Procedures

Novel services in the works :

- Critically needed, a state of the art lower limb orthotic and prosthetic center, with complete rehabilitation facilities should serve a large population and to become regional center.
- Swollen limb clinic
- Preferably Hyperbaric Oxygen chamber for wound healing and others