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লোকবন্ধু ডাঃ ভুৱনেশ্বৰ বৰুৱাদেৱৰ জীৱন পৰিক্ৰমাৰ এক আলোকপাত

অসমৰ চিকিৎসা জগতত ৪ চেপ্তেম্বৰ দিনটোৰ বিশেষ তাৎপৰ্য্য আছে। ৪ চেপ্তেম্বৰ বুলিলেই অসমৰ এজন বিশেষ চিকিৎসকৰ নাম আমাৰ মানস পটত ভাঁহি উঠে। তেওঁৱেই হৈছে অসমৰ সুযোগ্য সন্তান তথা চিকিৎসক 'লোকবন্ধু' ডাঃ ভুৱনেশ্বৰ বৰুৱা।

এই পৃথিৱীলৈ বহু মানুহ আহে আৰু যায়। কিন্তু কিছু ব্যক্তিয়ে তেখেত সকলৰ কৰ্ম্মৰাজি, চিন্তাধাৰা আৰু মানৱ সমাজলৈ আগবঢ়োৱা বিশেষ অৱিহনাৰে চিৰযুগমীয়া হৈ যায়। তেখেত সকলৰ নামৰ আগত অলঙ্কিত হয় বিশেষ কিছু বিশেষণৰে। তেনে এক ব্যক্তি হ'ল 'লোকবন্ধু' ডাঃ ভুৱনেশ্বৰ বৰুৱা।

১৮৯৩ চনত তেতিয়াৰ অবিভক্ত লক্ষিমপুৰ জিলাৰ ডিব্ৰুগড় মহকুমাৰ শদিয়াত উত্তৰ-পূৱ অঞ্চলৰ বিখ্যাত সম্ভ্ৰান্ত বৰুৱা পৰিয়ালত ৪ চেপ্তেম্বৰ তাৰিখে জন্ম গ্ৰহণ কৰে ডাঃ বৰুৱাদেৱে। তেখেত আছিল পৰিয়ালৰ ষষ্ঠ সন্তান। তেখেতৰ পিতৃ জিবেশ্বৰ বৰুৱা আৰু মাতৃ আছিল গিৰীজা বৰুৱা। তেওঁ ১২ বছৰ বয়সলৈকে স্কুললৈ যোৱা নাছিল বিশেষ কিছু কাৰণত। তেওঁ পঢ়াশালিলৈ নোযোৱাৰ ক্ষেত্ৰত ফণিধৰ চলিহাদেৱে আপত্তি দৰ্শাই তেওঁক স্কুলত ভৰ্ত্তি কৰাইছিল। তেওঁৰ পঢ়াৰ ক্ষেত্ৰত ডিব্ৰুগড়ত কুঞ্জলাল বৰুৱা আৰু গুৱাহাটীত ৰবিনাৰায়ণ বৰুৱাই বিশেষ পদক্ষেপ গ্ৰহণ কৰিছিল।

১৯১২ চনত ডিব্ৰুগড়ৰ পৰা মেট্ৰিক পাছ কৰি ১৯১৪ চনত কটন কলেজৰ পৰা বিজ্ঞান বিভাগত ইণ্টাৰমিডিয়েট পাছ কৰি স্কুল পৰিদৰ্শক হিচাবে চাকৰি আৰম্ভ কৰে। কিন্তু কিছু দিনৰ পাছত এই চাকৰি ত্যাগ কৰি চৰকাৰী জলপানী লৈ কলিকতাত মেডিকেল পঢ়িবলৈ যায়। তাতেই তেখেতে শিক্ষাগুৰু হিচাবে লগ পাই ভাৰতৰত্ন ডাঃ বিধান চন্দ্ৰ ৰায়দেৱক।

ডাঃ ৰায়ৰ জীৱন আদৰ্শৰে অনুপ্ৰাণিত হৈছিল ডাঃ বৰুৱাদেৱ। কালক্ৰমত দুয়োজন চিকিৎসকেই জন-মানসত আৰু সমাজত চিকিৎসক হিচাবে খ্যাতি অৰ্জন কৰি চিৰযুগমীয়া হৈ ৰ'ল। ডাঃ ৰায়দেৱে সৰ্ব্বভাৰতীয় স্তৰত আৰু ডাঃ বৰুৱাদেৱে অসমত।

১৯২১ চনত ডাক্তৰি পাছ কৰি চৰকাৰী চাকৰিত বৰপেটাত সহকাৰী শৈল্য-চিকিৎসক (Assistant Surgeon) হিচাবে চাকৰিত যোগদান কৰে। চৰকাৰী জলপানী লৈ পঢ়াৰ বাবে পাঁচ বছৰ চৰকাৰী চাকৰি কৰিম বুলি লিখিত চুক্তি দিব লগা হৈছিল।

যি সময়ত তেখেতে চাকৰিত যোগদান কৰিছিল, তেতিয়া দেশজুৰি চলিছিল অসহযোগ আন্দোলন। তাৰ মাজতো নিজে এজন স্বাধীনতা সংগ্ৰামী হৈ সংগ্ৰাম আৰু চাকৰি দুয়ো কুল বজাই ৰাখিছিল কৰ্ত্তব্য নিষ্ঠাৰ মাজেদি।

তেখেতে বহুবাৰ কাৰাবন্দীও হ'ব লগা হৈছিল। শেষলৈ তেখেতে চৰকাৰী চাকৰি ত্যাগ কৰি অসমৰ দুখীয়া-নিপিড়িত আৰু নি:কিন লোকলৈ নিস্বাৰ্থ ভাবে, বিনামূলীয়া চিকিৎসা সেৱা আগবঢ়াই গৈছিল প্ৰয়োজন সাপেক্ষে।

মানৱ সেৱাই আছিল ডাঃ বৰুৱাদেৱৰ কৰ্ম্ম আৰু তাৰ বাবে সময় সাপেক্ষে নিজ স্বাৰ্থ ত্যাগ কৰিবলৈ অলপো কুণ্ঠাবোধ কৰা নাছিল।

চিকিৎসা সেৱাৰ বাহিৰেও ডাঃ বৰুৱাদেৱে সমাজৰ প্ৰয়োজনীয়তা অনুভৱ কৰি আৰু বহুতো সেৱা আগবঢ়াই গৈছিল।

১৯২৬ চনৰ মে' মাহৰ ২৪ তাৰিখে বৰুৱা দেৱে শ্ৰীযুতা ইন্দু প্ৰভা বৰুৱাক বিয়া কৰাই। বেমাৰীৰ প্ৰতি ইমানেই ব্যস্ত আছিল যে বিয়াৰ বাবে নিজৰ দৰাৰ সাজযোৰৰ কথাওঁ ভবা নাছিল। অতি ঘনিষ্ঠ বন্ধু অমিয় কুমাৰ দাস দেৱৰ পাঞ্জাবী পিন্ধিহে বিয়াত বহিছিল। খোৱাখুবুনীও ছয়দিন পাচলৈ পিছুৱাই দিছিল কুৰুৱাত কলেৰা বেমাৰ হোৱাৰ বাবে।

তেখেত আছিল মানৱদৰদী চিকিৎসক, সমাজ হিতৈষী, নিষ্ঠাবান গান্ধীবাদী, বিচক্ষণ ৰাজনীতিবিদ, ক্ৰীড়া সংগঠক, স্বাধীনতা সংগ্ৰামী, দেশপ্ৰেমিক, সমাজসেৱক, সংগঠক আৰু বহুতো। প্ৰকৃতাৰ্থত তেখেত আছিল জনসাধাৰণৰ প্ৰকৃত বন্ধু, যাৰ বাবে তেখেত পৰিচিত হৈছিল 'লোকবন্ধু' হিচাবে।

সামাজিক কামৰ যোগেদি তেখেতে অসমবাসীলৈ অৰিহনা যোগায় যোৱা কেইটিমান অনুষ্ঠান হ'ল - জাতীয় উৎসৱলৈ পৰিণত কৰা অসমীয়া বাপটি সাহোন ৰঙালী বিহু, গুৱাহাটী বিশ্ববিদ্যালয়, অসম চিকিৎসা মহাবিদ্যালয়, আয়ুৰ্বেদিক মহাবিদ্যালয়, লোকপ্ৰিয় গোপীনাথ বৰদলৈ যক্ষ্মা চিকিৎসালয়, কস্তুৰবা আশ্ৰম, কলা-বোবা বিদ্যালয়, শ্ৰীমন্ত শঙ্কৰ মিশন, অসম মাতৃ আৰু শিশু মঙ্গল কেন্দ্ৰ। তেওঁৰ পৃষ্ঠপোষকতাত গুৱাহাটী বেঙ্ক আৰু ভাস্কৰ ইঞ্চিউৰেঞ্চ কোম্পানী থন ধৰি উঠিছিল।

অসমৰ ফুটবল জগতত নাম উজ্বল কৰা বৰদলৈ ট্ৰফী প্ৰতিযোগীতাৰ প্ৰথমটো ট্ৰফী লোকপ্ৰীয় গোপীনাথ বৰদলৈৰ স্মৃতিত ডা: বৰুৱাদেৱেই প্ৰদান কৰিছিল। ১৯৫২ চনত প্ৰথমবাৰৰ বাবে লতাশিল খেল পথাৰত বৰুৱা দেৱৰ সভাপতিত্বত ৰঙালী বিহু উদ্‌যাপন কৰিছিল।

ডা: বৰুৱাদেৱৰ লগত সেই সময়ত বিশেষভাবে জড়িত থকা আৰু সহযোগ আগবঢ়োৱা চিকিৎসক সকল আছিল ডা: হৰিকৃষ্ণ দাস, ডা: ঘনশ্যাম দাস, ডা: পোৱাল চন্দ্ৰ দুৱৰা, ডা: যতীন্দ্ৰ নাৰায়ণ ৰায়, ডা: ললিত কুমাৰ বৰুৱা আদি। ১৯৪০ চনত পলাশবাৰীৰ লাহাৰ ঘাটত কানি নিবাৰণী প্ৰচাৰৰ কেন্দ্ৰ খুলি গোপীনাথ বৰদলৈ, লীলাধৰ বৰুৱা, বিষ্ণু ৰাম মেধিৰ লগ লাগি কানিৰ অপকাৰীতাৰ বিষয়ে ৰাইজৰ মাজত সজাগতা আনিছিল। ডা: হৰিকৃষ্ণ দাস, ডা: ঘনশ্যাম দাস, ডা: পোৱাল চন্দ্ৰ দুৱৰা আৰু ডা: যতীন্দ্ৰ নাৰায়ণ ৰায়ে কানীয়াৰ চিকিৎসাৰ ক্ষেত্ৰত বৰুৱাদেৱক সকলো প্ৰকাৰৰ সহায় আগবঢ়াইছিল। অসমত প্ৰথম বিচিজি বেজী দিয়াৰ ক্ষেত্ৰত বৰুৱাদেৱ আৰু ডা: হৰিকৃষ্ণ দাসে আগভাগ লৈছিল। ১৯৫৪ চনত ৩০ জানুৱাৰী তাৰিখে গুৱাহাটিৰ কালাপাহাৰত সকৈ যক্ষ্মা চিকিৎসালয় আৰম্ভ কৰি সেই সময়ৰ অসমৰ মুখ্যমন্ত্ৰী শ্ৰীযুত বিষ্ণু মেধীদেৱৰ দ্বাৰা উদ্বোধন কৰাইছিল। কলিকতাত তিনিমাহ থাকি লেবৰেটৰীৰ কাম, অনুবীক্ষণ যন্ত্ৰৰ ব্যৱহাৰ, তেজ পৰীক্ষা কৰা প্ৰণালীৰ অভিজ্ঞতা অৰ্জন কৰি ১৯২৫ চনত গুৱাহাটিলৈ ঘূৰি আহি চিকিৎসা সেৱা আগবঢ়ায়।

১৯২৮ চনত চৰকাৰী চাকৰি বাদ দি স্বাধীনতা আন্দোলনত যোগদান কৰে। লোকপ্ৰিয় গোপীনাথ বৰদলৈ, বিষ্ণুৰাম মেধি, অমিয় কুমাৰ দাস, অম্বিকাগিৰী ৰায়চৌধাৰী, ধনীৰাম তালুকদাৰ আদি বৰেণ্য ৰাজনিতীবিদ সকলৰ লগত ওত:প্ৰোত: ভাবে জড়িত থকা স্বত্বেও ডা: বৰুৱাদেৱে কোনো ৰাজনৈতিক বিষয়বাব নোলোৱাকৈয়ে দেশসেৱা কৰি গৈছিল নি:স্বাৰ্থভাবে। ১৯৩০-৩২ চনৰ অসম কংগ্ৰেছৰ আন্দোলনৰ কাৰ্য্যসূচীত যোগ দিয়াৰ বাবে তিনি মাহ জেল আৰু ১০০/- টকা জৰিমনা ভৰিছিল। ১৬ বছৰ তেওঁ গুৱাহাটী জিলা কংগ্ৰেছৰ অপ্ৰতিদ্বন্দ্বী সভাপতি আছিল। ত্যাগবীৰ হেম চন্দ্ৰ বৰুৱা, অমিয় কুমাৰ দাস, সিদ্ধিনাথ শৰ্মা আৰু তেওঁ আন্দোলনৰ নীতি-নিৰ্দেশনাৰ গুৰি ধৰিছিল।

ভাৰতীয় চিকিৎসা সম্বাৰ অসম শাখাই ১৯৯৯ চনৰ তিনিচুকীয়াত বহা ১০৬ নং ৰাজ্যিক কাৰ্য্যকৰী সভাত প্ৰস্তাৱ হিচাবে গৃহিত কৰি অসম চৰকাৰলৈ ডা: বৰুৱাদেৱৰ জন্মদিনটো 'লোকবন্ধু' দিৱস হিচাবে স্বীকৃতি প্ৰদান কৰিবলৈ দাবী জনায়।

এই মহান চিকিৎসক জনক অসমৰ চিকিৎসা জগতত চিৰযুগমীয়া কৰি ৰাখিবলৈ ভাৰতীয় চিকিৎসা সম্বাৰ অসম শাখাৰ উপৰ্যোপৰি হেচাৰ ফলত অসম চৰকাৰে ডা: বৰুৱাদেৱৰ জন্মদিন ৪ চেপ্তেম্বৰ দিনটো 'লোকবন্ধু' দিৱস হিচাবে পালন কৰিবলৈ চৰকাৰী অধিসূচনা নং HLA/709/2000/3 যোগে ২/৯/২০০০ চনত জাৰি কৰে।

ডা: বৰুৱাদেৱ ভাৰতীয় চিকিৎসা সম্বাৰ অসম শাখাৰ তৃতীয়জন সভাপতি আছিল ১৯৫১-১৯৫২ চনলৈ। ডা: বৰুৱা আৰু সেই সময়ৰ অগ্ৰজ চিকিৎসক সকলে গঠন কৰি যোৱা ভাৰতীয় চিকিৎসক সম্বাৰ অসম শাখাৰ আজীৱন সদস্য হিচাবে পৰিচয় দিবলৈ পাই আমি নিজকে ধন্য মনাৰ লগতে তেখেত সকলৈ সশ্ৰদ্ধ প্ৰণাম যাচিলো।

মাত্ৰ ৬৩ বছৰ বয়সত ১৯৫৬ চনত ২৫ চেপ্তেম্বৰ তাৰিখে ডা: বৰুৱাদেৱ স্বৰ্গগামী হয়। লগে লগে অসমে হেৰোৱালে এজন সুযোগ্য চিকিৎসক, সমাজসেৱক, দিন-দৰিদ্ৰৰ বন্ধু।

এইজনা মহান ব্যক্তিৰ জন্ম দিৱসটো কেৱল ভাৰতীয় চিকিৎসা সম্বাৰ অসম শাখাৰ বিভিন্ন শাখাই পালন কৰাৰ বাহিৰে আজিকোপতি অসমৰ কোনো সম্বাৰ দ্বাৰা পালন কৰা পৰিলক্ষিত নহল। অসম চৰকাৰেও এইজন মহান ব্যক্তিৰ জন্মদিনটো 'লোকবন্ধু দিৱস' ঘোষনা কৰাৰ বাহিৰে পৰবৰ্ত্তি কালত পাহৰি পেলালে। অসমৰ এনে এজন সু-সন্তানক আজিৰ প্ৰজন্মৰ বহুতেই নাজানে। এইয়া অসমবাসীৰ বাবে এক পৰিতাপৰ বিষয়। তেওঁৰ পৰিচয় কেৱল এজন চিকিৎসকেই নাছিল। বিপদ-সম্পদ কালৰ অসমবাসীৰ বন্ধু আছিল। কিন্তু আজি তেওঁ অৱহেলিত কিয় ?

