

## HISTORY OF THE *BRITISH JOURNAL OF RADIOLOGY*

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**Abstract** — A short article tracing the history of *British Journal of Radiology (BJR)* through to the present day.

**Keywords**— **British Institute of Radiology, Professional Journals, British Journal of Radiology.**

### I. INTRODUCTION

*British Journal of Radiology (BJR)* is the journal of the British Institute of Radiology (BIR). The journal has roots dating back to 1896 and the launch of *Archives of Clinical Skiagraphy*, only a year after the discovery of X-rays, becoming the world's first journal dedicated to the then emerging field of radiology.

Medical journals may be compared to human life, having a conception, birth, growth, maturity, and possible decay and death. Journals may be conceived for a number of reasons. The journal may be purely scientific and perhaps with a specific purpose such as *The Lancet* which was conceived as a campaigning journal. The journal may be associated with a particular discipline, and this was the case with the journal that became the current *British Journal of Radiology (BJR)*.

### II. THE EARLY DAYS OF X-RAYS

Wilhelm Röntgen discovered the new X-rays on 9 November 1895, and there was an immediate international sensation in both popular and scientific circles [1]. The general public had to be reassured that this was a real discovery by a serious scientist. Röntgen presented his “preliminary communication” of the discovery on December 8 1895 and sent copies of his reprinted paper to scientific colleagues throughout the world.

The first radiograph printed in Great Britain was in the *British Medical Journal (BMJ)* of 25 January 1896, and was taken by Alan A Campbell Swinton of his own hand, who commented that, “these photographs are in the nature of shadows, though shadows produced by rays which are not luminous.” [2].

This was rapidly followed by a long *BMJ* editorial on 1 February giving an account of what was known of the discovery [3]. Sidney Rowland was a medical student at St Bartholomew's Hospital in London and was working as a

medical journalist at the *BMJ* under the editor Ernest Hart who was his uncle, in what we would now call an internship. Ernest Hart was one of the great medical editors and had been at the *BMJ* since 1866, leading many effective editorial campaigns and markedly increasing the prestige of the journal. Hart appointed his nephew Sidney “to investigate the application of Roentgen's discovery and to study practically its applications” and the first report appeared on 8 February 1896 [4]. Hart's choice of his nephew was inspired and the series of papers gave accurate and detailed accounts of the “New Photography” as it became known.

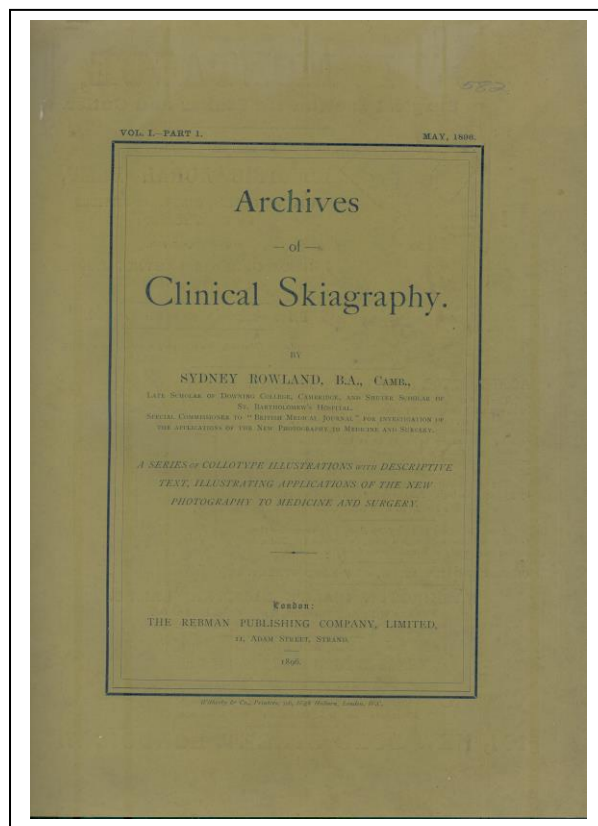


Fig. 1 Wrapper cover of the first issue of the *Archives of Clinical Skiagraphy*, May 1896.

