## **CURRICULAM VITAE**



Name	:	Dr. Ajit Kumar Varma
Sex	:	Male
DOB	:	28 February 1955. (Kilimanoor, Trivandrum Dist, Kerala.
Nationality	:	Indian
Martial status	:	Married
Wife	:	Nirmala Varma, Teacher, Vidyodaya School Tevakkal, Kochi, Kerala.
Children	:	Siddharth Varma (Chartered Accountant) Gautam Varma (Mechanical Engineer)
Permanent Address	:	Dr.Ajit Kumar Varma AMRITAKRIPA, 49/524-H, KALPAKA VILLAS, PARAYIL ROAD, PUTHUKKALAVATTOM, PUTHUKKALAVATTOM, PUNNAKKAL, ELAMAKKARA P.O, KOCHI 682 026. KERALA. E Mail <u>ajitkumarvarma@gmail.com</u>

#### Present official addresss

 Dr.Ajit Kumar Varma, Senior Consultant, Dept of Podiatric Surgery, Aster DM Healthcare Ltd. Kuttisahib Road, Near Kothad Bridge, South Chittoor P.O. Cheranalloor, Kochi 682027, Kerala, India.

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## Qualifications : <u>MBBS</u> – May 1974 to December 1978

University College of Medical Sciences, University of Delhi.

## **Rotatory Internship**

1979 (January to December) --Doctor for past 36 years.

### HOUSE SURGEON

1980 (General Surgery) Safdarjung Hospital, New Delhi.

## **M.S (General Surgery)**

Armed Forces of Medical College, University of Pune, Pune (Maharashtra) June 1990. **Gen Surgeon for past 25 years.**  Medical Registration number: MCI 1321; TCC 39779

T-C Medical Councils, Certificate of registration of Additional Medical Qualification: SL No: 17548, dated 18/04/2012.

## Work Expereince

1. 1981 (January to November) Missionaries of Charity, Nirmal Hirday, Delhi.

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- 2. (24<sup>th</sup> November 1981 to 8<sup>th</sup> August, 1997) Army Medical Corps, Army Head Quarters, New Delhi. Resigned in the rank of LT COL.
- 3. (August, 1997 to November, 1999): Consultant Surgeon, Department of Gastro Surgery, P.V.S Hospital, Kaloor, Kochi – Kerala.
- 4. (November, 1999 to 30<sup>th</sup> April, 2004) Consultant Surgeon, Central Hospital & Research Center, Down Hill, Malappuram, Kerala.

5. 1<sup>st</sup> May, 2004 to 31<sup>st</sup> May 2015: Chief of Unit-- Diabetic lower limb and Podiatric surgery, Department of Endocrinology, Diabetic lower limb and Podiatric surgery – Amrita Institute of Medical Sciences and Research Centre, Kochi, Kerala, India.— 682041.

6. 1<sup>st</sup> June 2016 to date: Chief and Senior Consultant, Dept of Podiatric Surgery, Aster DM Healthcare Ltd, Kuttisahib Road, Near Kothari Bridge, South Chittoor P.O. Cheranalloor, Kochi 682027, Kerala, India.

Extra curricular interests

- : 1<sup>st</sup> degree Black Belt, Karate.
  - Motivational and quality movies.

## Career Experience:

- During my tenure in the army, as a surgeon, for nearly ten years, I was posted to high intensity Militancy areas including Guradspur (Punjab), Kargil, (J & K), and Guwahati, (Eastern Sector). In these areas, I had immense experience in trauma surgery; including Bullet wound injuries, Bomb and Grenade blast injuries, to the head and neck, thorax, abdomen & limbs. In addition I got experience in usual Major elective and emergency general surgeries, while in the Army.
- During my tenure in the P.V.S. Hospital, Kaloor, Kochi in the department of Gastro surgery, I could get experience in all types of elective & emergency G.I, surgeries, including surgeries for malignancies, which included gastric, biliary, pancreatic, small and large Gut and ano-rectal surgeries. I also got good exposure to G.I Laproscopic surgeries. This is a super speciality, referal hospital, in Kochi, Kerala, with a large turnover of gasterosurgical, and gastero-medical cases.