আজি তেখেতৰ ১২৩ তম্ জন্ম তিথিত তেখেতৰ আত্মাৰ চিৰশান্তি কামনা কৰি নতসিৰে প্ৰণাম জনালো।

ডা: লক্ষেশ্বৰ ভূঞা সভাপতি ভাৰতীয় চিকিৎসা সম্বা তেজপুৰ শাখা	ডা: হেমেন্দ্ৰ কুমাৰ বৰা সভাপতি ডা: ভূৱনেশ্বৰ বৰুৱা আবক্ষ মূৰ্ত্তি স্থাপন সমিতি	ডা: অতুল কুমাৰ কলিতা সম্পাদক ভাৰতীয় চিকিৎসা সম্বা, তেজপুৰ শাখা তথা সম্পাদক, ডা: ভূৱনেশ্বৰ বৰুৱা আবক্ষ মূৰ্ত্তি স্থাপন সমিতি

বি:দ্ৰ: লোকবন্ধু ডা: ভূৱনেশ্বৰ বৰুৱাদেৱৰ ১২৩তম জন্ম তিথিত প্ৰকাশিত "লোকবন্ধু ভূৱনেশ্বৰ বৰুৱাদেৱৰ জীৱন পৰিক্ৰমাৰ এক আলোকপাত" শিৰ্ষক লিখনিটো একো সালসলনি নকৰাকৈ পুনৰ মুদ্ৰিত কৰা হৈছে।

Heartiest Homage and Tribute to Lokabandhu Dr. Bhubaneswar Barooah, Legendary Figure of North East India on his 129th Birth Anniversary the 4th September'2022

"STATE LOKABANDHU DAY"

The IMA CGP, Assam State Faculty privileged and honoured to republish his Presidential Address of 3rd Provincial Conference of Indian Medical Association, Assam Branch, 1951, which was held at Guwahati, Assam.

This priceless masterpiece of Presidential address of Dr. Bhubaneswar Barooah, which reflects his strong organizational capabilities and service to mankind in a treasure for the present medical fraternity and for the future generation.

His presidential address focused not only the Health Scenario, also tells about medical education, trade, agriculture, politics and overall development of human being. His devotion and farsightedness was so great that he could influenced people easily and make them friendly – so LOKBANDHU.

He was not only people's doctor, but a philanthropist, dedicated social worker with great sense of humour. He was instrumental in establishing Gauhati University, Assam Medical College, Ayurvedic College of Assam, Lokapriya Gopinath Bordoloi T.B. Hospital, Kasturba Ashram, Deaf & Dumb Vidyalaya, Shrimanta Sankar Mission Leprosy Hospital, Cancer Hospital etc. also played great role in Rongali Bihu with tradition.

Presidential Address of the 3rd Provincial Conference of the IMA, Assam Branch 1951

Dr, Bhubaneswar Barooah

Mr. Chairman, brother delegates, learned members of the Working Committee of the IMA, ladies and gentlemen !

It is a proud privilege to enjoy the love and confidence of my colleagues of the state and to be elected as the president of the 3rd Provincial Conference of the IMA, Assam Branch. Inspite of my many short comings I venture to shoulder the responsibility of conducting the affairs of such an august body with the hope of getting all co-operation from you. I thank you for the honour you have shown to me.

My first duty is to offer homage to those members of the association and the profession, who departed from the world during the year. Our sincerest condolence goes to the family of Dr. S. C. Chakravarty, who was in-charge of a particular branch of this conference and died on 15th September, suddenly in a motor accident.

Brother delegates ! this conference is a unique one because we have invited the members of the Working Committee of our parent body- the All India Medical Association to hold their autumn sessions at Gauhati along with our conference. So we have today among our midst many of the eminent colleagues from different states of Indian Union, who adore our profession and are also in charge of this great organisation.

This is really a unique opportunity to discuss the health problems of the country with special reference to health conditions of the State of Assam, which geographically occupies an important position as a sentinel of the eastern gates of our great country, with an area of about 63,000 sqr. miles (hill area 34,200 sqr. miles, plain area 28, 500 sqr miles), with a density of population 500 per sqr miles in the plains and 60 per sqr. miles in the hills. With a population of about 2 lacs, the state plays an important role in the economy of the Indian Union because it contributes 56 crores of rupees yearly from about 1000 tea gardens with 16 lacs acres of land under tea cultivation with nearly 10 lacs of immigrant tea-labour population. It also contributes a substantial share to the jute production of the country.

Brother delegates ! in 1947 we have taken over charge of the country with the legacy of more than 200 years of British rule. We have taken over charge of 35 crores of people, of whom 85% are illiterate and about 90% of them are scattered over about 7 lacs of villages without proper communication around unhygienic surroundings without even supply of drinking water & with religious and social superstitions which illiteracy carry along with it. To make this population health-conscious is a tremendous task and responsibility on the shoulders of the present pioneers of our profession. Ladies and gentlemen ! I am an optimist all throughout my life. I am sure the spirit, sincerity and tenacity, whcih the Father of the Nation infused in us to make this very element politically conscious to overthrow the foreign rule, will still prevail on us to make the same element health conscious, -a prerequisite and a fundamental condition for any health scheme to be successful. However limited our resources are in men, money and the last but not the least in humane element, we must make sincere attempt to discharge this first item of responsibilities. Next to health consiounsness comes the nutrition of the people. The food problem of the country requires serious consideration of the Govt and the people. Our country is not producing food in proportion to its requirement. So we are to import food at a huge cost to feed the growing population. The food situation of the state of Assam during the year under review becomes a serious problem. The position in the earlier part of 1950 was expected to be satisfactory and it was anticipated that Assam would be in a position to export,—even 10,000 mds of rice were actually exported out of the state. But owing to sudden development of certain unforseen circumstances such as communal disturbances, terrible earthquake, flood, damage by insects, influx of more than 5 lacs of refugees and encroachment of paddy land by jute cultivation and other many crops the state produced about

4½ lacs ton less than in the previous year. So the Govt. of India had to help Assam with 26,000 tons of food grains to tide over the difficulty. In this great danger of shortage of cereals, the medical men can play a great role by advising the people how to maintain health by a change of food habit taking more of fruits and vegetables and less of cereals. With this objective in view the food sub-committee under Gauhati District Congress Committee with Dr. Ghanasyam Das as Secretary has recently brought out a pamphlet to enlighten the people how to pass over the food crisis. The Govt. of Assam have taken up a Grow-more food scheme with seven point integrated programme, namely (1) irrigation (2) Compost; bone meal and oil cake manuring (3) Seed multiplication and distribution (4) plant protection (5) Utilisation of waste land with mechanised cultivation (6) double cropping (7) better cultured practices like sowing, weeding etc. The programme leaves out of account the most important factor that finally influences increased food production namely improvement in the condition of the pusher, the man that pushes the plough and the puller, the pair of bullocks that pulls the plough. Expenditure of money for improving the health of these village pushers and pullers is like quilt-edged investment in yielding immediate, steady and continuously increasing dividend in substantially increased productive capacity. **It is on the tiller of the soil that the economic structure of the country eventually rests.** It is his patient toil that year in and year out gives the nation its food and the country's main manufacturing industries their raw materials. It is from his meagre earnings that the larger provinces used to draw nearly 1/3 rd of their total revenues before the war. It is on the produce of his husbandary that the country's balance of foreign trade largely depends but when pestilence and famine sweep through the land it is he who pays the heaviest toll while it is only the outermost fringe of such public activities as the country enjoys that occasionally comes within the orbit of his daily life. What is the condition of these village pushers in the state of Assam? 50 to 60 percent of them harbour in their intestines blood sucking parasite ankylostoma which are continuously sucking their blood, already deficient in quality and quantity for undernourished condition, till they make them anaemic, pale like white paper, emacited, lethargic and unfit to plough more than 2 to 3 hours a day and that too with great difficulty. One third of this population suffer from the ravages of malaria especially during the summer—the most active season for cultivation. Cholera, dysentery and diarrhoea together take a toll of about 5,000 yearly, fevers most of them malaria carries yearly about 75,000.

The condition of the puller, the cattle population of Assam is deplorable for lack of adequate feeding. Rinderpest, Foot and mouth disease are two common epidemics that take yearly a heavy toll of the cattle of the state. Unless a comprehensive plan of feeding, breeding, removal of useless cattle and protection of diseases is also taken in hand the scheme of Grow more food will not be as successful as it should be.

What are the present arrangements for both preventive and curative purposes which the state Govt. have to look after the urabn and rural population. There are two departments of the Govt. of Assam : Medical and Public Health under the medical minister assisted by two departmental heads, the Inspector General of Civil Hospitals and the Director of Public Health each working independently. The actual medical help is given through the agency of the hospitals and dispensaries of both the departments. The yearly expenditure of the medical department is about 20 lacs and of the public health department is about 18 lacs. The hospitals of the medical department are generally at the district and sub-divisional head quarters and the dispensaries are in the rural areas. The total number of hospitals and dispensaries is 340. The strength of the medical personnel engaged is 398; of these 236 are engaged in rural areas and the rest 162 in urban areas. The total number of Public Health dispensaries is 76, Kalazar hospitals 2 with 122 beds. There are 144 doctors and 90 health inspectors in this department.

Inspections from the above arrangements it is clear that the health of the population especially of the rural part is not receiving proper attention of the Govt.

The arrangement to look after the tea garden labour population, which is about 10 lacs i.e., 1/10th of the total population are not adequate and satisfactory. There are 700 hospitals with beds and 200 dispensaries without hospital arrangement. The total number of beds is 12,000. The total number of registered medical man is 464 and unregistered 250 working under 41 chief medical officers mostly Europeans. Common diseases among the population are malaria, ankylostomiasis, helminthic diseases, Kalazar, ty-

phoid, tuberculosis, nutritional anaemias, splenic anaemias, dysenteries etc. I must mention here that the members of the British Medical Association,—to name a few from the most prominent among them are Dr. C. Ramsay of Kachar, Dr. E. M. Rice, Dr. Dodds Price of Nowgong, Dr. Macdonald of Mariani, contributed to the advancement of public health in Assam, specially working in tea garden areas. From the above arrangements it appears that the health of the people is not receiving proper attention from the Govt. of the state. It is mainly due to dearth of medical personnel. So it will not be out of place to mention briefly the slow evolution of medical education in the state that led to such a shortage of medical men.

The evolution of medical education in the state gives an interesting history. The first step on the part of the Govt. to provide medical education was taken in 1892 when certain scholarships were given to students of Brahmaputra valley, Khasi Jaintia hills for study at the Dacca Medical School. A clause in the Assam Labour and Emigration Act-I of 1882 also provided that every tea estate with more than 50 labourers on its pay-roll should entertain a medical officer. Great difficulty was experienced in enforcing this part of the Act due to great shortage of doctors. Then a system was introduced by which Medical Boards of examination were constituted in different districts to supervise the training of apprentices under and bond to serve for three years in a Govt. or tea garden hospital. Each of such Boards was formed by the Civil Surgeon of the district and another medical practitioner. After serving there for three years these apprentices were examined and after they had passed the necessary examination they were granted a certificate which authorised them to hold medical charge of the tea gardens under the supervision of fully qualified doctor. This is in short the origin of "Board passed doctor" to serve the tea gardens of Assam as well as the people of Assam.

In the year 1900 Berry White Medical School was established at Dibrugarh with donation of a philanthropist tea planter Mr. Berry White. So the school was named after him. This marks the beginning of the next step of medical education. During the first 18 years of the schools' existence the students were examined by the Supdt. and teachers of the school until the constitution of the Assam Medical Examination Board in the year 1918. Since then outside examiners were appointed and along with the Supdt. and teachers they examined the students which added efficiency of the teaching.

As regards to Medical Education of the university standard no provision was made within the province, but arrangement by which 2 or 3 seats were reserved yearly at the Calcutta Medical College with scholarships (Rs. 35 per month for many years then increased to Rs. 60 per month). Initially it is the tea industry of Assam owned mainly by the British Capitalists that stimulated the British Govt. to take steps to produce doctors.

After the Conference on Medical School Education held in Delhi on the 7th & 8th November, 1938 all provincial Govts. began to take steps for implementation of the resolutions passed in the conference. The Govt. of Assam accordingly appointed a committee on Medical Education, consisting of 12 members, 8 of them from medical profession and four were members of the State Assembly, with Col. Phipson, the then I. G. C. H. as chairman of the committee. The Committee unanimously passed a resolution recommending that one uniform minimum standard of training and qualification for practitioners of Modern Scientific medicine should be established throughout India at an early date and this standard should be such that satisfy the requirements laid down by the Medical Council of India. The mover of the resolution also recommended that the policy of the Assam Govt. should be to implement the resolution. This marks the 3rd stage in the evolution of Medical education in Assam.I am glad to mention that our present Cabinet, with Late Lokapriya Gopinath Bardoloi as Premier, took immediate steps to convert the Berry White Medical School to Medical College. Accordingly a committee was appointed with Dr. B. C. Roy, the present Premier of Bengal as Chairman to select the site of the college. The Committee unanimously approved the present site at Barbari. The present Assam Medical College was opened by Lokapriya Bardoloi at Barbari (Dibrugarh) on the 3rd of Novemebr, 1947. This is the short history of the evolution of medical education in the State.

Vital Statistics :

This is the foundation of all planned health scheme as ultimately all preventive and curative works must be organised on the basis of accurate knowledge. In the state of Assam this important work is left in charge of an illiterate village head man- Gaon Burah. So the vital statistics of the rural areas are inaccurate and unreliable. The Govt. should change

this system and place the subject in charge of the rural health assistants of the Public Health department.

The State of Assam is undergoing a great experiment with B. C. G. vaccine to combat Tuberculosis. 3 lacs and 38 thousand persons are already vaccinated within this year. The measures taken against this growing menace are absolutely inadequate.

Maternity and Child Welfare :

Infant mortality rate is 130.5 per 1000 births against the national average of 160 per 1000 births. Almost 50% of the deaths occur during the 1st month of life. So the infant mortality rate of the state is very high. This shows that very little work is done so far the maternity and childwelfare is concerned. Maternal mortality rate is also very high, though no proper statistics are available in Govt. reports.

Nursing Organisation :

The condition of nursing in the hospitals of Assam remains the weakest spot in the medical administration. A scheme recently taken up by the State Govt. for the re-organisation of nurisng service opens a prospect for improvement.

Leprosy :

There are about 12 leper colonies, the majority of them are in hill areas where 5487 lepers are being treated.