Rowland obviously found medical journalism very much to his taste and started and edited a new journal, the *Archives of Clinical Skiagraphy* (Fig 1), which was the seed of the *British Journal of Radiology*. A skiagram refers to a radiographic photograph and is derived from the Greek σκιά (skia) for shadow, since radiographs are of the nature of

shadows. In his preface to the first issue Rowland wrote on 2 April 1896 that “the object of this publication is to put on record in permanent form some of the most striking applications of the New Photography to the needs of Medicine and Surgery.”[5]. Even at this early time Rowland comments on the obvious usefulness of the new discovery. The journal contained many full-page radiographic plates (Fig 2) and Rowland observed that “in the plates presented in the first number of a publication which will, I hope, take a permanent place in Medical literature, I have presented some examples of the more difficult and instructive achievements of Skiagraphy up to this date”. Rowland finished by thanking all those who had sent him radiographs for publication. Sidney Rowland was not to stay with radiology and joined the Lister Institute as an assistant bacteriologist in 1898. In the First World War Rowland took the first mobile pathology laboratory to France, and died in March 1917 investigating an outbreak of meningitis in Mesopotamia.

The Archives increased in size and changed its name to *Archives of Skiagraphy* in April 1897. It is now difficult to imagine the difficulties experienced by the pioneers, and this is shown in the words of Charles Thurstan Holland, the Liverpool general practitioner who became an early radiologist and ultimately the president of the First International Congress of Radiology held in London in 1925. Writing in 1936 towards the end of his life Holland said, “there were no X-ray departments in any of the hospitals. There were no experts. There was no literature. No one knew anything about radiographs of the normal, to say nothing of the abnormal.”[6]. The journal therefore became essential to disseminate information and experiences, and advice about practical radiography. There was a page devoted to answers to questions sent in by correspondents, and there were also book reviews and advertisements. The role of advertisements in journals has never been simply about generating income for the publishers. Advertisements give the readers of the journal information about resources that they need to develop their clinical practice, describing their photographic plates, X-ray tubes and apparatus.

### III. THE INVOLVEMENT OF SOCIETIES

Many had seen Sidney Rowland’s articles both in the *BMJ* and in the popular press and wanted to meet to discuss this new field of radiology. Dr David Walsh therefore called a first meeting on 18 March 1897, and the first formal meeting of what was called the “X-ray Society” was held on 2 April 1897 [7]. The well-known physicist Silvanus Thompson was the first President by 3 June 1897 and on 7 June 1897 Wilhelm Röntgen was elected as the first honorary member, with the second honorary member being the British physicist Sir William Crookes. From the beginning it was decided that membership should “include

all who are interested in the scientific study of the Röntgen Rays.” This decision was to prove crucial to the ethos of the organisation. The name of the new society was soon changed to “The Roentgen Society” in honour of the discoverer of the X-rays, and a temporary home was found in rooms at the Medical Society of London in Chandos Street. The name of the journal *Archives of Skiagraphy* was changed to the *Archives of the Roentgen Ray* for the July 1897 issue, and it was noted in the editorial that the journal will “record the proceedings of the recently formed Roentgen Society, and will consist of original communications, notes, and correspondence... (and) offers itself, not merely as a journal of the new photography, but to some extent as the exponent of an important discovery.”[8]. The journal was now quarterly and the complete title read *Archives of the Roentgen Ray (Formerly Archives of Skiagraphy) The Only Journal in which the Transactions of the Roentgen Society of London are officially reported* (Fig 3). Sidney Rowland initially shared the editor’s position with William S Hedley from the (Royal) London Hospital. The Archives went through a series of minor name changes until 1904 [9].

