

Angiofibroma Group—Southeast Asia: Concept, research and outcome

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The Angiofibroma Group, Southeast Asia, is a global research group dedicated to innovations in angiofibroma. It was founded in 1994 with an inspiration from an angiofibroma patient. A major boost to the group came in 2008. The headquarters and secretariat of the angiofibroma group is in Agra, India. The aim of the group is to provide a platform to conduct, present, publish and promote research, exclusively in the field of angiofibroma.

Keywords:

angiofibroma, research, angiofibroma group, egypt representation in angiofibroma group, centre affiliation, angiofibroma board, angiofibroma committees.

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Angiofibroma is a benign yet clinically aggressive vasoformative tumour that constitutes 0.5% of all head-neck tumours. It is highly prevalent in India, Egypt, Pakistan, Brazil, Mexico and Argentina – hot spots of angiofibroma (Ahluwalia, 1998) [1] – and in Turkey, Russia, Canada and the rest of Latin America. It is less prevalent in the USA, Middle East and Europe. Poland is an interesting country of Europe in context of angiofibroma. It is rare in Thailand, Australia and New Zealand.

The unique sex predilection, associated potentially significant morbidity and the controversies regarding aetiology, pathogenesis, angiofibroma in female, extranasopharyngeal angiofibroma, classification and staging, intracranial extensions, role of radiotherapy, recurrences and geographical miss, treatment modality and protocols, spontaneous regression and malignant or sarcomatous change pose open questions leading to a well-defined scope of a dedicated research [2].

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The agenda of this group is to give impetus to basic research for angiofibroma, to have working groups for various controversies, to structure committees and to make them functional, to have a universal classification for angiofibroma, to have a global angiofibroma registry,

to conduct angiofibroma world congress every 4 years, to start fellowship exchange programme and an official publication of the group, to publish a comprehensive monogram on juvenile nasopharyngeal angiofibroma (JNA) and finally to have centre affiliation in the form of Regional Angiofibroma Centre, National Angiofibroma Centre, Advance Angiofibroma Centre and Satellite Angiofibroma Centres for intercentre collaboration to enhance an amalgamation of clinical and basic research to widen the horizon of angiofibroma research.

Structured survey in India and SAARC countries, awards, publications, panel discussions, symposia, international group meetings, international orations, guest lectures, plenary sessions, invited talks, representation at various international forums and platforms (SAARC, Asia Oceania, EUFOS, IFOS, etc.), listing at par with American Academy of Otolaryngology by World ENT Congress, Brazil 2009 are the activities and recognition to the Angiofibroma Group, Southeast Asia, to date.

The structure of the Angiofibroma Board consists of President, Secretary-General, Finance Secretary, Chairman and Secretaries of various international committees, Zonal Executives from Asia, Africa, Middle East, Europe, North America, South America, Oceania and Pacific.

The group is in the process of involving researchers and scientists of various specialities for collaboration and exchange of ideas and vision for angiofibroma to provoke a scientific interest in its possible aetiopathogenesis. Interested experts in histopathology, haematology, cellular pathology, anatomic pathology, immunology, immunotechnology, electron microscopy, cell transplants, cell therapy, genetics, biomedical engineering, molecular

biology, molecular technology, biochemistry, molecular physics, experimental oncology, nanotechnology, pathology, radiodiagnosis, anaesthesia, radiation oncology, neurosurgery, intervention neuroradiology and other allied specialities can contact us for a meaningful collaboration. These innovative minds are the pillars of angiofibroma research and are always an asset to the group.

Until now, we have worked on tumour attenuation coefficient in angiofibroma, hot spots, recurrence predictors [3], tumour embolization and immunotherapy for angiofibroma [4]. Presently, the areas of interest in angiofibroma are genetics, immunohistochemistry, hormones and stem cell therapy.

Specific genetic imbalances have been identified in angiofibroma by comparative genomic hybridization, but still genetic determiners involved in its pathogenesis remain unknown. The underlying dysregulated molecular mechanisms are unclear, and understanding of these may lead to its prevention. Congenital angiofibroma forwards the recent research that it is a result of developmental defect affecting the embryonic vascular network surrounding the sphenoid bone [5].

Angiofibroma development seems to be influenced by vascular endothelial growth factor, transforming growth factor- β 1 and IGFI, though the real production stimulus of these mediators has not been completely understood. Vascular endothelial growth factor is secreted by JNA and contributes to strong vascularization of angiofibroma [6]. The incidence of microparticle arteriovenous shunts in JNA is much higher. Prominent collagen type VI expression exerts an important growth stimulus in angiofibroma.

Clonal alteration in the b-catenin oncogene and stromal component is the key neoplastic component in angiofibroma [7]. The study of genetic changes in primary tumours is necessary through 'high throughput' techniques with correlate gene grouping real-time expression analysis for the detection of possible recurrence risk predictors [8].