Cancer in the State of Assam :

Cancer warrants special attention as it is increasing in Assam. The newly established department of E. N. T. of the Assam Medical College is crowded with cancer cases, specially of throat cancer. Assam provides a virgin soil for research workers on this fatal disease.

Condition of the Services :

Special rules are in existence applicable in the case of public health personnel by which their three years services are not counted towards their pensions. In no other service of the state such unreasonable rules exist. These discriminating rules clearly show that the state is not giving proper importance and attention to this nation building department. Pay and prospects in the Public Health Department should be immediately revised and made attractive to persuade competent people to join the service.

Ladies and gentlemen, I have tried to give an account of the health problems of the state and of the present arrangement in the state to cope with them.

The Bhore Committee while recommending short term programme rightly gives first priority for production of trained personnels to feed the Primary Health Centres for every 30,000 people in the periphery of the rural zone. This should be the starting point of health organisation of all states i.e. production of trained personnels and their distribution in the peripheral rural zone. The greater the distance of the periphery the more attractive remuneration and facilities should be given to the man in charge of such centres.

Next to this there is need to take up a comprehensive scheme to eradicate a preventable disease within the state i.e. ankylostomiasis which has brought disabilities and adversely affected the efficiency of the working population leading to proverty and further disease among the majority of the population of a certain important community. Ankylostomiasis is attracting the attention of the World Health Organisation. In the state of Assam about 70 percent of the rural and tea garden population which form about 90 percent of the total population of the state are suffering from Ankylostomiasis. So in my opinion this should be the disease to be tackled first. The scheme to eradicate the disease will involve in itself sewage disposal, supply of pure drinking water, spread of knowledge of the utility of use of latrine and community hygiene. If this is done we solve most of the medical problems of the state.

I am sure, with the co-operation of this great organisation we will be able to implement the scheme if earnestly taken up by the Govt.

An acid test of a goverment's sincerity and desire to do good to this majority of the people lies in how it deals with this important nation building department.

In conclusion, I invite all medical men of the State to join this great and growing national institution and organise themselves into a compact and powerful body capable of shouldering the responsibility of making Young India healthy and prosperous, and to give their due share of the contribution to world peace.

Jai Hind

Gauhati
26.9.51

Bhubaneswar Barooah

Editorial,

The editorial board once again takes the pleasure extending an warm greetings to you all. It is a matter of great honour for us that this issue of the IMA ASB CGP journal is going to be released on the auspicious occasion of the Lokabandhu Day, the birth day of one of the great son of Assam, who was none other than Dr. Bhubaneswar Barooah. He was an eminent physician, freedom fighter, philanthropist and great social worker of Assam.

Dr. Bhubaneswar Barooah was born on September 4 in 1893 at Sadiya under Dibrugarh subdivision of the then Lakhimpur district. He joined government medical service after passing medical science in 1921. But, Dr. Barooah was motivated to join the freedom struggle movement that was razing through out the nation. So, he resigned from his government service and started to treat poor patients free of cost. People of Assam will remember Dr.Bhubaneswar Barooah for his various visionary works. It was Dr. Bhubaneswar Barooah who was instrumental in converting ertswhile Berry White Medical School into full fledged medical college in Dibrugarh. He also founded Assam Branch of Indian Medical Association(IMA) in 1947 and Dr.Barooah himself adorned the prestigioud post of the President from 1951 to 1956. He was also the founder President of Lokapriya Gopinath Bardoloi TB hospital, which was established in 1954. And the greatest

tribute paid to this great soul of Assam was by establishing the Dr.B Barooah Cancer Hospital in Guwahati in his memory.

Dr. Bhubaneswar was fondly called as Lokabandhu. Lokabandhu means friend of people. He was fully committed to welfare of the patients. So, people called him Sankardeva, a saint of the people of Assam. One of his friend, Amio Kumar Das, recollects that Dr. Barooah did not get time to get ready even for his wedding ceremony as he was seeing patients. He arrived wearing a dirty shirt at brides home and Amio Das had to get a clean shirt for Dr. Barooah. Even after the ceremony he rushed to the hospital to see cholera inflicted patients leaving his newly wed wife at home.

In order to keep him evergreen in people's memory, IMA Assam chapter took a resolution in its 106th Tinsukia Session in 1999 to observe 4 September, the birthday of Dr. B.Barooah, as Lokbandhu Day. Government of Assam also granted the resolution of IMA in the year 2000 vide order no HLA/ 709/2000/3.

Dear members, it is indeed a matter of immense joy for all of us that we are able to release this issue of our mouth piece to commemorate the birthday of this legendary soul of Assam. On this auspicious occasion let us all pledge to emulate the humanetarian qualities of our "Lokabandhu" while discharging our services towards our patients all the time. If we fail to do that, then our celebration of Lokabandhu Day will just remaine a showpiece.

Season of festival are knoking at the door. These celebrations teach us that " good prevails over evil", these festivals bring us a sense of love and brotherhood, they unite us. We may not be able to communicate with you all through this journal before that..! So, the editorial team send you all and your family members greetings and best wishes in advance. May Almighty shower His choicest blessings upon each one of you.

Long live IMA (National)
Long live IMA National
Long live IMA ASB

With regards,
Dr. Jagadish Basumatary

Guest Editorial

'Azadi Ka Amrit Mahotsav'

Dedicated to all the Freedom Fighters of Medical Fraternity

Today on 15th August, 2022, India has completed 75 yrs of Independence and celebrated 76th Independence Day. The Ministry of culture, Government of India's Theme 'Azadi Ka Amrit Mahotsav' with so many National Programmes were celebrated in full vigour and enthusiasm.

In an independent country every citizen should have a sense of belonging wherever they find themselves. It is the high time to wake up to the great task of building trust between the people and the nation, so we can have peace and stability in the country. We are all indebted to our national heroes who made this country what it is today. As responsible citizens lets put extra effort into performing our civic responsibilities. Our diversity should not be seen as a weakness but as our greatest strength. It is only by working together that we can build a resilient and thriving nation. Let us renew our pledge to always uphold our national unity, so that we can live together in peace and harmony.

It is a day to remember the countless sacrifices done by the freedom fighters. It is the time to rejoice and to be proud as medical fraternity as so many

of our medical giants took active part in India's freedom struggle, sacrifies their profession and life.

Among the pioneers of medical stalwarts of India's freedom movement Dr. Bhan Daji Lad (Real name – Dr. Ram Chandra Vitthal Lad) whose contribution towards India's independence was unforgettable. Dr. Jadu Gopal Mukherjee plunge into the freedom movement of the nation before Dr. Bidhan Chandra Roy, who joined the armed revolutionaries of Bengal like Aurobindo Ghosh and Bagha Jatin. Dr. Jadu Gopal was very close to Bagha Jatin and became the leader of Jugantar an armed revolutionary group after Jatin's Martyrdom in 1915. The British Administration announced a reward of Rs. 20,000.00 on him, but failed to catch him. In 1923 he was arrested and accused of leading global revolutionary movement against the British Empire. He was ordered to leave Bengal. There after he lived in Ranchi where he treat the TB patients. He was again jailed in 1942 by the British. After independence he was offered a post of Governor but Dr. Jadu Gopal preferred serving the people of Ranchi.

Dr. Bidhan Chandra Roy who has dedicated his life in India's freedom movement. He was one who treats Mahatma Gandhi during his illness. Dr. B. C. Roy led Civil Disobedience Movement in Bengal and was imprisoned by British Government. He was later awarded 'Bharat Ratna', after independence by the Govt. of India, which is the supreme Civilian Award of the Nation. 1st June, the Birth Anniversary of Dr. B. C. Roy is celebrated as Doctor Day all over India. After Independence he became the Chief Minister of Bengal. Dr. M. A. Ansari who was champion of Hindu-Muslim unity. Dr. Ansari played a great role in bringing Muslim league and congress together to fight for freedom in 1916. In many Indian towns and cities there is a road generally called Ansari Road, these are named after surgeon Dr. M. A. Ansari a freedom fighter. Later as congress president he

faught against the devisive forces. He also headed Jamia Millia Islamia, a nationalist academic Institution established in opposition to the British controlled Aligarh Muslim University.

Dr. T. S. Sundar Rajan was another freedom fighter in the medical profession hailed from Madras (Chennai). He spent a lot of time with Veer Savarkar at Shyamji Krishna Verma's India House in the UK. After returning to India he led the Rowlatt Act Satyagraha, Khilafat movement and Civil Disobedience movement in Madras. After India won independence Dr. Rajan became a minister in the Madras (Tamilnadu) Government.

Lokabandhu Dr. Bhubaneswar Barooah from Assam was one of the stalwart in medial fraternity who had immense contribution in India's freedom movement. He had dedicated his life in serving the poor people of Assam. During the India's freedom movement, along with other freedom fighters from Assam played active role and arrested and jailed several times by the British. Dr. Bhubaneswar Barooah contributed in establishing Guwahati University, Assam Medical College, Ayurvedic College, Deaf and Dumb Institution in Assam. He was also instrumental in establishing Assam Branch of Indian Medical Association.

Dr. Sushila Nayar, who was Mahatma Gandhi's personal physician and also played active role in freedom movement of India. Hakim Ajmal Khan, Dr. Rafiuddin Ahmed, Dr. Dwarka Nath Kotnis, Dr. Manmohan Atal, Dr. Swaminath Shastri were few of many other medical practitioner, whose contribution towards India's independence were remarkable and worth mention.

During 'Azadi Ka Amrit Mahotsav' and on 76th Independence Day of our Country, we again remember our professional heroes of India's freedom

movement. Their countless sacrifices made us proud. We pray for their solace along with all freedom fighters. We are here only because of their dedication, sacrifices and we are indebt to them.

To conclude, my sincere thanks to the members of Editorial Board of the 'CGP News' IMA, CGP, Assam State Faculty and specially Dr. Hemendra Kumar Borah, Editor in Chief and Director of IMA, CGP, Assam State Faculty for their good gesture of bringing out the 'CGP News' regularly with utmost care and maintaining the professionalism.

Dr. Laksheswar Bhuyan
Vice President
IMA, Assam State Branch

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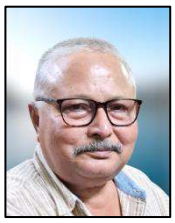

THE GENERALIST DOCTOR

Dr. Manabendra Goswami
Guwahati

A generalist is a physician who sees the patient as a whole "unit" (i.e. not as an organ system, as would a specialist); generalists include family practitioners, internists and paediatricians.
(Segen's Medical Dictionary, 2012 Farley, Inc.)

In our country, all these years, this job was performed by the family physicians. The 'generalist' has come about only in recent times starting few decades back. (Here in this article, I have used the term generalist as synonymous to family physician.)

This is the age of specialists, super specialists and super super specialists. The role of the general practitioner or the family physician is gradually fading into oblivion. The family physician used to play a pivotal role in the patients lives till the seventies of the 20th century. He was consulted for any and all ailments in the family members lives. He was the first contact point for the family members. The family physician or the generalist, as he is called today, saw the patient and advised and guided him. Either he was given treatment or he was referred to a specialist for further management.

The family physician was like a member of the family and he used to be consulted for any and every matter in the family, be it illness, buying/selling properties, arranging a bride or a groom, education of children etc. His position in the family was cemented permanently. The family physician was the person who treated patients from 'womb to tomb'.

But times have changed and the perspectives also changed drastically over a decade starting from late seventies. The family physician, over time lost the importance and position that he enjoyed in a family. He was no longer held in high esteem. All this happened as a part of evolution of societal changes. He was consulted on very minor matters only and he no longer played an active role in decision making. The people started going to specialists on the most trivial of issues, bypassing the general practitioner. If one gets headache, then goes direct to a

neurologist. If one gets diabetes, goes to an endocrinologist. If one gets bone pain or joint pain, goes to an orthopaedician. This has been the trend since long.

As a result, the patient load on the specialists have increased a lot. The number of specialists has not increased proportionately in comparison due to various reasons like insufficient number of seats for postgraduation in medical colleges and concentration of doctors in urban areas. As a result waiting time in doctors chambers increases and the doctors have to work overtime leading to compromise on quality. The same is true in both private and government hospital setups.

Now a days the idea of a family physician, as we knew it in the golden days of yore, is fast fading away. We select the doctor whom we will consult and if we are referred further or redirected to another doctor, there also we tend to weigh pros and cons and go to a doctor of our own choice. In this process the patient stands the possibility of being a loser both financially and health wise.

Another grave issue is doctor shopping. What the patient does is visit several doctors chambers with the complaints and then take a decision, which may not be the right choice. But this is what is happening today in most parts of the country, especially in urban areas.

The essence of the family physician is no longer there. It has been replaced by a new breed of doctors – whom we call generalists. He is the physician round the corner, available at most times. The generalist gives the primary treatment and if need be, refers the patient to the appropriate specialist.

The role of the generalist has to be appreciated, as he sees the patient, advises essential investigations and sets the line of treatment i.e. primary care without much hassle to the patient or the family. If the patient at all has to be referred to a specialist doctor, the patient is at least equipped with the preliminary workup reports that facilitates smooth transition to specialist care.

Dr. Bhubaneswar Barooah, Dr. Nalini Kanta Sarma, Dr. Anandeswar Barthakur, Dr. Akshay Dutta from Guwahati, Dr. Prasad Bordoloi, Dr. Munin Baruah, Dr. Chandan Bezbaruah from Jorhat, Dr. Robin Bezbaruah from Shillong were true generalists, with the aura of the family physician. They were giants in the profession and were revered by all. The likes of them are yet to be born.

For an effective system of better healthcare delivery, simply building medical colleges, hospitals without proper qualified teachers and without proper equipments, without a proportionate increase in number of undergraduate and

postgraduate seats will not serve the purpose. We need more doctors to take care of the huge population. But churning out doctors, especially specialists, is not an easy task. It rakes time, money, infrastructure and expertise. More than specialists, we need more general doctors or generalists, who are well versed in medical science, can tackle common diseases and also knowledgeable in preventive and social medicine. The generalist can play an influential role in the society by virtue of his easy availability and approachability. The generalist must be given due respect and importance in all aspects of healthcare delivery system. This is the only way by which we can think and plan for one effective system to deliver healthcare to the crores of people of the country.

Indian Medical Association (IMA) is doing a tremendous job of giving due recognition to the generalists or the general practitioners of the country. IMA has its wing College of General Practitioners (CGP), through which the doctors are given proper training and study materials for different courses related to both urban and rural practice. Any allopathic graduate doctor is eligible o become a member of IMA CGP. Fellowship of IMA CGP (FCGP) is also awarded to deserving candidates, who fulfil certain criteria. FCGP is also recognised by Government of India and National Medical Council (NMC) and can be written after the name like any other degree or fellowship.

Doctors are gradually getting interested in becoming generalists and this trend should be encouraged. The generalists actually form the backbone of an efficient and effective healthcare delivery system.

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ADULT VACCINATION

Dr RUPAM DAS
MD(PAED) FIAP
TEZPUR

(1822-1895)

LOUIS PASTEUR

AVISION TO FUTURE OF HUMANITY

"WHEN MEDITATING OVER A DISEASE, I NEVER THINK OF INDING A REMEDY FOR IT, BUT INSTEAD, A MEANS OF PREVENTION"

Vaccines are crucial to prevent mortality in that >25% of death is due to infections. Vaccines are recommended for adults on the basis of a range of factors. Substantial improvement and increases in adult vaccination are needed to reduce the health consequences of vaccine. Preventable disease among adults.

