

PIONEERS IN RHEUMATOLOGY

Sir Alfred Baring Garrod

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Sir Alfred Baring Garrod will be remembered for his contributions to rheumatology.

Garrod was born in Ipswich, on 13th May 1819. He had a strong liking for science. His choice was medicine. He joined Ipswich hospital to study medicine, but later shifted to University College Hospital, London. Garrod completed MB in 1842 and MD in 1843 securing gold medals at both the examinations.

During the same period, he was awarded Galen medal of the Society of Apothecaries for his proficiency in Botany.¹

Garrod began his career as a clinical assistant in chemical department of University College Hospital, London. His duties involved analysis of body fluids and other specimens sent to the laboratory. In 1847, he was appointed Assistant Physician, followed in 1851, as Professor of Therapeutics and of Clinical Medicine at the University College Hospital, London. Garrod participated actively in the affairs of the University City College hospital. He was involved in the establishment of materia medica museum.² In 1862, he left the University College Hospital and joined King's College Hospital as Physician and Professor. He gave up active hospital work in 1874, but continued to be a Consulting Physician at the same hospital.¹

Garrod received many honours. He

became a fellow of the Royal College of Physicians in 1856, and a Fellow of the Royal Society in 1858, delivered Goulstonian Lectures in 1858, and 'Lumelian' Lectures in 1883. He was Vice-President of the Royal College of Physicians, and served in 1860 as President of Medical Society of London. In 1887, Garrod was knighted in 1887 by Queen Victoria on the occasion of her first Jubilee, and subsequently appointed one of the Physicians Extraordinary to her majesty in 1890. He was the first recipient of a medal founded in memory of Dr. Moxon by the Royal College of Physicians. Garrod was an honorary member of Verein Fur innere Medicin in Berlin¹ and was an active member of British Pharmacopoeia committee.

Contributions to Medicine

Garrod made significant contributions to medical literature. In 1855, he edited and published *Essentials of Materia Medica and Therapeutics*, It was the first text book of its kind.¹ The book was widely read and went through many editions. He also contributed to *Reynold's System of Medicine*, wrote papers on cholera, scurvy, treatment of rheumatic fever, and rheumatoid arthritis.¹ His last paper on uses of guaicum was published forty-eight years after his paper on uric acid in blood¹ !

Garrod was a popular teacher. He held his lectures in the early morning hours (8.00 am). Even so these were well attended. In his lectures and during the ward rounds he emphasised rational therapeutics.

Contributions to Rheumatology

Garrod contributed to two important

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areas of rheumatology namely, gout and rheumatoid arthritis.

In 1848 he reported increased uric acid levels in the blood of patients with gout without a similar increase in patients with acute rheumatism and Bright's disease,² developed thread test (for uric acid) in 1854, reported the presence of small quantities of uric acid in the serum of healthy individuals, (1859),² and demonstrated deposition of urate crystals in the joint cartilage.² He also drew attention to the relationship of lead poisoning with gout.¹

(The importance of these observations was not realised until 1960, when Hollander identified uric acid crystals in the synovial fluid)²

In his treatise on arthritis, Garrod made ten propositions.¹ These reflect his insight in the disease causation. Some of the propositions are -

- High uric acid levels are present (and essential) before during and between attacks of gout
- High uric acid levels can be asymptomatic
- Kidneys are involved in both the early stages of the disease with a specific functional defect of inability to excrete uric acid and late in the disease with the development of structural changes. He postulated that hyperuricaemia was the result of either increased production or inability of kidneys to excrete uric acid efficiently.
- Only in true gout there is deposition of urate of Soda in the inflamed tissues

Rheumatoid Arthritis²

Until Garrod published in 1859 his treatise on gout and rheumatic gout, rheumatoid arthritis was described under various terms like rheumatic gout, chronic rheumatism, rheumalgia, scorbutic rheumatism, etc. In the treatise he discussed various arthritic conditions and their differential diagnosis.

He rejected all the above terms and chose the name rheumatoid arthritis. With this Garrod (finally) delineated from gout the arthritis described earlier by Landre-Beauvai's and Charcot, suggested it to be considered a different disease. Garrod stated "Perhaps Rheumatoid Arthritis would answer the object by which term I imply an inflammatory affection of the joints, not unlike rheumatism (but) in some of its characters differing materially from it".³ Based on this differentiation, he advised that there was no need for dietary restriction to patients with rheumatoid arthritis. British Ministry of Health adopted the term rheumatoid arthritis as the official designation in 1922. American Rheumatism Association adopted it in 1941.

Dr. Garrod was a kind hearted person. He helped his students during early part of their career, and also during their health problems¹.

In his later years he stopped teaching, but continued his interest in materia medica.

Garrod died on 28th December, 1907.

A street has been named after him in Aix les Bains.²

p.s. Sir Alfred Baring Garrod is not to be confused with his son Sir Archibald Garrod, an equally famous physician who was responsible for recognition of inborn errors of metabolism. He wrote many papers on joint diseases and pointed out the difference between rheumatism and rheumatoid arthritis.^{3,4} He was of the opinion that in the term rheumatoid arthritis, many diseases were lumped together.³

References

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