Introduction

When we discuss “pioneers” in stroke, it is pertinent to include the historical “firsts” or the “torch bearers” or the inventors” for landmark discoveries in stroke understanding, prevention and treatment of stroke or rehabilitation post stroke. In lieu of limited space, we will confine too few chosen names in the above fields.

Hippocrates

In fourth century BC, Hippocrates first described the phenomenon of sudden onset of paralysis, loss of consciousness or sudden death: “Apoplexy” or “struck down violently”. He was the first to approach scientifically what was then believed to be a “Stroke of God”. Many of the basic terms for stroke and carotid disease derive from ancient Greek medical literature. Although scientists continued to study the cause, symptoms, and treatment after the Hippocratic era, it was not until the mid-sixteenth century AD, when the renaissance anatomists first differentiated and precisely explained stroke pathophysiology in terms of blockage or rupture of a brain artery.

Thomas Willis (1621-1675)

Thomas Willis, an eminent 17th century physician is credited with creating the word neurologie. He is rightly remembered for his astute observations of neurological conditions. Willis is especially remembered for the “Circle of Willis”, the arterial anastomosis at the base of the brain. Although this had already been described by Wepfer, Willis is credited with explaining the functional significance of this anastomosis as a safety device against occlusive deficiency. He confirmed this by elegant post-mortem dye studies. Disorders of the cerebrovascular system are a relatively modern concept. It is possible to review Willis works and see many different types included with in it, two or more centuries before their true clinical importance was recognized. However much clinical neuroimaging has advanced since Willis time, he nevertheless gives clear descriptions that still fascinate, educate, stimulate research and in some cases provoke wide debate. There is still much that can be learnt from this great man whom Sherrington described aptly, as having “put the brain and nervous system on their modern footing”.

Charles Foix (1882 – 1927)

Charles Foix has been aptly christened as the “first modern stroke neurologist”. Though his interests, collaborations, studies and contributions were extremely broad, Foix will undoubtedly be remembered best for his studies on cerebrovascular disease. Foix first important stroke paper concerned the syndrome of the Posterior Cerebral Artery and written with Masson. He and his colleagues, Hillemand and Schalit published reports on the blood supply of the pons, the thalamic syndromes and the lateral medullary syndrome and authored a major work on the arteries of the brainstem including the diencephalon. Nearly a century later, and with the ever-growing number of physicians and researchers interested in stroke and technology related to stroke also growing exponentially, we should acknowledge the contribution of Foix for starting it all.

C. Miller Fisher (1911-2012)

Regarded by many as the leading clinical neurologist of the 20th century, his numerous publications include the famous and seminal observations on carotid artery occlusive disease, especially in plaque pathology, anticoagulation for ischemic stroke, atrial fibrillation and embolic hemorrhagic infarction, and system embolism, transient ischemic attack and transient monocular blindness, lacunar syndromes, parenchymatous hematoma syndromes, basal rupture of intracranial aneurysms, spontaneous carotid dissection, reversible vasospasm, amongst others. Many of the syndromes described had memorable names; such as “transient global amnesia”, “subclavian steel”, “ocular bobbing”, “wrong way eyes”, “one-and-half syndrome”, “string sign”, etc.

Henry Barnett (1922)

Dr. Henry Barnett, born in 1922, London, Ontario, is a pioneer in stroke research. Barnett’s key research field is prevention of stroke. He will be primarily remembered as an enthusiastic coordinator of the North American Symptomatic Carotid Endarterectomy Trial (NASCET).
Together with a European study of similar design, this trial provided scientific evidence for revascularization therapies for symptomatic extracranial carotid artery stenosis.

Vladimir Hachinski (1939)

Vladimir Hachinski is a pioneer in stroke and vascular dementia. The main areas of Hachinski’s research are vascular cognitive impairment, stroke and brain-heart interactions. He coined the term “multi-infarct dementia” and developed the Hachinski’s ischemic scale which is most widely used to differentiate degenerative dementia from multi-infarct dementia. With John W Norris, he established the first specialized stroke unit for the urgent clinical treatment and systematic study of stroke. Hachinski and Norris co-designed the Toronto stroke scale and then with Cote, he designed the Canadian Neurological Scale to measure the stroke-related neurological deficits. Hachinski’s current research interests focus on the identification of risk factors that are common to stroke and Alzheimer’s disease, the prevention of stroke and the delay of onset of AD.

Louis Caplan (1936)

Born in the year 1936, and famously known as the “bed side neurologist”, this gentle giant is a professor of Neurology at the Harvard Medical School and chief of the Stroke Service at the Beth Israel Deaconess Medical Center, Boston, USA. Besides his seminal work on the posterior circulation, Caplan is also famous for establishing the Harvard Cooperative Stroke Registry, in 1978. He strongly believes that medical curriculum in universities should have a greater emphasis on patient communication.

Praful Dalal: Pioneer of Stroke Care in India

Praful Dalal, neurologist at the Lilavati Hospital, Mumbai, India, and Research Director at the Lilavati Kirtilal Mehta Medical Trust Research Center, Mumbai is widely viewed as the guru of stroke care in India. He is acutely aware of his environment – a country with a population of over 1 billion people that is experiencing soaring numbers of stroke cases, and where most people lack access to basic health care. Dalal first piloted his innovative approaches to stroke care almost 50 years ago. The lessons learnt at the Bai Yamunabai Laxman Nair Charitable Hospital and Topiwala Medical College, catering mostly to the city’s poor, became the building blocks for Dalal’s remarkable reputation. Dalal’s numerous achievements include his pivotal role in undertaking the Indian Cooperative Acute Stroke Study (ICAS-1), the first such all-India study of strokes with a common protocol, which has become the basis of further studies.

G. Arjun Das

His interest in stroke commenced in 1951 when his mother suffered right hemiplegia with aphasia. Treatment scenario in those days, in his own words, “ranged from ice-packs on the head for resumed intracerebral hemorrhage in the acute stage to intravenous histamine drips in sub-acute stage of ischemic stroke “and other such obsolete empirical management strategies. Few visionaries through their sheer perseverance despite limited availability of technology and drugs were responsible in bringing down the mortality and morbidity rates of stroke in India. Amongst them, Dr. Arjun Das is a pioneer. He has been the main force behind establishing “stroke units” in India.