Adults vaccination has failed to catch on and remains in rudimentary State. Although the burden of vaccine preventable disease in adults is not well defined in India. It should be remembered that adults are also susceptible to Vaccine preventable disease (VPD). Adults are many times more likely than children to die of vaccine preventable diseases. Immunity acquired by childhood vaccination may wane by adulthood. It is possible that some adults were never vaccinated as

children and some newer vaccines were not available when these adults were children. Immunoseneseence may also result in greater susceptibility to vaccine preventable diseases. Advancing age renders them to be more susceptible to serious disease caused by common infections. (eg, flu and Pneumococcus)

Barrier of successful adult immunization include, lack of awareness, vaccine hesitancy, missed opportunities and cost.

Steps to improve adult immunization Could include: Adoptionof national guidelines,Education of health care providers and the Public, Promotion of Life course immunization, Make the vaccine available in the office,Reducing out of Pocketcosts for patients, Patient reminder and that recoil system, Offer immunization at timings convenient for working adultseg Evenings or weekends.

Uniform guidelines for Immunization of adults do not updated for years. The first published guidelines for adult immunization in India by the Association of Physician of INDIA(API), was in April 2009 , This was an a depletion of the Advisory Committee on Immunization practices (ACIP) guidelines of that year. These guidelines have been updated in 2016,

The Indian association of Nephrologist published guidelines for vaccination in normal adults in INDIA, which were based on the earlier API guidelines, ACIP and WHO guidelines.

The National immunization Schedule includes only Tdap/Td / TT in pregnant women. MOH GOI has recommended COVID vaccine is all adults after the age of 12 yrs with EUA certification.

COVID VACCINATION

MOH GOI recommends use of COVID-19 vaccines for everyone age 12 and older within the scope of the Emergency Use Authorization. Now pregnant women and lactating mothers are also eligible for COVID vaccines. Three COVID vaccines are available in India as of now. Covishield, Covaxin and Sputnik.

Covishield: It is given as 2 dose schedule 0.5 ml IM at 0-12 weeks. Its efficacy against any severity Covid19 infection is 60-80% and that against severe disease is nearly 90-95%. It's generally safe except rare cases of thromboembolism, especially in young females after the 1st dose.

Covaxin: It is given as 0.5 ml IM two dose schedule at 0-28 days. The efficacy against any severity Covid19 infection is 77.8% and that against severe disease is 93.4%. It is a safe vaccine.

Sputnik: There are two vectors used. rAd26 for first dose and rAds for the second dose which is given at 21 days. Efficacy of this vaccine against any severity Covid19 infection is 80% and that against severe disease is nearly 100%. There is another preparation known as Sputnik light which is just giving the 1st dose containing rAD26. It is not available in India.

Booster for COVID Vaccination: Recently India has rolled out plan for booster dose in a phased manner.

- As a matter of abundant precaution, for those Health Care Workers

(HCWs) &Front Line Workers (FLWs) who have received two doses, another dose of COVID-19 vaccine would be provided from 10th January 2022. The prioritization and sequencing of this precaution dose would be based on the completion of 9 months i.e. 39 weeks from the date of administration of 2nd dose.

- All persons aged 60 years and above with comorbidities who have received two doses of COVID-19 vaccine, will on Doctor's advice be provided with a precaution dose from 10th January 2022. The prioritization and sequencing of this precaution dose would be basedon the completion of 9 months i.e. 39 weeks from the date of administration of second dose. Several other countries have also started giving a booster dose (either homologus booster using the same vaccine or heterologous booster using some other vaccine) 6 months after the last dose of the vaccine. Israel is the 1st country to recommend 2nd booster to health care workers and elderly population.

HEPATITIS A VACCINATION :

2-dose series HepA (Inactivated vaccine), 6-12 months apart or single dose live Hepatitis A vaccine (approved up to 45 years of age). Live hepatitis A vaccine is contraindicated in immune compromised host.

Special situations with at risk for hepatitis A virus infection:

- Chronic liver disease (e.g., persons with hepatitis B, hepatitis C,

cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, alanine aminotransferase [ALT] or aspartate aminotransferase (AST] level greater than twice the upper limit of normal).

- HIV infection.
- Men who have sex with men.
- Injection or non injection drug use.

- Persons working with hepatitis A virus in research laboratory or with nonhuman primates with hepatitis A virus infection.
- Travel in countries with high or intermediate endemic hepatitis A.
- Pregnancy if at risk for infection or severe outcome from infection during pregnancy. Only inactivated vaccine can beused.

HEPATITIS B VACCINATION:

Routine vaccination: Not at risk but unprotected by previous vaccination

3-dose series of 1.0 ml IM (20 ug) at 0, 1, 6 months (minimum intervals: dose 1 to dose 2: 4 weeks/dose 2 to dose 3: 8 weeks/dose 1 to dose 3: 16 weeks]). Hepatitis B vaccines have diminished immune response after the age of 40 years or in those with obesity, smoking or immune compromising conditions. It should be avoided in gluteal

region and is best given in the deltoid region.

Special situations: At risk for hepatitis B virus infection include Chronic liver disease, HIV infection, Sexual exposure risk, Current or recent injection drug use, Percutaneous or mucosal risk for exposure to blood, Travel in countries with high or intermediate endemic hepatitis B, Pregnancy.

INFLUENZA VACCINATION:

Influenza vaccines are safe, effective and the principal measure for preventing influenza and reducing the impact of epidemics, The Quadrivalent flu vaccines containing the most recent vaccine strain are recommended. One dose, preferably a month before the onset of the rainy season, is advisable.

Protection for those most at risk

WHO recommends that health care workers and people who are most at risk of developing serious complications from influenza infection be vaccinated every year before the onset of the Influenza season. Priority groups for vaccination include pregnant women, individuals with certain chronic diseases. Elderly persons, Residents of institutions for older persons and the disabled, Children aged 6-59 months, Health care workers etc. In India, at present, flu vaccine is offered to high-risk group adults. A single dose of inactivated flu vaccine in dose of 0.5 ml is given intramuscularly into the deltoid muscle. Vaccination is indicated in high-risk subjects, e.g., those with COPD, CKD, cardiac or lung diseases, hepatic, metabolic diseases (diabetes), hematological diseases, pregnancy, nursing homes, health care

personnel, household contacts of children <5 years or adults >50 years, diseases which impair respiratory functions, and immunosuppressed individuals.

TYPHOID VACCINE:

Typhoid conjugate vaccine is routinely indicated as a single dose from the age of 6 months. The vaccine is licensed up to the age of 45 years. It can be considered for adults at increased risk of Typhoid fever or its complications.

HUMAN PAPILLOMAVIRUS VACCINATION:

Routine vaccination: In India, bHPV and qHPV vaccines are licensed for women till 45 years of age. Recently nonavalent HPV vaccine (HPV9) is licensed as a gender neutral vaccine for boys from 9-16 years of age and women from 9-26 years of age.

Schedule:

Schedule for adult women is 3 doses at 0-1-6 months for bHPV and 0-2-6 months for qHPV or HPV9. For men only HPV9 is licensed in

schedule of 0-2-6 months.

• Interrupted schedules: If vaccination schedule is interrupted,the series does not need to be restarted.

• Pregnancy: HPV vaccination not recommended until after pregnancy; no intervention needed if vaccinated while pregnant; pregnancy testing not needed before vaccination. . Can be safely administered to breastfeeding women.

MENINGOCOCCAL VACCINATION:

Special situations for MenACWY

• Anatomical or functional asplenia (including sickle celldisease), HIV infection, persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use:

Schedule: 2-dose series MenACWY-D (Menactra, Menveo) at least 8 weeks apart and revaccinate every 5 years if at continued risk.

- Travel in countries with hyperendemic or epidemic meningococcal disease: 1 dose at least 2 weeks before travel.

• Microbiologists routinely exposed to Neisseria meningitidis: 1 dose MenACWY (Menactra, Menveo) and revaccinate every 5 years if risk remains.

• 1 dose is recommended in certain high risk groups: International travelers, students going for higher studies abroad, Travelers to Hajj.

PNEUMOCOCCAL VACCINATION:

Routine vaccination.

For immunocompetent adults 65 years or older:

• Administer 1 dose of PCV13 first then give 1 dose of PPSV23 at least 1 year later.

- If the patient already received PPSV23, give the dose of PCV13 at least 1 year after they received the most recent dose of PPSV23. ·
- Anyone who received any doses of PPSV23 before age 65 should receive 1 final dose of the vaccine at age 65 or older. Administer this last dose at least 5 years after the prior PPSV23 dose.
- PCV13 and PPSV23 should not be administered during the same visit.
- If both PCV13 and PPSV23 are to be administered, PCV13 should be administered first.
- PCV13 and PPSV23 should be administered at least 1 year apart.

Special situations

1. Age 19 years or older with immunocompromising conditions

(congenital or acquired immunodeficiency [including B- and T-lymphocyte deficiency, complement deficiencies, phagocytic disorders, HIV infection], chronic renal failure, nephrotic syndrome, leukemia, lymphoma, Hodgkin disease, generalized malignancy, iatrogenic immunosuppression (e.g., drug or radiation therapy] organ transplant, multiple myeloma) or anatomical or functional asplenia (including sickle cell disease and other hemoglobinopathies):

Schedule: 1 dose PCV13 followed by 1 dose PPSV23 at least 8 weeks later, then another dose PPSV23 at least 5 years after previous PPSV23. At age 65 years or older, administer 1 dose PPSV23 at least 5 years after most recent PPSV23 (note: only' 1 dose PPSV23 recommended at age 65 years or older.)

2. **Age 19 years or older with cerebrospinal fluid leak orcochlear implant:** 1 dose PCV13 followed by 1 dose PPSV23 at least 8 weeks later. At age 65 years or older, (administer another dose PPSV23 at least 5 years after PPSV23 (note: only 1 dose PPSV23 recommended at age 65 years or older.)

RABIES VACCINE

Tissue culture vaccines (TCV) such as human diploid cell vaccine, purified chicken embryo cell vaccine (PCECV), Vero cell-purified rabies vaccines are now available. TCV are used for pre- and post- exposure prophylaxis. They are easy to administer, highly immunogenic,and have a good margin of safety.

Pre-exposure schedule: Pre-exposure schedule for rabies vaccination is 3 doses at days 0, 7, and 28 (NCDC Guidelines). WHO recommends two dose schedule day 0 and 7. It is recommended for high-risk groups such as veterinarians, laboratory personnel working with rabies virus, medical and paramedical personnel treating rabies patients, dog catchers, forest staff, zookeepers, postmen, policemen, delivery boys. For the high risk group only, antibody titers in the serum may be monitored annually. Booster dose should be administered when the titer falls below 0.5 IU/ml.

Postexposure prophylaxis: A person who is exposed and has never been vaccinated against rabies should get five doses of rabies vaccine at 0, 3, 7, 14, and 28 days. (NCDC Guidelines), WHO recommends 4 dose schedule 0, 3, 7, 14-28 days. In category 3 bite they should also get human rabies immune globulin/equine rabies immune globulin OR Rabies monoclonal antibodies preferably on the same time as the first dose (max up to Day 7 of vaccination). A person who has been previously vaccinated should get 2 doses of vaccine at 0 and 3 and no immune globulin or monoclonal antibodies are required.

TETANUS, DIPHTHERIA, PERTUSSIS VACCINATION:

Routine vaccination

• If previously did not receive Tdap at or after age 11 years: 1 dose

Tdap, then Td or Tdap every 10 years.

Special situations

• Previously did not receive primary vaccination series fortetanus, diphtheria, or pertussis: (CATCH UP VACCINATION) At least 1 dose Tdap followed by 1 dose Td/Tdap at least 4 weeks after Tdap and another dose of Td/Tdap at 6-12 months after last dose (Tdap can be substituted for any Td dose, but preferred as first dose); Td orTdap every 10 years thereafter (CDC 2021).

• Pregnancy: 1 dose Tdap during each pregnancy, preferably, between 27-36 weeks.

VARICELLA VACCINATION:

Routine vaccination:

. No evidence of immunity to varicella: 2-dose series 4-8 weeks

apart if previously did not receive varicella-containing vaccine and if previously received 1 dose varicella-containing vaccine, 1 dose at least 4 weeks after first dose.

Special situations:

• Pregnancy with no evidence of immunity to varicella: contraindicated during pregnancy; after pregnancy (before discharge from health care facility), 1 dose if previously received 1 dose varicella-containing vaccine or dose 1 of 2-dose series (dose 2: 4-8 weeks later) if previously did not receive any varicella-containing

vaccine.

• Health care personnel with no evidence of immunity to varicella:

1 dose if previously received 1 dose varicella-containing vaccine; 2 dose series 4-8 weeks apart if previously did not receive any varicella-containing vaccine.

· HIV infection with CD4 count 2200 cells/mm3 with noevidence of immunity:

Vaccination may be considered (2 doses 3 months apart); contraindicated for HIV infection with CD4 count <200cells/mm3.

- Severe immunocompromising conditions: contraindicated. ZOSTER VACCINATION Routine vaccination Age 50 years or older: 2-dose series RZV (Shingrix) 2-6 months apart (minimum interval: 4 weeks; repeat dose if administered too soon), regardless of previous herpes zoster or history of zoster vaccine live (ZVL, Zostavax) vaccination (administer RZV at least 2 months after).

HAEMOPHILUS INFLUENZAE TYPE B VACCINATION:

Special situations

· Anatomical or functional asplenia (including sickle cell disease):

1 dose if previously did not receive Hib; If elective splenectomy, 1 dose, preferably at least 14 days before splenectomy.

Hematopoietic stem cell transplant (HSCT): 3-dose series 4 weeks apart starting 6-12 months after successful transplant, regardless of Hib vaccination history.

WHAT ARE THE RECOMMENDATIONS FORVACCINATIONS OF HCPS?

· **Hepatitis B:** If previously unvaccinated, 3 doses of a recombinant Hep B vaccine in a 0-1-6 months schedule. It is preferable to test for anti-HbS antibody 4-8 weeks after the last dose. Those with past history of vaccinations should have titers estimated and should receive a booster if titers are below. threshold levels. Non-responders to the first series should receive a second 3 dose schedule, followed by estimation of antibody titers. If still below threshold levels, the HCP should be labeled as a primary non responder.

• **Influenza**: 1 dose of influenza vaccine annually, IV or LAIV. Inactivated vaccine is given IM, Live attenuated influenza vaccine

(LAIV) is given intranasally for 2-50 years old (contraindicar immune compromised hosts).

. MMR: For healthcare personnel (HCP) with no documentat a

of immunity, should receive 2 doses of MMR at 4-8 weeks interval.

· **Varicella (chickenpox):** For HCP who have no serologic proof

of immunity, prior vaccination, or diagnosis or verification of a history of varicella or herpes zoster (shingles) by a healthcare provider, 2doses of varicella vaccine, should be administered 4 weeks apart. .

Tetanus, diphtheria, pertussis (Tdap): 1 dose of Tdap as soon

as feasible to all HCP who have not received Tdap previously. Pregnant HCP should receive Tdap in each pregnancy. Td boosters are to be administered every 10 years thereafter.

• **Meningococcali:**Q-MCV is recommended to all HCPs who areroutinely exposed to isolates of Neisseria meningitidis. A booster is recommended every 5 years if risk continues.

• **Rabies:** Microbiologists, technicians handling samples from rabies

cases, clinicians working in rabies wards.