<u>Amrita Institute of Medical Sciences and research centre</u>, Kochi, Kerala, is a large tertiary, 800 bedded, super-speciality hospital, run by the 'Mata Amritanandamai Math'. There is also a 600-bedded general hospital adjacent to this. A post M.S, .one year Fellowship in Podiatric surgery and a two-year Podiatry assistant course was being conducted. We are the only institute in Asia to conduct these two courses in diabetic foot. We have set up a patient association called 'Amrita Diabetes Welfare Association' (ADWA), which has over 1500 members and publishes a patient education magazine called 'Diabeat'

**Two film documentaries**, one on Diabetic foot and the other on Diabetes. We have also produced an educational C.D. for doctors, on diabetic foot

The Department of Diabetic lower limb and Podiatric surgery, Aster DM Healthcare, Kochi, Kerala, is mainly dealing with diabetic lower limb surgical problems, associated with the dept of Endocrinology and diabetes. This integrated team approach, so important in the proper management of the diabetic lower limb problems, is available in only few centres worldwide. This is the best of its kind in the country, and probably in Asia. The department has the support of allied specialties like Neurology, nephrology, Ophthalmology, Neurosurgery, Cardiology, Nuclear Medicine and Urology within the Institute itself. . We have close support of the vascular surgery, and interventional radiology departments, for revascularisation procedures.

Our evaluation and management techniques are of world standards. Some examples are the mat-type computerized pedopodogram, the 'Trans Cutaneous Partial Oxygen Pressure monitor', vacuume assisted closure machine, use of fiberglass walking Total Contact Casting in Charcot and foot ulcers, 'felt' offloading, the latest in the techniques of dressings and dressing materials, Anodyne therapy for intractable neuropathic symptoms and HBOT.

There are four foot wear institutes nearby, which make highly specilized diabetic footwear, with trained staff, thus providing high quality preventive, post–operative and rehabilitative footwear.

- We have a daily In-Patient strength of about 40 to 45 diabetic foot cases, and a daily Out-Patient turnover of about 50 to 60 patients. We electively carry-out about 5 to 6 diabetic lower limb surgeries every O.T. day, which is thrice a week. Cases include extensive necrotising fasciites, plantar-space infections, toe and foot gangrene, osteomylites, large number of Charcot cases, and many others. Many of the cases we operate are referred from other hospitals, in sepsis and multiorgan dysfunction, and are taken up for surgery as an emergency or semi-emergency basis. However our initial trial is for limb salvage and only in life-threatening situations a major amputation (below or above knee) is done.
- We are also carrying-out all types of foot and ankle reconstructive and corrective surgeries in diabetic patients in our department. This includes charcot reconstructive surgeries including Triple arthrodesis, Talo-calcaneal arthrodesis, Naviculo-calcaneal arthrodesis, Plate fixation of Charcots fractures of foot, with or without autogenic, iliac crest bone graft. Bunionectomy & SCARF surgery for hallux valgus, Arthroplasty for Hallux limitus/rigidus, Arthroplasty for Hammer, Mallet and Claw toes, Neuromas excision, surgical management of Plantar Fasciitis, Cysts and ganglions, Bone spurs, Tendo-achilles lengthening--- open surgery, Tendon transfer surgeries, Repair of ruptured foot & ankle tendons, and Application of Illizarov frame among many others. We are the first department in India to carry out these surgeries in diabetic patients.
- I have devised a novel technique of foot and ankle stabilization, 'The Amrita Sling Technique.' This is lieu of an external fixator, after internal fixation. The external fixator is well known to cause infection and other complications in Diabetic Charcot foot and ankle surgeries. Using our technique of 'Amrita Sling', we have been able to markedly reduce postoperative complications and morbidity. I have also devised techniques of using Polymethyl methacrylate, to replace severely destroyed Charcot foot bones, which would otherwise certainly go for a below knee amputation. In the

past over five years we have carried out about 70 surgeries using these novel techniques and been able to prevent lower limb amputations. The manuscripts have been published in international medical journals,
**Regarding success rates of reconstructive Charcot foot surgeries** done in the U.S, by conventional techniques, some of my friends there, eminent Podiatric and foot and ankle reconstructive surgeons; have sent me published articles. The most comprehensive article is the one given below:

Surgical Management of Charcot Neuroarthropathy of the Foot and Ankle, A Systematic Review. Lowery.N, Woods.J, Armstrong.D, Wukich.D. Foot and Ankle International. 2012 Feb;33(2):113-21.

