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Pioneer Aviation and a Medical Legacy: The T.W. White Society Prize for Thoracic Research¹

A Tribute to Group Captain Sir Thomas Walter White (1888-1957) – Australian's pioneer military aviator

by
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The twentieth century has seen many great inventions but few of greater significance than that of aviation. Within the single window of one century, the world has seen not only the invention of flight, but also its ascendance to interplanetary probes. The discipline of military aviation likewise has developed from the first tentative flights of "those magnificent men" of the Royal Flying Corps to the development of aviation medicine as a crucial specialty not only within civilian aviation and space medicine but as a part of Defence Health more broadly.

It is appropriate that Australia's pioneer military aviator, Major T.W. White should be commemorated particularly in an outreach prize for thoracic medicine. This Prize, the T.W. White Society Prize for Thoracic Research commemorates the life and works of one whose service contributed significantly to both Australia as a Nation and to the genesis of military aviation.

Group Captain Sir Thomas Walter White (1888 - 1957)

Thomas Walter White was born in Melbourne, and in 1914 enlisted as a soldier in the First World War. He was one of the first four volunteers to be trained as a pilot in the A.I.F. and was the first to be awarded his wings. As an Australian, he was a member of an exclusive group of several officers of the first Australian Half-Flight, which was raised in 1915. He was posted to the Indian Expeditionary Force D ("Force D") in May 1915. This pioneer unit of military aviation was posted to the Middle East and engaged in its initial operations in Mesopotamia from May 1915¹. Captain Thomas White was then commissioned in the Royal Flying Corps from June 1915, but as he said, "We retained our own [Australian] uniforms and always wore our "Australia" shoulder patches"! Flying the early military biplanes of those pioneering days, the unit operated in the skies in the Ctesiphon region of Mesopotamia, flying over the Tigris and Euphrates Rivers and the northern littoral of the Persian Gulf. Whilst flying a low-level sortie, Captain White crashed his plane into a telephone pole some 12 kilometres south of Baghdad in November 1915 and was captured. He was physically abused by his Arab captors, and his life was undoubtedly saved by his being handed over to Turkish soldiers². He kept a secret account (at mortal risk) of his captivity, including its abuses and privations, and recorded evidence of atrocities against the Armenians². His notes became the basis for his book "Guests of the Unspeakable". In the traditions expected of captured officers of the day he refused to sign a "No Escape" document forced upon him by his captors. Together with a fellow British officer, he disguised himself as a Turk and escaped from captivity on board a train taking him north to further incarceration. He hid for 33 days aboard a Ukrainian steamer in port, before it finally sailed from Constantinople. Ultimately, he made his way to a British Consulate in Eastern Europe prior to the end of the First World War.

White's experiences in captivity and his basic altruistic and humanitarian outlook lead him to champion welfare programmes for those whose families who had been touched and disadvantaged by a breadwinner's service in the First World War. He supported Major General John Jellibrand's movement to establish the Legacy Club; this latter formed in Melbourne in September 1923. White promoted these ideals and entered Federal

Parliament in 1929. He was to serve therein for 22 years in a Cabinet Post as Minister for Customs and later as Minister for Aviation. After leaving Parliament he served as one of Australia's senior ambassadors. He was posted to London as Australia's High Commissioner and served in that post from 1951 until 1956.

At the outbreak of the Second World War, Major White transferred to the Royal Australian Air Force and as Group Captain White served as Commanding Officer in Air Training Schools in Australia and at the RAAF Base in Bournemouth in southern England. It is recorded that:

"Breaking all the rules concerning age, he flew as a co-pilot in several bombing raids over Germany"²

Knighthood for his services to aviation, to humanitarian welfare and to the people of Australia, he died in 1957.

The T.W. White Society

The T.W. White Society was founded by a group of young officers of the Queensland University Regiment in 1982. Two of its founding members were Robert Johnston and David Monaghan - the former who became a senior administrator at the University of Queensland, and the latter a senior solicitor. The founder group had been boarders together at The Southport School on Queensland's Gold Coast. a School known for its traditions of public service and outreach. Whilst at University and whilst serving in their "second careers" in the Royal Australian Infantry, they saw a need to highlight the outreach and services of Australia's pioneer aviator; and to promote medical research, particularly in the area of thoracic medicine -a discipline which is so important in aviation health. Thus, was established the T.W. White Society Prize for Thoracic Research.

The medical custodian of the Prize is The Thoracic Society of Queensland, which awards the Prize annually to the top researcher for his or her contributions to the advance of knowledge of thoracic medicine.

The Fusion of Science, Service and Military Art

Best-practice medicine today depends on the unity of science and of art; on the promotion of research and its communication to patients and doctors alike, and on the concepts of service. The T.W. White prize for medical research symbolises the need for balance between focused specialisation on the one hand, and the retention of a broad outlook- the continued mix of art and science in professional life -on the other. In the best of all worlds, the specialist retains some of the outlook of the artist. Indeed. scientists are artists insofar as they create delicate instruments and refine methods for the purpose of discovery. It has been said also that "artists are scientists insofar as they seek knowledge of the world to help them with the creation of their sculptures, music or painting"³. Marble is handled in different ways by the sculptor when compared with that of the geologist³.