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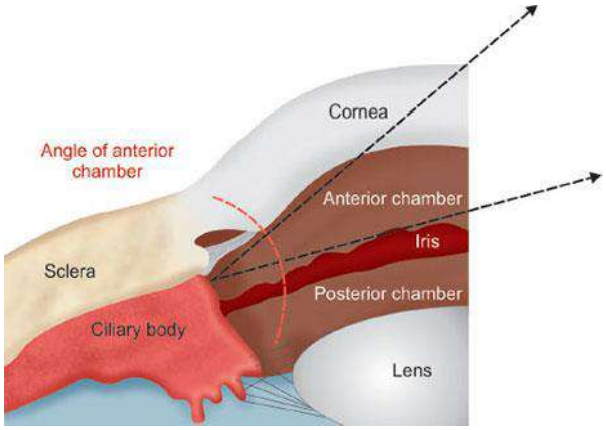
Glaucoma – An Overview

Dr. Angarag Bhagawati
Tezpur Eye Hospital,
Tezpur

Glaucoma is the leading cause of irreversible blindness worldwide. In 2020, 4.13 million people aged 50 years and older suffered moderate and severe vision impairment, and 3.6 million were blind due to glaucoma. In 2020, glaucoma caused 11% of all global blindness in adults aged 50 years and older. This is a very dreaded ocular condition but general population has little awareness about it. Although Glaucoma is a very vast topic, let us try to discuss some key points about the disease.

Some important anatomy

Angle of the anterior chamber of the eye



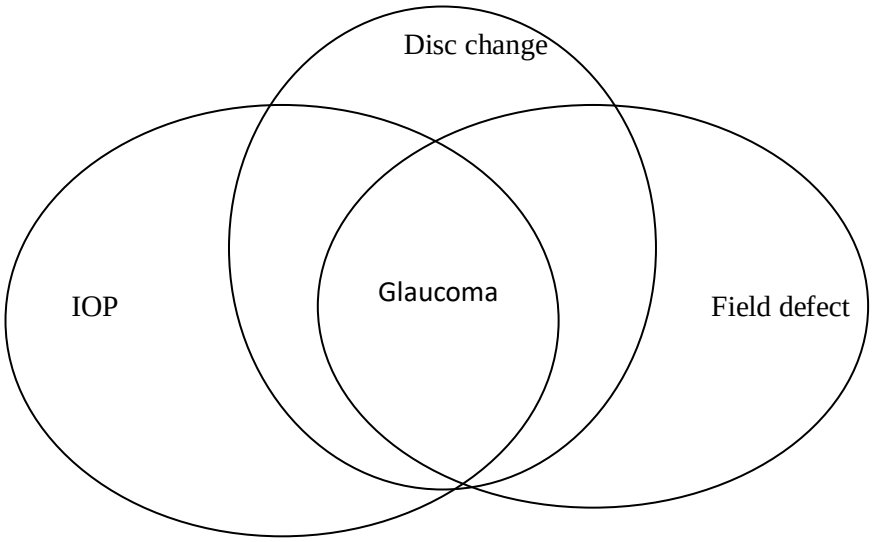
The space between the cornea and the human lens is divided into anterior and posterior chamber by the iris. Aqueous humor, which is produced at the cilliary processes of the posterior chamber, flows passively by osmotic gradient to the anterior chamber and is absorbed out of the eye mainly by the Trabecular meshwork. The aqueous contribute mainly to the Intra Ocular Pressure (IOP). Normal IOP of the human eye is considered to be between 11 to 21 mm of Hg. If there is blockage to the outflow of aqueous or there is increased production the IOP rises.

Definition

Glaucoma can be broadly defined as an optic neuropathy with characteristic appearance of the optic disc and specific patterns of visual field defects that is associated frequently but not invariably with raised Intra Ocular Pressure[1]. Let's try to understand the definition –

1. Glaucoma is an "Optic Neuropathy" with characteristic changes of the optic disc.
2. Visual field defects are of specific pattern
3. Intra ocular pressure (IOP) may be high or normal.

Let's study the diagram below



If a patient presents with all the 3 parameters we can diagnose it as glaucoma, but we have to be vigilant in other scenarios too.

The pathogenesis of glaucoma can broadly be summarized as the mechanical changes that occur in the Optic Nerve Head (ONH) largely due to rise in the IOP.

Diagnostic tools

a) IOP measuring tools
   I. Tonometers
      i. Goldmann Applanation Tonometer – Very accurate
      ii. Schiotz tonometer – cheap but observer variation may occour
      iii. Air puff tonometer – Non contact method, so can be used by all but reliable only in lower to middle range

iv. Tonopen – quite accurate and IOP can be measured in eyes with bad cornea also

b) Angle viewing tools – The angle is viewed directly by the ophthalmologist using different kinds of Gonio lenses like Goldmann Three Mirror, Zeiss Four Mirror etc. OCT (Ocular Coherence Tomography) images can also be used.

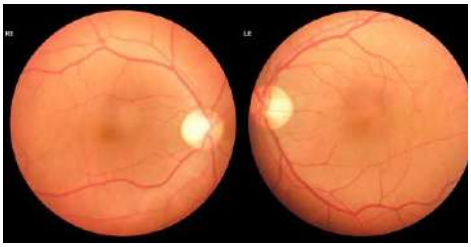
c) Visual Field Analyzers (perimetry) – Although various perimetry techniques are available, perimetry is now a days done with computerized automated perimeters. These machines have all the data for a patient's age and is quite accurate if done correctly. Only downside is that this is hard to perform in patients with low IQ.

d) Optic Nerve Head viewing tools

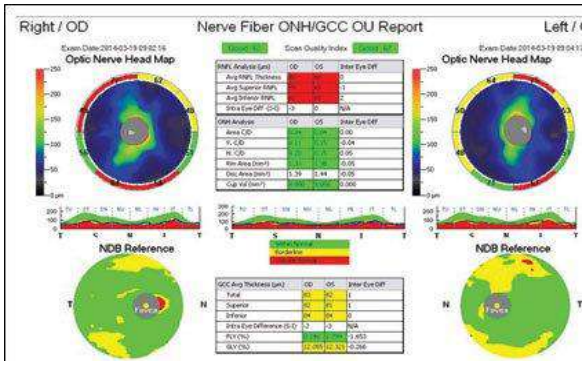
I. Indirect Ophthalmoscopy – ONH can be studied using a 90D or 78D lens with the Slit Lamp or through a 20D lens with the Indirect Ophtahlmoscope.

II. Fundus Photograph – A fundus camera can be used to study the photograph of the ONH.

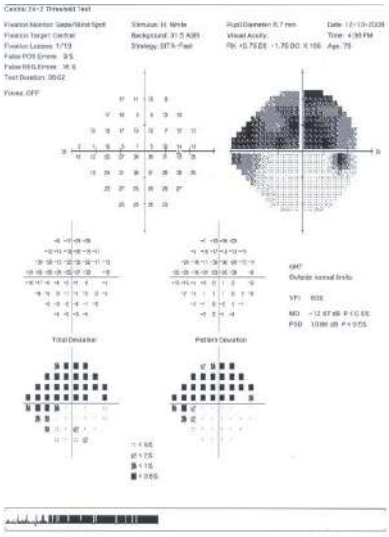
III. OCT – Very useful tool as it can provide high resolution cross sectional image of the retina.



Fundus Photo showing ONH



OCT Imaging



Perimetry Test Report

Classification:

A. Primary adult glaucoma
   a. Open angle glaucoma
   b. Angle closure glaucoma
B. Secondary glaucoma due to some other ocular or non ocular pathologies
C. Congenital or developmental glaucoma.

Primary Open Angle Glaucoma (POAG)

This is the commonest and most dangerous type of adult glaucoma. It is characterized by an open angle, IOP more than 21 mm of Hg most of the time and typical ONH changes and visual field defects.

Symptoms

Unfortunately in POAG the patient remains asymptomatic until significant damage has occurred. Initial symptoms noticed by patient are like unable to see properly the side of the road while driving or in general some loss of vision quality.

Signs

1. Raised IOP – Most of the patient has IOP of more than 21 mm of Hg. However some patients may present with normal IOP. The patients without raised IOP are categorized as Normal Tension Glaucoma (NTG)
2. Optic disc changes – POAG is often diagnosed after finding ONH changes or asymmetry in the optic discs of both the eyes.
3. Visual field defects are noticed while performing perimetry.
4. The angle is always found to be open on Gonioscopy.

Management

The aim of the treatment is always towards lowering the IOP. Even if a patient's IOP is found to be normal it is assumed that his/her ONH is damaged by this IOP. So IOP should be lowered to a level below than the IOP which was recorded at the time of diagnosis. There are also some newer drugs which have neuro-protective properties and are believed to be effective in delaying the damage to retinal nerve fibre layer.

a) Medical therapy – There are many anti glaucoma drugs available now a days. Most of the drugs are in the form of eye drops. Many of them also provide neuro-protection. These drugs should be continued for the whole life of the patient. However many drugs are expensive and hence patient compliance is poor in a country like ours. So, patient education and awareness is also important at the time of prescribing the drugs.
b) Laser Trabeculoplasty – This procedure should be considered if there is high suspicion of poor compliance of the patient or in elderly patients. However the effect of the procedure lasts only a few years.
c) Trabeculectomy – This surgical procedure is considered when medical therapy fails (Requirement of more than three drugs to lower IOP, poor compliance etc.). Trabeculectomy should also be performed in advanced diseases and if there is requirement of lowering the IOP to a very low level.

Primary Angle Closure Glaucoma (PACG)

PACG is a condition in which elevation of IOP occurs as a result of obstruction of the aqueous outflow by partial or complete closure of the angle by the peripheral iris. It happens in anatomically predisposed eyes like relative anterior location of the lens iris diaphragm, shallow anterior chamber, narrow entrance to the chamber angle etc.

Symptoms

Patients typically complaint of sudden unilateral headache and peri-orbital pain. There is sudden diminution of vision. Some patients complaint of coloured halos and a red eye. Many patients also complaint of nausea and vomiting along with other symptoms.

Signs

1. IOP is typically raised to a very high level (50 – 100 mm of Hg).
2. Corneal edema
3. Shallow anterior chamber
4. Pupil is mid dilated and oval shaped
5. Aqueous flare and cells can be seen
6. Optic disc is hyperaemic or normal (if can be visualizede)
7. Gonioscopy reveals a closed angle

Management

a) Prophylactic Laser Iridotomy – This is performed in anatomically predisposed eyes to prevent an acute attack. This therapy is successful in more than 75% of the patients. This is done with Nd:Yag Laser.
b) Medical therapy – When an acute attack occurs, main aim is to lower the IOP as rapidly as possible. Acetazolamide through IV and oral route should be started. Mannitol can also be started through IV route with rapid infusion. Classically 2% Pilocarpine eye drops are instilled at 30 minutes interval, but other drops like dorzolamide can also be used if pilocarpine is unavailable. Analgesics and anti-emetics are used as per requirement.
c) Laser Iridotomy – Peripheral laser iridotomy should be performed in both the eyes once the acute attack subsides and the cornea is clear.

Secondary glaucoma

Let's discuss some important secondary glaucoma

a) Pseudoexfoliative glaucoma – Pseudoexfoliation syndrome is a condition in which exfoliative material is deposited on the iris, ciliary region and lens capsule. This condition is quite common and found in day to day practice. When these flakes collect and block the angle pseudoexfoliative glaucoma occurs. This occurs generally after the age of 70 years. The management is in the line of POAG but with poor prognosis.

b) Inflammatory glaucoma – Glaucoma can occur in a patient with uveitis. This typically happens due to blockage of the angle by the inflammatory deposits or by extensive posterior or peripheral anterior synechia. Treatment consists of management of the inflammation with topical corticosteroids and NSAIDS. The IOP should be lowered initially with anti glaucoma drops and should be re evaluated once the inflammation totally subsides.
c) Neovascular glaucoma – This follows extensive retinal ischemia and is commonly associated with Central Retinal Vein Occlusion or Proliferative Diabetic Retinopathy. There is presence of neovascularisation over the iris and a zip like adhesion of the iris to the peripheral cornea resulting in angle closure. Management is very difficult and prognosis is also poor.
d) Lens Induced Glaucoma (LIG) – This condition is commonly seen in a country like ours where patients delay their cataract surgery due to ignorance, fear or financial reasons. This may occur due to rapid development of cataract where the lens becomes swollen and push the iris towards the cornea. LIG may also occur if lens proteins from a hypermature cataract escape to aqueous and subsequently block the angle. Patients complaint of severe pain in one eye and headache. This may be associated with nausea or vomiting. Patients usually give a history of gradual loss of vision in that eye from some time. This is an ocular emergency condition. If the IOP is more than 50 mm of Hg for 3 or more days, there is a high possibility of the patient going blind. Treatment is by early reduction of IOP and cataract surgery as soon as possible.
e) Corticosteroid induced glaucoma – Topical or oral administration of corticosteroids can raise IOP around 5 – 6% population. This happens in genetically predisposed eyes. Treatment is by stopping the corticosteroid and lowering the IOP with anti glaucoma medication.
f) Secondary glaucoma due to an intra ocular tumor – Intra ocular tumor can lead to increased IOP by direct infiltration of the angle by the neoplastic cells.
g) Secondary glaucoma in systemic diseases – There are many syndrome in which glaucoma may occur like the Sturge Weber Syndrome, Neurofibromatosis I etc.

Congenital glaucoma

It is a rare condition affecting 1:10000 births. It may be *true congenital glaucoma* present at birth, *infantile glaucoma* which develops before three years or *juvenile glaucoma* which occurs in between 3 – 16 years of age.

Signs

a) Corneal Haze – This is the first sign noticed by the parents after birth. The haze is caused by corneal edema.
b) Buphthalmos – The eye become very large as a result of stretching due to very high IOP.

Management

In infants the IOP may be measured with a Perkins Tonometer. But the corneal diameter also gives a good idea about the disease. If the corneal diameter is more than 11mm prior to 1 year or more than 13 mm at any age, there should be a high chance of the child suffering from glaucoma. Early surgery with early diagnosis can help to save the eye. Surgical procedure options are Goniotomy, Trabeculotomy or Trabeculectomy.

Glaucoma is often referred to as the silent thief of sight. This is because in POAG the patient hardly has any symptom before significant damage has occurred. Therefore it is advisable to the whole population to do a periodic eye check up, especially after 40 years of age. The first degree relatives of a diagnosed patient of glaucoma should always have their eyes screened for glaucoma. We must remember that early detection and early and proper treatment can only save a glaucoma patient from blindness.

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Dr. Naba Kr. Hazarika
Past Hony. State Secretary, IMA ASB

DR. BHUBANESWAR BAROOAH
LEGENDARY FIGURE OF NORTH EAST INDIA

Lokabhandhu Bhubaneswar Barooah was a legend of his time. In forties and early fifties, there was no socio-economic field in Assam where he deed not have any substantial contribution. He was the person who initiated the formation of the Assam Branch of Indian Medical Association in 1947. It was his selfless efforts which could bring radical transformation in the medical field of North-East, through establishment of Assam Medical College in Dibrugarh, Ayurvedic College and Lokapriya Gopinath Bardoloi T.B. Hospital in Guwahati. In setting up Gauhati University his involvement and association was direct. Only through his pursuation Late Krishna Kanta Handique who was his close friend agrees to accept the First Vice-Chancellorship of the University. Not only in the medical and educational field, Dr. Bhubaneswar Barooah was pioneer is establishing several other social service institutions like Kasturba Ashram, Deaf and Dumb School etc.