Dr.David Armstrong, an eminent podiatric surgeon sent me this publication. He and his co-authors have systematically analyzed literature about these surgeries done in U.S, from 1965 to 2010, published in 2012. As per their review, the success rates at two years are about 70%. In the next two years complication rates are about 90%. 5 year success rates are very low.

Regarding our success rates, we have made a data analysis. Though we have had some complications, most of them resolved with treatment. Most of our 70 Charcot reconstructive surgery patients are ambulant even after 5 years, even as of now they are able to walk and carry out their basic functions. (Operated from 2009 to 2016). All these cases had marked bone destruction, which would have otherwise certainly ended up in a below knee amputation. They were adequately counselled prior to surgery regarding our techniques. Most of them are happy and come for follow-up. We have voice recorded some of the patients' feedback, which are very encouraging.

### These surgeries have been uploaded in the You-Tube: The links are:

- 1. Amrita Sling Technique: <u>www.youtube.com/watch?v=GdPlfJlbqUU</u>
- 2. Foot Bone Prosthesis (PMMA): <u>http://www.youtube.com/watch?v=CgsNIP3m5tw</u>
- 3. Polymethyl methacrylate (PMMA) Foot & Ankle replacement Prosthesis http://www.youtube.com/watch?v=U4tIu6TONbo
- 4. Informative video on Anodyne Therapy: <u>www.youtube.com/watch?v=pv39y5Mp6oU</u>

Web Site: www.ajitkumarvarma.co.in

I have been invited as a guest faculty for many national and international Diabetic Foot conferences, the most notable being to the premier 'World Diabetic Foot Conference (DFCon—2014)', held at Los Angeles from 19<sup>th</sup> March '14 to in 22<sup>nd</sup> March 2014. I was invited to speak on two topics, one on 'Salvage procedures in Diabetic Foot infections', and a 'Video presentation of the novel foot and ankle reconstruction techniques', which I have devised.

I have also developed a new polymer based footwear for diabetic patients, which has been 'patented'. This was a D.B.T. N.Delhi, funded project. The 'proof of concept' has been done. However, further procedures in setting up a factory and commercial production of the footwear being engineering and administrative issue further progress in this regard has not yet been done.

## In January 2010, I was conferred with the prestigious Dr.S.C.Misra medical oration award.

I am the principal investigator in a couple of major research programmes. Most notable among these is the invention of an **entire foot bones replacement prosthesis.** This has been provisionally patented. However, much work has yet to be done in bringing out this for implanting in the human foot.

# Research papers and publications in national and international journals, during my career as a doctor --- 208.

## Research papers recently published, in context to diabetic foot problems:

1. Dr.Ajit Kumar Varma, Dr.A.Bal, Dr.H. Kumar, Dr. Rajesh. K, Sandhya.M.N. Efficacy of polyurethane foam dressings in debrided diabetic lower limb wounds. Wounds 2006; 18(10): 300-306.

(Gave oral presentation of the topic at—'Symposia of Advanced Wound Care', '06 at San Antonio, Texas, U.S.)