It is possible to have the best of both worlds - the specialist as exemplified by the focused medical researcher, and the broad perspective of those who render wide service to the community - particularly in applied sciences such as agricultural science, engineering and medicine. But how to be both a good specialist and one with the wisdom which perspective brings is a great professional challenge to all who follow the profession of medicine and of arms.

One approach is to attempt a superficial study of many interests. This does not necessarily give broad insight, and seldom brings wisdom. It has been said that a doctor or other health professional "cannot understand other peoples problems by interrupting his or her own work to climb a few feet up another's tree"³.

An alternative approach is to adopt the historical paradigm. As each climbs his or her own tree, it is essential to look back and learn the history of one's own specialty in great detail. Such an approach soon leads to a study of origins, and the origins of our own specialty tree are entwined in the roots of others. In every case, if one does this, one sees the common ground of many disciplines and sees them in perspective. One sees, as in the early days of the development of aviation and of medical research both, the fusion of art and science.

Thomas Walter White's legacy, the T.W. White Prize for Thoracic Research, highlights the importance of maintaining a broad outlook, irrespective of whether or not one is working at the most minute point of the medical research coalface. The need to maintain a balanced approach is no better exemplified by examples in the history of respiratory medicine - those of the discoveries of Auenbrugger and Laennec.

Auenbrugger

Leopold Auenbrugger (1722-1809) was the pioneer of chest percussion, and one of the significant pioneers of thoracic medicine. He was appointed Physician-in-Chief of the Hospital of The Holy Trinity in Vienna in 1751. He was first to write concerning the use of percussion of the chest, in diagnosis. He was a consummate clinical artist⁴ - but a great scientist also. Auenbrugger appreciated that sounds could be generated by tapping over an air-filled or fluid-filled surface; and that such could give much information about the nature of any underlying substance. He ascertained the different sounds obtained by tapping the chest wall; and conducted experiments to determine the changes in pitch and timbre over fluids injected into the chest of a cadaver, having injected them post-mortem. He extrapolated his findings into bedside practice.

It transpires that Auenbrugger was not a narrow clinician but a man of refined taste and broad interests in the arts and sciences. He was what would be called today a music "buff". He loved opera and wrote music. He composed the libretto for "The Chimney Sweep" (Der Rauchfangkehrer) written by Salieri's. Auenbrugger was indeed a specialist, but one whose roots were broad.

Laennec

Laennec (1781-1826) was the inventor of the stethoscope. Known to his mother (but perhaps not to the local street children) as Rene-Theophile-Hyacinthe, he was a great lover of the outdoors. He received a commission in the Army and served as a Regimental Surgeon during the French Revolution. He was appointed Physician to the Hospital Necker in 1816; and in 1819 invented the stethoscope - at first, only a cylinder of paper. He appreciated that sound could be channeled along hollow tubes; and that its air transmission was not as good as that emanating from a diaphragm or from a solid body. His invention of that first stethoscope and the development of its successors enabled the diagnostic sounds of cardiac and lung diseases to be placed on a reliable basis. Laennec was the first to describe the conditions of bronchiectasis, pneumothorax and haemorrhagic pleurisy. He was the first to use the terms of aegophony, pectoriloquy and rales - these latter either sonorous or sibilant⁵.

Like Auenbrugger, Laennec did not research or practice medicine in a social vacuum. His love of the outdoors was extended by his extensive skill as a horseman. It is said that it was whilst watching children at play - a boy tapping the end of a see-saw while another listened with his ear to the wood - that dawned the idea of the instrument which today we call the stethoscope. Laennec's book "Traite de L'Auscultation Mediate"⁶, published in 1819, has been described as "the most important treatise on diseases of the thoracic organs ever written"⁸.

The T.W. White Prize has its primary terms of reference, the encouragement of new discoveries in medical research. What new discoveries in thoracic medicine are waiting to be made? Percussion was invented only in 1751 and required no new tools - only an enquiring mind and the hands of the clinician. Auscultation with the stethoscope was invented only in 1819 and then needed only a tube of paper. Charcot, the French Neurologist, summed up the philosophy of the enquiring mind as the most important ingredient of research, by asking the question:

"How is it that, one fine morning, Duchenne discovered a disease [muscular dystrophy] which had probably existed since the time of Hippocrates?"

In Grey's Elegy it was said that the good deeds of individuals might be "interred with their bones". Such is not the case with the example of service of Group Captain Sir Thomas White. His legacy of service today is the encouragement of research in thoracic medicine, a discipline which has become crucial to the further development of both underwater and aviation medicine; and to their civilian and military applications.

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