He was a great patron of art, culture and sports. He was the spirit behind who motivated people of Assam to celebrate 'Bihu' as a national festival in a public field at Guwahati. He encouraged the artists for introducing co-acting in Assamese theatres and provided inspiration to them by attending all such theatre performances at Guwahati. He commissioned Late Ashu Dev, a renowned painted of Assam to paint designs from Chitra Bhagavat on the walls of the hall of his Sarania residence. When Rup Konwar Jyoti Prasad was making the first Assamese film "Joymati" Dr. Barooah went all way to Bholaguri just to congratulate Rup Konwar for his artistic pursuit. In organising a national tournament in Assam by inviting teams from outside, he donated the first "Bardoloi Trophy" in memory of his friend Lokapriya Gopinath Bardoloi which is still a major football event in the country.

Dr. Barooah was front ranking freedom fighter who went to jail several times. He was a Gandhian all through who sincerely believed in Non-violence and Khadi. Inspite of his heavy schedule he managed to spend sometime everyday to, spin in his Charkha. After India attained independence, he was actively involved in politics, holding important organisational assignment in Congress, but politics never lured him. In Assam politics, he was known as undisputed "King Maker" but he abhorred the idea of holding any governmental office though he was offered Ministerial assignment, membership of Parliament

and even the Vice-Chancellorship of Gauhati University. This shows his sincerity of purpose, his selflessness and above all his greatness as a person.

In economic field, je was instrumental in promoting Gauhati Bank, the first commercial bank in Assam. When this Bank was about to sink, Dr. Barooah deposited his entire life saving in the Bank to save the institution from collapse fully knowing that there was no chance of getting back the money. He was also a promoter of Bhaskar Insurance Company, the first venture in insurance sector in the Eastern part of the country.

Though a radical social activist, Dr. Bhubaneswar Barooah was a Doctor by profession whose aim in pursuing this noble profession was serving the suffering humanity. As a Doctor, he was "DHANWANTARI" whose mere presence by the side of a patient could cure his illness. Patients suffering from any type of ailments used to come to him and his accurate diagnosis of the disease coupled with simple and cheap treatment gave such patients new lives. He had God gifted talent to diagnosis ailments and his investigative equipments for diagnosis were a Stethoscope and an old Microscope. As a Doctor he could have minted money as his medical proficiency was sought after by all sections of people of Assam. But he never hankered after riches – he very often went to the countryside to help the poor people. He did not have even a money bag; his Khadi Kurta pockets served as his purse, his bank and his charity trust, all rolled into one. He treated poor patients free of any charge and even paid for their medicines and diets. A believer of dictum "Plain living and high thinking" he was a saint incarnate to the poor people.

He was an institution by himself – a multifactor institution always eager to help people, particularly the poor and vulnerable a versatitle towering personally emitting radiance and charming people from all walks of life. People of Assam repaid their debt with adoration to this great noble soul by calling him "LOKABANDHU" – Peoples' Friend.

Dr. Bhubaneswar Barooah was bon on 4th September, 1983 at Sadiya. He was the sixth child in a family of 13 children. One of his elder brothers Late Lakheswar Barooah was the first Speaker of Assam Legislative Assembly after independence. His younger brother Late Dr. Kanak Chandra Barooah was a leading medical practitioner at Guwahati and an eminent social activist with whose efforts Dr. Bhubaneswar Barooah Cancer Institute was established at Guwahati in early seventies. From childhood Dr. Barooah was dreaming of becoming a doctor but owing to financial constraints of his family he joined as a Sub-Inspector of Schools after passing Intermediate Science Examination from Cotton College in 1914. While he was working in Garo Hills the then high profile Inspector of Schools, Mr. Small visited his place of working. Mr, Small

was very much impressed by the dedication and efficiency of the young Sub Inspector and wanted to promote him to the rank of Deputy Inspector out of turn. But Bhubaneswar Barooah declined the offer and requested Mr. Small to help him in securing a seat to study medicine in Calcutta Medical College. As luck would have it, he was awarded a stipend for studying M.B. in Calcutta Medical College.

One of his teachers in Calcutta Medical College was none other than the Great Dr. Bidhan Chandra Roy. After completion of his studies in Calcutta Medical College, he was selected to the Post Graduate Course in Medicine in the same college but he could not avail the chance and had to come back to Assam to join as an Assistant Surgeon in 1921 as per terms of the bond he executed to avail the stipend. As Assistant Surgeon he served in different places and established his credentials as an outstanding Doctor. But his patriotic fervour, independent thinking and his sympathy to political prisoners (at that time Civil Surgeons and Assistant Surgeons were incharge of District and Sub-divisional jails) and wrath of his British Superiors. Fortunately for Barooah this helped him to resign from government job in 1924 before the expiry of the term of his band. He came to Guwahati and set up his private practice and simultaneously he involved himself actively in the freedom struggle. He played a laudable role as a true patriot who believed in non-violence. He joined Congress and held important organisational assignments. As a Congress man he was a disciple of Gandhiji wearing Khadi cloths. He had strong views on political matters – particularly pertaining to the interest of the country and the state – but he had no dogma. He was liberal in out look, disciplined in his life style, principled in his activities.

At heart he was a simple man but widely respected for his humanism. As a Doctor he was alarmed at the high incidence of hook worm and malaria in the rural areas of undivided Assam. He made relentless efforts to create awareness among people about the menace of these diseases for eradication of the same. As a medical practitioner he was in the miracle of glory unparallel in the State but he was always benevolent in his approach. People believed that he had God-gifted magical power to cure any illness. There were innumerable instances showing what great faith the Doctor envinced from the common people. He had high regards for Ayurvedic as well as Homeopathic System of medicines. Through his profession Dr. Baroosh rendered selfless dedicated service to the needy and suffering humanity.

As a Doctor, he used to indentify himself with patients without any consideration of fees though his fee was very minimal. In case of critically ill he used to visit the patient number of times even at late hours but never asked for

any fee or conveyance. To him, the patient's interest was must more than his personal interest. After his second heart attack, the attending physicians, particularly his younger brother Dr. K.C. Borooah imposed strict restriction in his movement to give him some rest.

On one occasion, both mother and father of an ailing young man came to him at late hour of evening and begged him to come to their house to examine their critically ailing son, who was in the second floor of the residence. Dr. Barooah's family members did not like to allow him to go in view of his own illness. But Dr. Barooah was moved by the request to the parents and agreed to examine the ailing young man. Ultimately a compromise was struck – the ailing young man would be carried down to the ground floor of the residence to avoid stair climbing by Dr. Barooah who himself was a heart patient. Dr. Barooah went and examined the patient but he was very must disturbed and agitated. On his return he rebuked his family members and told them "Today just to oblige you I have done something which is my whole life never I dreamt of doing. A serious patient had to be dragged to the ground floor only for my interest. I would have been happier dying in the second floor than doing this." This showed his concern for the patients. Two months after that incident Dr. Barooah breathed his last at the age of 63 years, on 25 September, 1956.

Though he is no more he left a legacy of his motto **"service to mankind is service to God"** and the befitting tribute to this noble soul would be to follow his cherished ideals in the service of suffering humanity and mankind.

Dr. Arunima Goswami
Guwahati

FILARIASIS: AWARENESS AND MANAGEMENT

Filariasis is a disease that is caused by nematodes that inhabit the lymphatics and subcutaneous tissues. Three filarial species cause lymphatic filariasis: *Wuchereria bancrofti, Brugia malayi* and *Brugia timori.* Infections are transmitted by mosquito vectors. More than90% of cases are due to *Wuchereria bancrofti* world over. 99.4% cases in India are due to *W bancrofti* and is transmitted by *Culex quinquefasciatus* which was previously known as *Culex fatigans.* In Filariasis, humans are the definitive hosts. According to WHO, 'Lymphatic Filariasis' which is commonly known as 'elephantiasis' is a neglected tropical disease. Hence awareness regarding this disease is of paramount importance.

Globally 120 million people in around 80 countries are living with the disease. 1.2 billion people are at risk for the disease and are eligible for preventive chemotherapy. The global baseline estimates of people affected with lymphatic filariasis are 25 million men with hydrocele and over 15 million people with lymphoedema. At least 36 million people remain with these chronic disease manifestations. Eliminating lymphatic filariasis can prevent suffering and contribute to reduction of poverty. The epidemiology of lymphatic filariasis is changing due to implementation of a global programme of mass drug administration (MDA)to eliminate transmission. Not only has mapping of disease prevalence prior to MDA led to reclassification of some countries as nonendemic, but more than 20 countries have been able to stop MDA due to interruption of transmission and some have appeared to eliminatetransmission entirely. (1)

Fig 1: Reprinted from WHO Preventive Chemotherapy joint Reporting Form. Annual country repirts, 2016, WHO. Copyright 2017. Available from http://apps.who.int/gho/cabinet/pc.jsp(Accessed on July 29, 2019

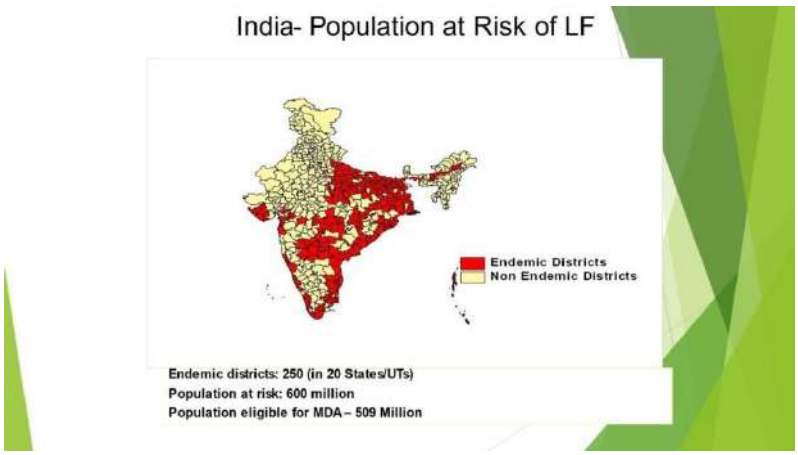

Fig 2: Showing lymphatic filariasis affected districts of India.

Fig 3: Showing filaria endemic districts of Assam.

I. Burden of Filaria

According to one study from India, chronic filariasis patients lose around 29 days of work per year due to complications of infection (2). Another study reported productivity loss due to Acute Adenolymphangitis (ADL) 70-100%, 10-29% due to lymphoedema and 15-19% due to hydrocele (3). Data suggests high prevalence of depressive illness accounting for 5.09 million DALYs (disability adjusted life years). Filariasis is a major cause of disfigurement and disability in endemic areas resulting in significant economic and psychosocial burden. Inability to workcauses economic loss and poverty. Communities shun those who are disfigured. Women with chronic filariasis are often rejected by their spouses and getting married becomesdifficult for young girls with disfigurement.

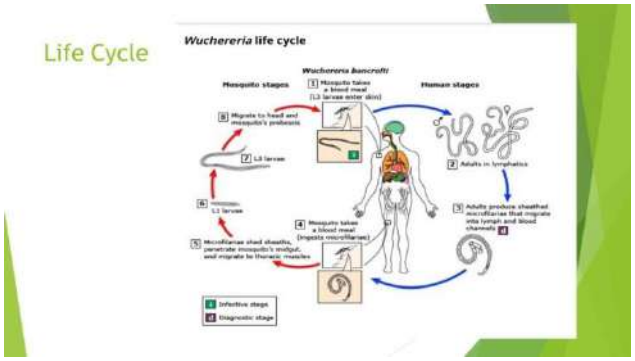

Fig 4: Life Cycle of *Wuchereria bancrofti*

II. PATHOGENESIS:

Filariasis is caused by the complex interplay of pathogenic potential of the parasite, human host response and complicating bacterial and / or fungal infections. Genetic factors are likely to influence the susceptibility to lymphoedema as all people are not affected equally. Adult worms in lymphatics cause mechanical obstruction which leads to subclinical
lymphangiectasis and lymphatic dilatation. This lymphatic dilatation harbours secondary bacterial / fungal infection which leads to lymphoedema (4). Further recurrent infection in an already lymphoedematous patient leads to elephantiasis. Wolbachia, an endosymbiotic bacterium of filarial parasites, seems to be responsible for inflammatory manifestations and immune responses of filariasis (6).

The pathogenesis and clinical progression are likely to be influenced by (i) The extent and duration of exposure to infective insect bites. (ii) The quantity of accumulation of adult worm antigens in the lymphatics. (iii) The host immune response. (iv) The number of secondary bacterial and fungal infections. Paradoxically symptoms of lymphoedema are more severe in patients without circulating microfilaria, whereas patients with circulating microfilaria are often asymptomatic.

III. CLINICAL MANIFESTATIONS

1. Asymptomatic (Subclinical)

Most infected residents of endemic areas are asymptomatic. However, on investigation many abnormalities may be found. In apparently normal individuals, lymphatic dilatation may be seen by doing 'Lymphatic scintigraphy'. Also, abnormalities in lymphatic drainage may be seen. Scrotal lymphangiectasia is usually diagnosed by ultrasonography.
Microscopic haematuria or proteinuria may occur. A common finding is Eosinophilia, usually more than 3000 /microL. Elevated serum immunoglobin IgE may be present.

2. ACUTE MANIFESTATIONS -

(i) Acute Adenolymphangitis (ADL) – This is characterised by sudden onset fever and painful lymphadenopathy. Interestingly retrograde lyphangitis may occur. Inguinal
lymph nodes and lower limbs are commonly involved. ADL can also involve genitalia also. In males typically painful epididymitis with fever and malaise occurs

(ii) Acute Dermatolymphangio-adenitis (DLA) – This is characterised by oedematous inflammatory plaques. Systemic symptoms like fever, chills, myalgia and headache may occur. It is thought to be caused by superficial bacterial infection of damaged skin. Usually, history of trauma or entry lesions particularly in the inter digital areas may be present (7).

(iii) Filarial fever – It is very difficult to diagnose as acute self-limited episodes of fever occurs often in the absence of lymphangitis or lymphadenopathy

(iv) Tropical Pulmonary Eosinophilia - This is a result of immune hyper responsiveness to microfilaria and is characterised by nocturnal wheezing. Dry hacking non-productive cough occurs. Weight loss, fatigue and malaise are commonsymptoms.

3. CHRONIC MANIFESTATIONS –

(i) Lymphoedema – Here limb swelling occurs in relation to chronic inflammation of the lymphatics. Involvement of the inguinal lymph nodes in long term filariasis leads to leg swelling. Involvement of the axillary lymph nodes leads to upper limb swelling and in women breast is sometimes involved. Chronic inflammation leads to brawny nonpitting oedema and hardening of the tissues with hyperpigmentation andhyperkeratosis. Severe lymphoedema is referred to as 'Elephantiasis' (5). Chroniclymphatic disease can involve the genitalia causing unilateral or bilateral hydrocele.Lymphatic filariasis of the ovary, mesosalpinx, vulva and breast has also beenreported (8).

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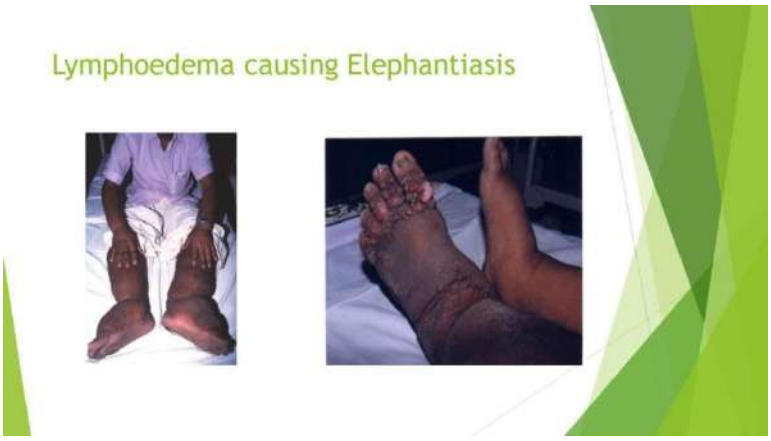

Fig 5: Showing lymphoedema and elephantiasis

(ii)Renal involvement - Chyluria may occur causing loss of a large amount of protein and fat leading to nutritional deficiencies including anaemia and hypoproteinaemia. There may also be haematuria and proteinuria. This is probably mediated by immunecomplex nephritis.