Biphasic nature of the origin of angiofibroma in vascular endothelial cells or fibroblasts is poorly understood. Immunohistochemistry may hold the future of research in angiofibroma [9]. Angiofibroma is labelled as angiogenic histogenetic tumour that leads to a scope of antiangiogenic therapy in the future treatment strategy. Specific angiogenesis blockers may represent a treatment protocol for unresectable and recurrent angiofibroma, as a retention and/or induction of receptor tyrosine kinase in ischaemic angiofibroma was observed. Somatostatin receptor is overexpressed in JNA cells. Somatostatin analogue, Tc-octreotide, is effectively bound to JNA cells. Somatostatin analogues

might be used in the diagnosis and treatment of primary, recurrent and residual angiofibroma [10].

Hormonal disorders have been reported in angiofibroma patients. Androgen and oestrogen receptors have been identified in tumour tissue; however, a hormonal influence on JNA is controversial. Despite controversy, the hormonal stimulation may remain a possible therapeutic target for angiofibroma.

Preoperative superselective embolization in conjunction with endoscopic angiofibroma surgery has markedly changed the surgical outcome in the recent past. The newer adjuvants to endoscopic sinus surgery are gamma knife surgery, coblation-assisted endoscopic resection, endoscopic surgery using low-temperature plasma radiofrequency, harmonic scalpel-assisted endoscopic surgery, endoscopic laser-assisted excision and robotic radiotherapy – cyber knife.

The lesser known facts about JNA are that people using anabolic steroids for various reasons are more prone to develop angiofibroma. Angiofibroma in HIV-positive patients has much aggressive course. Haemophilic-deficient and factor VII-deficient angiofibroma patients are at high risk for torrential bleeding. There is a concept of tumour embolization besides arterial embolization, when the facility of later is unavailable. Authentic cases of angiofibroma in female individuals have been reported from many centres of the world, which are histopathologically and immunohistochemically proven. We have the biggest series of angiofibroma in female individuals in the world. Angiofibroma has been reported even in a pregnant female from France. Extranasopharyngeal angiofibroma occurs in still older patients and has been seen at various sites of the head and neck, such as nasal septum, turbinate, larynx, ethmoid, maxillary sinus and hypopharynx.

The representation in the Angiofibroma Group, Southeast Asia Board, and centre affiliation in Egypt are as follows. We are still in the process of adding experts and centres from various parts of Egypt to make it comprehensive and to give appropriate representation to the cross-section of Egypt.

Angiofibroma Group, Southeast Asia Board

Zonal Executive: Professor Nasser Kotby, Africa

Egypt Nominee: Professor M. Chafik Khalifa

Chief Coordinator: Professor M. Adel Khalifa, Egypt

AG-Sea International Committee Office Bearers

Liason and Future Prospect Committee: Professor Hesham Negm (Secretary)

Nomenclature Committee: Professor M. Adel Khalifa (Secretary)
 Classification Committee: Professor Reda Kamel (Secretary)
 Surgical Committee: Professor Mohamed El Shazly (Secretary)

BioMedical Engineering Committee: Professor Badr Eldin Mostafa
 Radiotherapy and Anaesthesia Committee: Professor Nabil Rabie
 Recurrence Committee: Professor Mohamed Hassab
 ENPA Committee: Professor Ali Tawfik

AG-Sea Centre Affiliations

Regional Angiofibroma Centre (Africa), Cairo, Egypt
 ORL Department, Cairo University Hospital, Cairo, Egypt
 Chair: Professor Hossam Bosraty
 Executive: Dr Ahmed Atef
 Associates: Dr Batawi, Dr Kamal Ebeid

National Angiofibroma Centre (Egypt), Tanta, Egypt
 ORL Department, Tanta University Hospital, Tanta, Egypt
 Chair: Professor Mohamed Askar
 Executive: Dr Ahmad Ragab, Professor Mohamed Nasser ElSheikh

Advance Angiofibroma Centres in Egypt

- (a) Mansoura University Hospital, ENT Department
 Chair: Professor Yasser Khagafy
 Executive: Dr Shaaarway Kamal, Shawky Mosi
- (b) Ain Shams University Hospital, ENT Department, Cairo
 Chair: Professor Mohamed Zaki Helal
 Executive: Professor Ossama I. Mansour
 Associate: Dr Mohamed El-Sharnouby
- (c) Alexandria University Hospital, ENT Department
 Chair: Dr Ahmed Aly Ibrahim
 Executive: Dr Ahmed Omran
- (d) Menofia University Hospital, ENT Department
 Chair: Dr Omar Banhaway

Angiofibroma International Committee Members

Global Registry Committee: Professor Magid El Shennawy, Dr Mohamed Wael Mustafa

Etiopathogenesis Committee: Professor Magdy Amin
 Committee on Controversies: Professor Ahmed Elsalmary
 Radiology Committee: Professor Ahmed Sameh Farid
 Committee on AF in Female Individuals: Professor Maged Bahgat

Newer Modalities Committee: Professor Aly Gamal Zohini

Angiofibroma Satellite Centres in Egypt

- (a) ENT Department, Zagazig University Hospital
 Executive: Dr Ahmed Khashaba
- (b) Banha, Al Qalyubiyah
 Executive: Dr Ahmed Abdel Hady
- (c) ENT Department, Sohag University Hospital

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Photograph of Professor Desiderio Passali, Italy
 International President of the Angiofibroma Group, Southeast Asia



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Conflicts of interest

There are no conflicts of interest.

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