- Ambika Gopalakrishnan Unnikrishnan, Palaniswamy Gowri, Kannan Arun, Ajit Kumar Varma, Harish Kumar. Tropical Chronic Pancreatitis and Peripheral Vascular Disease, A Case Report. Journal of the Pancreas. Vol. 8, No. 2 - March 2007. [ISSN 1590-8577]
- 3. The Acute Charcot, JOURNAL OF THE INDIAN MEDICAL ASSOCIATION, Volume 106 • Number 11 • Kolkata • November 2008, RV JAYAKUMAR, AJITH KUMAR VARMA, PRAVEEN JAYAPATHY

- Amrita Sling Technique: A novel method of foot and ankle stabilization in the deformed Charcot foot. Ajit Kumar Varma MS, TS Mangalanandan MB,BS, Harish Kumar DNB,MRCP. The Journal of Diabetic Foot Complications; 2009, 1 (1), No. 1: pp. 1-7.
- Triple Site Necrotizing Fasciitis in a Diabetic Patient: A case report. Dr. Amit Kumar C. Jain, Dr. Ajit Kumar Varma, Dr. Mangalanandan, Dr. Harish Kumar. The Journal of Diabetic Foot Complications, Volume 1, Issue 3, No. 4,
- 6. Surgical Outcome of Necrotizing Fasciitis in Diabetic Lower Limbs. Dr. Amit Kumar C. Jain, Dr. Ajit Kumar Varma, Dr. Mangalanandan, Dr. Harish Kumar, Jain, Dr. Arun Bal. The Journal of Diabetic Foot Complications, Volume 1, Issue 4, No. 1.
- Digital Amputations in the Diabetic Foot. Dr. Amit Kumar Jain, Dr. Ajit Kumar Varma, Rejitha Mol K.S, Dr. Mangalanandan, Dr. Arun Bal, Dr. Harish Kumar. The Journal of Diabetic Foot Complications, Volume 2, Issue 1, No. 3, 12 –17, © 2010.
- 8. Spectrum and Prevalence of Fungi Infecting Deep Tissues of Lower-Limb Wounds in Patients with Type 2 Diabetes. Gopi Chellan, Shashikala Shivaprakash, Sundaram Karimassery Ramaiyar, Ajit Kumar Varma, Narendra Varma, Mangalanandan Thekkeparambil Sukumaran,, Jayakumar Rohinivilasam Vasukutty, Arun Bal, Harish Kumar. JOURNAL OF CLINICAL MICROBIOLOGY, June 2010, p. 2097–2102 Vol. 48.
- 9. NEGATIVE PRESSURE WOUND THERAPY IN SALVAGING THE DIABETIC FOOT- AN A.I.M.S EXPERIENCE. Dr Amit Kumar C Jain, Dr Ajit Kumar Varma, Dr Mangalanandan, Dr Arun Bal, Dr Harish Kumar. The Journal of Diabetic Foot Complications, 2011; Volume 3, Issue 1, No. 3, Pages 13-16.
- 10. Varma AK. Reconstructive foot and ankle surgeries in diabetic patients. Indian J Plast Surg 2011; 44:390-5.
- Major Amputations in Diabetes An Experience From a Diabetic Limb Salvage Centre in India. Dr. Amit Kumar C Jain, Dr. Ajit Kumar Varma, Dr. Mangalanandan, Dr. Harish Kumar.The Journal of Diabetic Foot Complications The Journal of Diabetic Foot Complications, 2012; Volume 4, Issue 3, No. 1, Pages 63-66.
- 12. <u>Use of Poly Methyl Methacrylate as Prosthetic Replacement of</u> <u>Destroyed Foot Bones – Case Series.</u> Visakh Varma, Ajit Kumar Varma,

Mangalandan T.S, Arun Bal, Harish Kumar. The Journal of Diabetic Foot Complications 2012; Volume 4, Issue 3, No. 3, Pages 71-82.