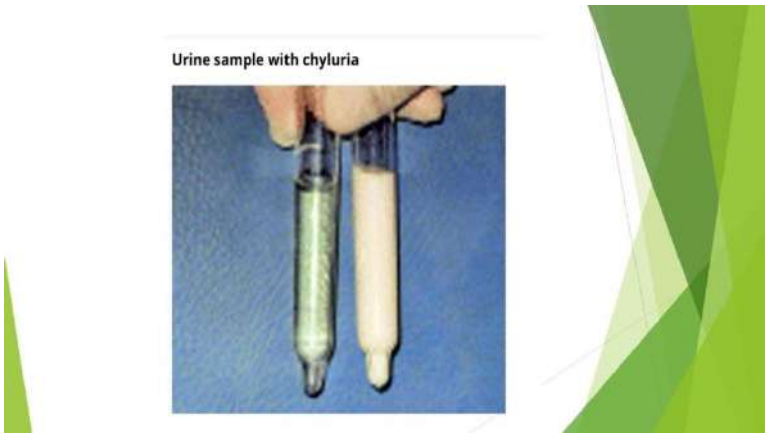

Fig 6: Showing urine sample with Chyluria

(iii) Other Syndromes – Arthritis, Endomyocardial fibrosis,

Tenosynovitis, Thrombophlebitis, Lateral popliteal nerve palsy etc. may occur in Filariasis.

IV. DIAGNOSIS

1. Circulating antigen detection - Circulating filarial antigen (CFA) assays have been developed for diagnosis of *W bancrofti*. These tests detect antigensreleased by adult filarial worms, so may be positive in amicrofilaraemic individuals (9). This is taken as the gold standard for diagnosis of Filaria. The antigen remains stable during day and night so these tests can be performed atany time. This test is available in both card and strip-based tests.

2. Blood smears - Microfilaria are detected in peripheral blood smears takenbetween 10 PM and 2 AM. The three filarial species that cause lymphatic filariasiscan be differentiated from each other through microscopy by staining with either Wright or Giemsa stain. Hence this is good for identifying the type of Microfilaria.

3. Polymerase Chain Reaction (PCR) - Species specific techniques are used as research tools to detect filarial infection in humans and to assess prevalence ofmicro filarial infection among mosquitoes.

4. Antifilarial antibody tests - These are serologic tests that detect filarial antibodies, i.e., elevated levels of IgG and IgG4. Do not differentiate between various types of filarial infections. Further cannot differentiate between activeand past infection.

5. Imaging

a. Ultrasound and lymphoscintigraphic techniques detect adult worms inlymphatic vessels. Movement of living worms can be detected by US and has been described as the *filarial dance* sign.
b. Previously contrast lymphangiography was used to visualise lymphaticvessels, but this procedure can damage lymphatic vessels and now it has been replaced by lymphoscintigraphy.

V. MANAGEMENT

Filariasis has a wide spectrum of clinical presentations. Hence management dependson certain considerations.

1. In **asymptomatic** and **acute clinical manifestations** antimicrobials should be given.

Early treatment of Filariasis helps in preventing the long-term complications anddisfigurement.

2. In **chronic infections** we should go for morbidity management. When a patient develops lymphoedema or elephantiasis, the damage has already been done. Henceantimicrobials have no role at this stage.

3. For **control of filariasis in the community**, Mass Drug Administration (MDA) is themainstay of management.

VI. ANTIMICROBIALS

1. **DEC (Diethyl Carbamazine Citrate)** – This is a potent microfilaricidal and macrofilaricidal drug. It kills approximately 50% of adult worms. DEC should beavoided in pregnancy and lactation.
2. **Doxycycline** – This has both microfilaricidal and macrofilaricidal activity. It killsWolbachia, an intracellular bacterial symbiont present in microfilaria and adultworms (10).
3. **Ivermectin** – This has microfilaricidal activity but does not have much macrofilaricidal activity. Hence repeat doses are required.
4. **Albendazole** – Has no direct effect on microfilariae but leads to slow decline ofmicrofilaremia due to anti-macrofilaricidal activity.

VII. MANAGEMENT OF CHRONIC PATHOLOGY

1. **Lymphatic pathology** – General measures like washing of the affected areas twicedaily should be done. Usage of antibacterial films, keeping nails clean, wearing of shoes helps in preventing secondary infection. The affected limb should be exercised regularly and elevated at night. Aggressive treatment of secondary infections and close attention to hygiene is essential.

Fig 7: Showing washing of affected limb and application of anti-bacterial film

2. **Hydrocele** – Drainage may give relief but re-accumulation occurs. Surgery isrequired for prevention of re-accumulation.

3. **Chyluria** – This may be associated with secondary nutritional deficiency. Hence alow-fat high protein diet is required.

4. **Surgery** - Reconstructive surgery has some role in reducing the weight anddisfigurement in gross lymphoedema.

VIII. MASS DRUG ADMINISTRATION

Mass drug administration (MDA) reduces the blood borne reservoir of microfilaria to a level below that required for sustained transmission by local vectors. MDA programs have beeninitiated in more than 60 countries and various combinations of DEC, Ivermectin andAlbendazole have been used. These programs have led to suppression of transmission to<1% (the predicted threshold for elimination) in several countries. More than 20 countries have been able to stop MDA due to interruption of transmission and some countries seem to have eliminated transmission entirely In India in order to cut off the transmission of filariasis in the community in endemic districts the NVBDP (National Vector Borne Disease Program) advocates annual MDA with DEC and

Albendazole consecutively for 5 years or more to the population, except in children below 2 years, pregnant women and seriously ill persons.

MDA is implemented in a carefully designed method. 'House to house approach' is one important strategy but difficult to cover. 'Booth approach' in health care institutions is done. In schools, offices, industries, prisons, market places, bus stands, railway station, fairs etc. 'Group approach' is done. Drug administrators are to administer the drugs directly to the people in the community in their presence. Doses schedule of drugs are to be kept with the drug administrator. 1 (one) drug administrator should cover 250 population i.e., 50 houses / families during MDA.

Prevention

The focus is on MDA whereby the cycle is broken. MDA reduces the blood borne reservoir ofmicrofilariae to a level below that required for sustained transmission by local mosquito
vectors (11). Anti-vector measures like mosquito nets, mosquito repellents etc. are to be used. No vaccine is available till date, though research is on the way. Awareness is the key.

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IMMUNIZATION IN PREGNANCY

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ABSTRACT

The idea of vaccinating a female before, during and after the gestational period is to protect the woman against a host of fatal infections. Vaccination counselling has to be a part of pre conceptional counselling.By rule all women should be up-to-date with their vaccination schedule before becoming pregnant. As more than 50% of all pregnancies are unplanned, it is of utmost importance that all women in the reproductive age group should receive complete immunization regardless of their plans of conception. Immunization during pregnancy can be summarized as :-

1) The detailed history of occurrence of vaccine preventable diseases, previous records of vaccination and allergic reactions to any vaccine administered in the past needs to be noted. Rubella, Hep B and Varicella are recommended prior to pregnancy. If Rubella is given, pregnancy has to be deferred for three months.

2) Immunization against Tetanus, Diphtheria, Pertussis and Influenza is recommended during pregnancy.

3) Postnatally Rubella ,Hep B ,Varicella ,Influenza. ,Tetanus and HPV vaccination are recommended to all non immunized mothers.

IMMUNIZATION IN PREGNANCY

INTRODUCTION:

Since childhood immunization is given importance over years together , the same significance should be given to immunization during pregnancy. If any pregnant women suffers from an infectious disease during her gestational period it is a threat to the advancement of modern science, because of the fact that it could have been prevented by vaccination. The matter of concern regarding administration of vaccines to pregnant women is the theoretical risk of infecting the developing fetus with the chance of transplacental transfer of the virus. Prenatal routine universal screening for all females in the reproductive age group should be done as an essential component of preconception counselling.

The following vaccines should be considered prior to the plans of conception.

a) **MMR-** detailed history of immunization with MMR or development of immunity due to past infection should be investigated upon and if in doubt a serological test for Rubella antibody should be carried out.The presence of IgG depicts old infection or immunized status while IgM depicts recent infection who need not be vaccinated with MMR.The serological investigation is read as follows:-

If the Hemeagglutination Inhibition less than 1:8,it suggests no immunity to Rubella. This group needs to be vaccinated prior to plans of conception and pregnancy should be deferred for 3 months after the vaccine is administered. If the Hemeagglutination Inhibition is more than 1:20,it suggests immunity against Rubella. This group need not be vaccinated prior to pregnancy provided a detailed history is obtained . MMR vaccine is contraindicated during pregnancy and if any accidental pregnancy occurs within a month of vaccination , the couple should be thoroughly counselled for the incidence of adverse outcomes.

WHY IS MMR VACCINE IMPORTANT?

Women who are not immunized against Rubella contract the virus via nose and throat that leads to Congenital Rubella Syndrome comprising of an array of congenital defects of the developing foetus.Once the fetus is exposed to the virus a host of cellular changes occurs in different organs like eyes, ears, brain, central nervous system and heart leading to glaucoma , deafness, hypertension, cataract, dental abnormalities, mental retardation, blindness and hepatosplenomegaly.85 out of 100 babies born with maternal Rubella in the first trimester of pregnancy will have congenital malformations. Dosage and administration: 0.5 ml administered subcutaneously preferably into the outer aspect of the upper arm in the postmenstrual period.

b)**Varicella Zoster -** belongs to the Herpes family and can cause Chicken pox (Varicella) and Herpes Zoster(Shingles).A detailed history of childhood infection or immunity to Chicken pox has to be taken.Once infected with Varicella virus , life long immunity is achieved. If history cannot be elicited then serological test for Varicella Zoster antibody can be done.Varicella Zoster vaccine is administered if no immunity is documented. Varicella vaccine is a live attenuated virus and hence is contraindicated during pregnancy and those who are vaccinated preconceptionally should be advised to defer pregnancy for atleast a month following vaccination. Varicella immunoglobulin can however be administered if a susceptible pregnant woman is exposed to Varicella and also indicated for new born of mothers developing Varicella 4 days prior to delivery or 2 days following delivery.Varicella immunoglubin is not indicated for prevention of congenital Varicella .

WHY IS VARICELLA ZOSTER VACCINE IMPORTANT?

Infants whose mother is infected with Varicella during the late 1st and early 2nd trimester suffer from limb atrophy and skin scarring collectively known as congenital Varicella syndrome.Opthalmological and central nervous system involvement is also seen, increasing neonatal morbidity and mortality.

Dosage and administration- 2 doses of Varicella vaccine 4-8 weeks apart in the postmenstrual period.

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Adverse effects-redness,pain,swelling at the site of injection (oral /axillary temperature >37.5C;rectal temperature>38C)

c)Hepatitis B- Detailed history of Hepatitis B vaccination needs to be taken prior to plans ofpregnancy.If history cannot be elicited serological test for anti HBs antibodies can be done to know the immunization status.Usually it should be administered preconceptionally but if the risk factors are present in an unimmunized pregnant women, weighing the risk benefit ratio Hepatitis B vaccine can be administered during pregnancy and lactation. The risk group[1,2] includes multiple sexual partners, intravenous drug abusers, occupational exposure, household contact with carriers.

Since Hep B vaccine is inactivated (recombinant) viral vaccine and is comprised of noninfectious HBsAg particles there is no theoretical as well as practical risk of vaccinating females at high risk with Hep B vaccine.[3,4,]

WHY IS HEP B VACCINE IMPORTANT?

The greatest threat is the risk of vertical transmission to the baby which is as high as 90%,leading to life long carrier status in adults and eventually high risk of cirrhosis and Hepatocellular carcinoma.Neonates born to HBsAg positive mothers should receive both Hepatitis B vaccine and immunoglobulin within 12 hours of birth.

d)HPV vaccine- With India being the cervical cancer capital of the world, ideally HPV vaccination should be offered to all female between 9 to 26 yrs of age way ahead of pregnancy.If a female conceives after the first dose of vaccination,the subsequent doses should be deferred and termination of pregnancy is not indicated.

The current vaccine recommendations for all pregnant women are:-

1)**Tetanus toxoid** –

WHY IS TETANUS TOXOID IMPORTANT?

Tetanus can cause severe maternal morbidity and neonatal mortality.The life threatening toxin of the bacteria named CLOSTRIDIUM TETANI can be prevented from entering into wounds,cuts or fresh ulcers only by immunization.[5,6.].Tetanus affects the nervous system and is extremely fatal.Neonatal tetanus occurs due to unsterilized instruments used for umbilical cord cutting or unhealed stumps.WHO reports around 200,000 neonatal deaths occurring mainly in developing countries due to tetanus.[7]

All pregnant women should receive 2 doses of Tetanus toxiod at least a month apart with the first dose being administered during the 2nd trimester(around 20 weeks).

In case a subsequent pregnancy occurs within 3yrs then only a single booster dose is given.Dosage administration- First dose 0.5 ml deep intramuscular around 16-20 weeks and second dose after 4-6 weeks(instead of the second dose of Tetanus toxoid, Tdap vaccine can be given) In Indian rural settings where there is lack of awareness and sparse antenatal visits, first doseis given during the first antenatal checkup followed by the 2nd one month later.

2)**Infuenza vaccine** :Available vaccines are trivalent inactivated viral,(TIV) subunit or live attenuated influenza vaccine (LAIV) and recombinant quadrivalent vaccines Pregnancy Dosage recommendation - one dose of inactivated vaccine(TIV) of 0.5 ml to be given intramuscular either during the Flu season or around the 26 weeks of gestation also known as the Flu shot (H1N1,H3N2,Infuenza B)

WHY IS INFLUENZA VACCINE IMPORTANT?

As pregnancy is an immuno suppressed state, expectant mothers are more likely to suffer from severe illness due to influenza during the seasonal outbreaks.[8].Inactivated influenza vaccine are considered safe to ward off serious morbidities associated with maternal influenza. All women in the 2nd or 3rd trimester of pregnancy should be subjected to influenza vaccination regardless of the season. Usually those in the month between November to March poses more risks
2) **Tdap vaccine** : It is Tetanus, Diphtheria and inactivated acellular Pertussis vaccine (Diphtheria and Pertussis both are reduced antigen)

Pregnancy Dose Recommdentation: One dose Tdap around 27-36 weeks of gestation. The Tdap vaccine gives passive immunity against pertussis via transaplacental transfer of antibodies from mother to fetus.

WHY IS Tdap VACCINE IMPORTANT ?

Pertussis is an immensely contagious respiratory tract infection with the highest risk to the neonates presenting with serious complications like pneumonia,seizures leading to high

neonatal morbidity and mortality . Indian, with an account of highest incidence of Pertussis globally ,the neonates are vulnerable to be affected by life threatening infection contracted specially from the mothers. Mothers are the most common source of Pertussis infection for the newborns.Newborn babies are too young to be protected by currently available vaccination schedule,hence TDaP vaccine is of utmost importance.

As primary vaccination against Pertussis with DTP vaccines commence around six weeks post natally , Tdap vaccine administered during the third trimester to the mother provides protection during the initial few months after birth.Higher protective antibody concentrations can be gained in the fetus when administered around 27 to 36 weeks of pregnancy. The window period is provided till the new born commence their own primary schedule of immunization. Tdap vaccine should be considered instead of the second dose of scheduled Tetanus toxoid administration. Those women who are vaccinated in previous pregnancies with Tdap vaccine should also be administered with a dose of Tdap vaccine in the third trimester provided the pregnancy interval is around 2-3 years because there is rapid waning of antibody levels.

Dosage and administration

0.5 ml prefilled syringe given as deep intra muscular injection preferrably in the deltoid region.Side effects of Tdap - otherwise well tolerated ,injection site local swelling fever ,mild redness,and uncommonly diarrhoea /malaise.

3)Other vaccines recommended for pregnancy with risk factors on special circumstances when risk of infection outweighs the theoretical risk of vaccine administration.

i)**Heptatis A vaccine**-A formaldehyde inactivated[9.10] vaccine advised to women visiting endemic areas with HAV infection.Safety of Hep A Vaccine in pregnancy is yet to be established.However if a pregnant woman is exposed to Hep A ,administration of immunoglobulin is highly recommended to prevent acute fulminant hepatitis.[11,12]

ii)**Pneumococcal vaccine**- An inactivated polyvalent polysaccharide for use in patients with dysfunctional spleen,sickle cell disease ,chronic diseases of liver,lungs,heart,renal failure and HIV infection.

iii)**Meningococcal vaccine**- inactivated bacterial polysaccharide for pregnant female travelling to areas in which N.meningitidis is endemic or epidemic.

iv)**Rabies**- Pre-exposure prophylactic immunization for animal workers and travellers to enzootic areas.Post-exposure prophylaxis is done with inactivated whole cell viral vaccine.[13]

SUMMARY –KEY POINTS :

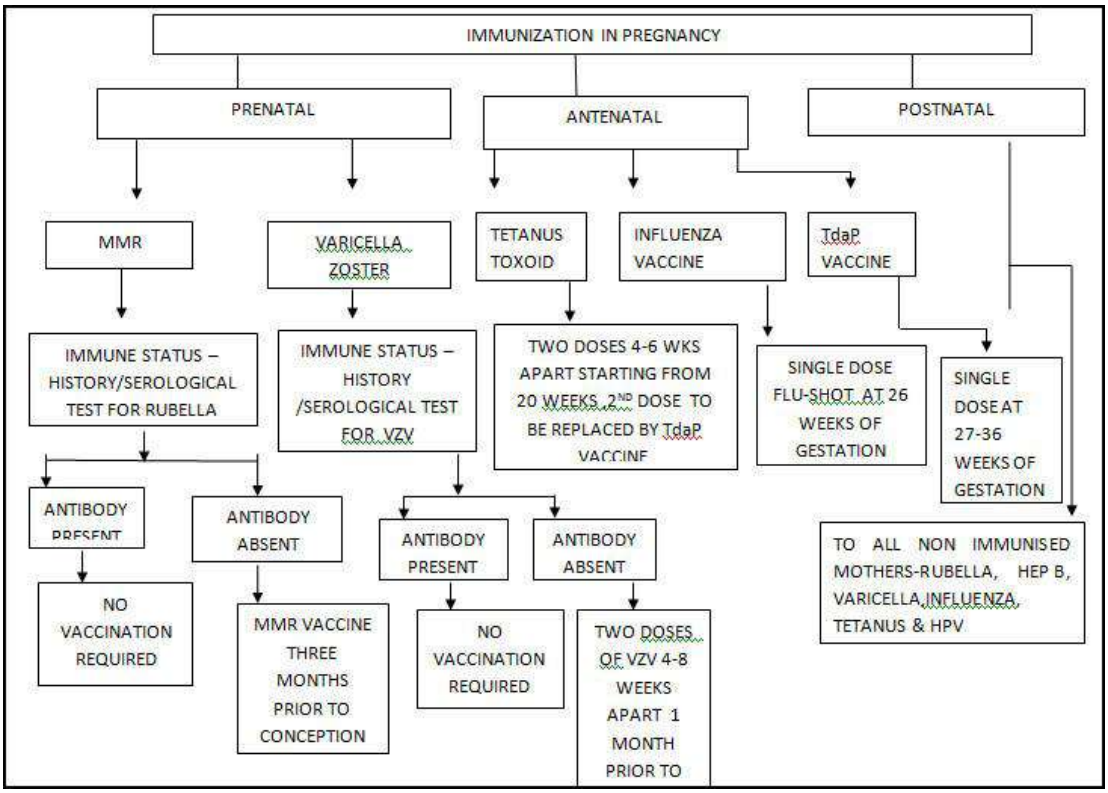
1) PRE CONCEPTIONAL IMMUNIZATION SHOULD BE UP TO DATE IN ALL WOMEN OF REPRODUCTIVE AGE GROUP.

.2) IMMUNIZATION IN PREGNANCY OFFERS A COST EFFECTIVE MEANS OF PREVENTING A SERIES OF MATERNAL AND NEONATAL MORBIDITIES.

3) BASIC THREAT TO ROUTINE PREGNANCY IMMUNIZATION IS THE LACK OF AWARENESS EVEN IN THE HEALTH CARE PROVIDERS AND ABSENCE OF CONFIDENCE ABOUT SAFETY OF THE VACCINES TOWARDS THE DEVELOPING FOETUS IN THE BENEFICIARIES.

4) MASS SCALE AWARENESS AND INCORPORATION OF SCHEDULE IMMUNIZATION IN THE GOVERNMENT VACCINATION PROGRAMMES NEEDS TO BE DONE TO ACHIEVE OPTIMUM MATERNAL AND PERINATAL HEALTH BENEFITS.

FLOW CHART OF IMMUNIZATION IN PREGNANCY



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Report of IMA CGP Assam State Faculty
3rd Quarter of the Association Year 2022 – 23

July – September'2022

Total Membership strength as on date

Existing - 529

New member enrolled – 21

Grand Total – 550

Details of the new member enrolled : -

Tezpur – 3

Biswanath Branch – 17

Nalbari – 1

Total Sub-Faculty – 4 Nos.

1) Tezpur, 2) Tinsukia 3) Hojai, 4) North Lakhimpur

Another new sub-faculty will be formed within the month of Novenber'2022 in Biswanath Branch IMA.

Conference attended by the CGP Members

State Level : - At Nagaon

Annual Conference of IMA AMS ASSAM

Organised by the IMA AMS Nagaon Chapter and IMA Nagaon Branch. Following members attend the daylong Conference.

From IMA CGP Tezpur

As Speaker in Scientific Seminar

1. Dr. Satyajit Borah
2. Dr. Piyush Agarwal

As Chairpersons

1. Dr. Laksheswar Bhuyan
2. Dr. Atul Ch. Saikia
3. Dr. Hemendra Kr. Borah
4. Dr. Atul Kr. Kalita

From Guwahati CGP Member

As Speaker : - Dr. Apurba Kr. Bhattacharjee

As Chairpersons : -1. Dr. Manabendra Goswami
2. Dr. Hemanga Baishya
3. Dr. Sikha Sarma

From Nagaon CGP Member

1. Dr. Sarbeswar Borah, Chairman, IMA AMS, Assam
2. Dr. Ajit Goswami, Secretary, IMA AMS, Assam
3. Dr. Apurba Kr. Sarma
4. Dr. Purnananda Borah

The Conference was grand success from all rounds under the leadership of Dr. Sarbeswar Borah.

Dr. Ajit Goswami, Dr. Brojen Bora, Dr. Ranjan Goswami and members of IMA Nagaon Branch. Particularly the Scientific Session.

National Level

East Zone National Conference of IMA CGP held at 'PURI' Bhubaneswar, Odisha on 27th and 28th August'2022. Total 9(nine) delegates from IMA CGP ASF attended the Conference. For the first time in the history of IMA CGP ASF attended the Conference. I congratulate all the delegation on behalf of CGP ASF.

The delegates are :-

1. Dr. Hemendra Kr. Borah, Tezpur
2. Dr. Satyajit Borah, Tezpur
3. Dr. Utpal Kr. Das, Tezpur
4. Dr. Biswajit Das, Tezpur
5. Dr. Nivedita Das, Tezpur
6. Dr. Queen Das, Tezpur
7. Dr. Apurba Kr. Bhattacharjee, Guwahati
8. Dr. Sikha Sarma, Guwahati
9. Dr. Randeep Neog, Dispur.

Out of 9 (nine) delegates five chaired the Six Scientific Session of Eleven Topics which was presented by the brilliant national and international repute Faculty.

Achievement :-

By the members of the IMA CGP ASF

1. Dr. Satyajit Borah, President, IMA CGP ASF, elected 'DEAN' IMA CGP HQs for the association year 2023-2024. He has been selected Honorary Professorship on Teachers' Day 5th September'2022, IMA AMS for coming five years term.

2. Dr. Queen Das, Hony. Secretary, IMA Tezpur Branch conferred upon Honorary Fellowship (FCGP) in the recently conclude East Zone National Conference, IMA CGP held at Puri, Odisha.

3. Dr. Sikha Sarma, Hony. Secretary, IMA ASB selected for 'DOCTORS' DAY AWARD-2022' by IMA HQs.

4. Dr. Gayatri Gogoi, presented her works on community based participatory research for cancer prevention: Experience in N.E. population of India in the American Association for Cancer Research Conference at Philadelphia.

5. Dr. Dwijen Das, Asstt. Professor of Medicine, TMCH attended as Chairperson in Webinar on Hypertension / Stroke organised by the Standing Committee for Hypertension/Stroke IMA.

6. Dr. Surajit Giri invited by the 16th Asia and Oceanic Regional Anaesthesia and Pain Management Congress and 12th Academy of Regional Anaesthesia of India National Congress in the inauguration function to narrate journey from Anaesthesiology to Snakes.

7. Dr. Arunima Goswami, Chairperson API Assam Chapter act as Moderator in the Webinar organised by the Association of Physicians of India Assam Chapter on Monkey pox an overview on 7th September.

8. Dr.(Ms) Prerna Keshan conferred upon the prestigious 'FICMCH' at Fifteen World Congress of National Association of RCH of India in 'MARCHICON-2022' held on 23rd – 25th September'2022 organised by Marchi Delhi, K}LHMC and SSK Hospital, New Delhi.

9. Dr. Abhisek Raha Asst. Secretary, Member Scientific & CME Committee and newly enrolled Life member of IMA CGP LUMDING BRANCH GOT 3RD PPOSITION for best presentation IN RESEARCH SOCIETY FOR THE STUDY OF DIABETE IN INDIA and presented in the Annual Meeting of RSSDI held on 6th to 9th October 2022 at Chennai trade center , Chennai

Assam CGP SHINED in EAST ZONE CGP CONFERENCE which was held at PURI, BHUBANESWAR on 27th and 28th August 2022. All total 9(nine) CGP members attended the conference. They're Dr. Satyajit Borah, Dr. Apurba kr Bhattacharjee, Dr. Hemendra kr.Borah, Dr. Unpal Das, Dr. Biswajit Das ,Dr. Randeep Neog, Dr.(Ms) Sikha Sarma and Dr.(Ms)Nibedita Das and Dr (Ms) Queen Das. Out of nine delegates Dr.satyajit Borah, Dr Apurba Kr. Bhattacharjee, Dr. Hemendra kr.Borah, Dr. Biswajit Das and Dr. Sikha Sarma Chaired 11 TOPICS In vi sessions of the Scientific Seminar where Brilliant Speakers all over the different states delivered their expertisation on the concerned TOPICS. ALL the sessions was an Academic Feast where all Delegates enjoyed. For the first time a good number of ASSAM CGP MEMBERS attend the EAST ZONE NATIONAL CGP CONFERENCE representing ASSAM STATE FACULTY. I being the Director of Studies IMA CGP Assam State Faculty offer my heartiest congratulations and gratitude to all the delegates attending the conference.

Publication of Journal 'CGP NEWS'

7th issue April – June 2022 published on 1st July'2022, the birth day of Dr. B.C. Roy. This issue is dedicated to Dr. B.C. Roy.

8th issue July – September 2022 will be inaugurate on 16th October'2022 during the Annual Conference of IMA CGP Assam State Faculty, by Dr. Satyajit Borah, DEAN, HQs CGP elected for Association Year 2023-24 cum President, IMA ASB and President IMA CGP ASF. This issue dedicated to Birth Day of Lokabandhu Dr. Bhubaneshwar Barooah on his 129th Birth Day, who was a Legendary figure of North East States.

Dr. Jagadish Basumatary
Hony. Faculty Secretary

Dr. Hemendra Kr. Borah
Director of Faculty

CGP, Assam State Faculty

List of New Life Members enrolled during the month of August and September'2022

Sl. No.	Name of the Applicant	Local Branch
1	Dr. Biswajit Das	Tezpur
2	Dr. Pradip Kalita	-do-
3	Dr.(Ms) Anjali Goswami	-do-
4	Dr.(Ms) Bandana Sharma	Nalbari
5	Dr. Narayan Upadhyaya	Viswanath
6	Dr. Manjit Kataky	-do-
7	Dr. Dulal Ch. Sarma	-do-
8	Dr. Debajani Das Pathak	-do-
9	Dr. Prabin Kakaty	-do-
10	Dr. Naren Kutum	-do-
11	Dr. Ripan Chutia	-do-
12	Dr. Sailen Bora	-do-
13	Dr. Eliza Deka	-do-
14	Dr. Indrani Roy Bora	-do-
15	Dr. Bipul Paul	-do-
16	Dr. Diganta Kr. Baro	-do-
17	Dr. Chandra Kanta Borah	-do-
18	Dr. Chinmoyee Kakati Bora	-do-
19	Dr. Mukunda Borah	-do-
20	Dr. Dilip Sarma	-do-
21	Dr. Bikash Sarkar	-do-

Congratulation to you all
&
Welcome to the fold of
IMA CGP ASF ASB

Dr. Jagadish Basumatary
Hony. Faculty Secretary

Dr. Hemendra Kr. Borah
Director of Studies

IMA CGP ASSAM STATE FACULTY

Photo Galary

Tezpur Branch IMA observed SAVIORS' day

Saviours day of IMA Tinsukia branch

Lokbandhu day Celebration of IMA Tinsukia branch

Doctors day celebration of IMA Tinsukia branch

SWC MEETING organized by BORPETA BRANCH

Tezpur Branch observed LOKABANDHU DAY

Doctors' Day Celebration by IMA TEZPUR BRANCH

Photo Galary

Felicitation Programme on the occasion of Doctors'Day Celebration Programme

Dr. Gayatri Gogoi,
Honors Dr. Chandra Sekhar Das Memorial Award, 2022

Rotary Swarn Samman Award to Senior Doctors who served Tezpur for more than 50yrs.

Dr. Prema Keshan, Renown gynecologist of the state and Infertility Specialist conferred upon the prestigious FICMCH at the Fifteenth World Congress of National Association of Reproductive and Child Health of India in MARCHICON–2022 held on 23rd to 25th September 2022 organized by MARCHI DELHI,LHMC & SSK HOSPITAL, New Delhi

With the Doctors' Day Award
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Dr. Queen Das Hony. Secretary IMA TEZPUR BRANCH Conferred upon Honorary Fellowship (FCGP) in the EAST ZONE NATIONAL CONFERENCE, IMA CGP held at PURI, ORRISA On 27th and 28th September 2022

Dr Satyajit Borah received Honorary Professor IMA AMS from Professor Dr J.A.Jayalal, Immediate Past president in presence of Professor Bed Prakash Mishra and Secretary General IMA Dr J M Lee on 5th September 2022 Teacher's Day at IMA HQS.

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