- Foot care practice the key to prevent diabetic foot ulcers in India. <u>Chellan G, Srikumar S, Varma AK, Mangalanandan TS, Sundaram KR,</u> <u>Jayakumar RV, Bal A, Kumar H. Foot (Edinb).</u> 2012 Dec;22(4):298-302. doi: 10.1016/j.foot.2012.08.007. Epub 2012 Sep 19.
- 14. A DECADE OF EXPERIENCE IN MANAGING DIABETIC FOOT AT AMRITA, INDIA'S LARGEST DIABETIC LIMB SALVAGE CENTRE. Dr Amit Kumar C Jain, Dr Ajit Kumar Varma, Dr Mangalanandan, Dr Harish Kumar. The Journal of Diabetic Foot Complications, 2013; Volume 5, Issue 1, No. 2, Pages 15-17.
- REVASCULARIZATION IN THE DIABETIC LOWER LIMB. Dr Amit Kumar C Jain, Dr Ajit Kumar Varma, Dr Mangalanandan, Dr Harish Kumar. The Journal of Diabetic Foot Complications, 2013; Volume 5, Issue 1, No. 3, Pages 18-23.
- 16. Topical Antimicrobials in Wounds. Amit Kumar C Jain, Ajit Kumar Varma. *Medicine Science*. 10.5455/medscience.2013.02.8073.
- Charcot Neuroarthropathy of the Foot and Ankle: A Review. <u>Ajit Kumar</u> <u>Varma</u>. Journal of Foot and Ankle Surgery, 2013-11-01, Volume 52, Issue 6, Pages 740-749.
- Reconstructive foot and ankle surgeries in destroyed diabetic Charcot's Neuroarthropathy, stabilized with Amrita-Sling Technique: A one year follow-up. Ajit Kumar Varma, Praveen Jeyapathy, Mangalanandan T. S., Arun Bal, Harish Kumar. The Journal of Diabetic Foot Complications, 2013; Volume 5, Issue 3, No. 2, Pages 62-72.
- 19. Use of Polymethyl Methacrylate as prosthetic replacement of destroyed foot bones clinical audit. Ajit Kumar Varma, Vishak Varma, TS Mangalandan, Arun Bal, Harish Kumar. The Journal of Diabetic Foot Complications, 2014; Volume 6, Issue 1, No. 1, Pages 1-12.
- 20. Ankle Brachial Index and Transcutaneous Partial Pressure of Oxygen as predictors of wound healing in diabetic foot ulcers. Lalithambika CV, Nisha B, Saraswathy L, Ajit Kumar Varma, Amrutha Jose, Sundaram KR. The Journal of Diabetic Foot Complications, 2014; Volume 6, Issue 2, No. 4, Pages 54-59.
- 21. Emergence of multi drug resistant bacteria in diabetic patients with lower limb wounds. Wilbin Xavier, Mangalanandan T Sukumaran\*, Ajit Kumar Varma\*, Harish Kumar, Gopi Chellan, Indian J Med Res 140, September 2014, pp 97-99.

**OBSERVERSHIP AT KINGS COLLEGE AND HOSPITAL, LONDON**: From 1<sup>st</sup> July 05 to 15 Aug 05, I had undertaken an observership at the 'Diabetic foot center' at Kings college and hospital, Denmark hill London, under the guidance of Dr.Mike Edmonds,(Endocrinologist). Lead podiatrist there is Ms.Maureen Bates. Ms.Ali Foster was the lead podiatrist, now retired. This was an exceedingly wonderful and informative experience. I learnt a lot of new techniques, including offloading, which they apply, quality orthotics for Diabetics, and many other important treatment modalities, which we have implemented in our department.

### **OBSERVERSHIP AT THE CENTER OF LOWER EXTREMITY AMBULATORY**

**RESEARCH,** Rosalind University, Chicago, U.S. –From the 28<sup>th</sup> of April '08 to the 28 June '08, I had undergone an observership at the Dr.Scholl Podiatric Medicine, Rosalind University. This is one of the oldest and reputed Podiatric medicine and surgery teaching institutes in the world. Here I underwent a two months observership and hands-on training course on 'Foot and ankle reconstructive and corrective surgery'. During this period, I also visited five other leading foot and ankle reconstruction centres in the U.S. This was mainly focused on diabetic patients and included major surgical reconstruction procedures of deformed Charcot's feet. We have started these surgeries in our department, which is the first in India to carry out such procedures.

**Clinical Research Experience:** Associated in number of completed and ongoing clinical research, both as P.I and co-investigator, in subjects related to Diabetic lower limb and Podiatric surgery.

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