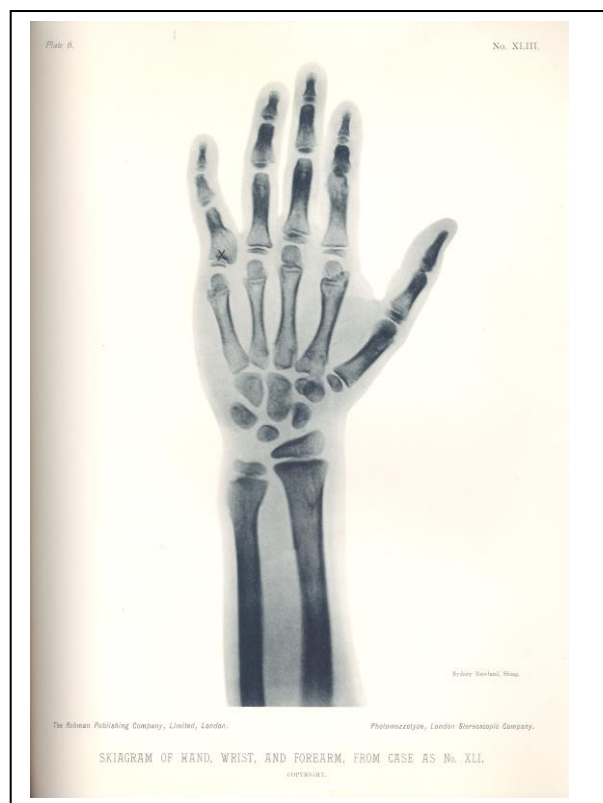


Fig. 2 Whole page image from the first issue of the Archives of Clinical Skiagraphy, May 1896. An enchondroma of the base of the fifth proximal phalanx is marked by an X.

In 1904 the new *Journal of the Röntgen Society* commenced as the Society’s journal and the link with the old Archives was broken [10]. This was related to tensions between the publishers of the journal and the council of the

Society. The new journal went through 19 volumes until 1924, when the name changed to *The British Journal of Radiology (Röntgen Society Section) The Journal of the Röntgen Society*.

The British Association of Radiology and Physiotherapy (BARP) was formed in April 1917 by a group of radiologists in London as a purely medical body unlike the multidisciplinary Röntgen Society. There was a concern that many who were in charge of radiology departments outside of the teaching hospitals were untrained in image interpretation although they were able to take good radiographs, and the aims of BARP were “to promote the advancement of Radiology and Physiotherapy on scientific lines under the direct control of the medical profession.” Although BARP membership was only for clinicians it was possible for the council to elect scientists to both honorary and ordinary membership. The Archives became the journal of BARP and from June 1918 was called *Archives of Radiology and Electrotherapy. The Official Organ of the British Association of Radiology and Physiotherapy*. In 1924 the name changed to *The British Journal of Radiology (BIR Section) Archives of Radiology and Electrotherapy*. There had been a long-standing desire to have an institute for the study, and so the British Institute of Radiology (BIR) was formed. There were therefore two journals each called *The British Journal of Radiology*, which might be confusing.

The final change came in 1928 following the amalgamation of the BIR and the Röntgen Society, and the journal *The British Institute of Radiology, New Series* continues today.



Fig. 3 Archives of the Roentgen Ray from May 1902 with advertisement on the cover

#### IV. THE DEVELOPING JOURNAL

It is interesting to observe changes in the journal that have occurred over the decades since 1896. These changes reflect both scientific, social and technical differences and developments.

The journal was traditionally published in regular hard copy issues and individuals and institutions would have them bound together for storage and reference. The author would purchase reprints of the publication from the publisher and would receive requests for reprints from colleagues often throughout the world. The author would then mail the reprint to the requesting individual. Today the journal is available online to members of the British Institute of Radiology and subscribing institutions, while reprints are available in PDF.

Many journals including *BJR* have undertaken a process of retrodigitisation of their historical archive. This has the significant advantage of making older material very much more accessible. The digitised *BJR* is a wonderful resource with papers by many of the great names of radiology having published in *BJR* or its precursors. The original writings of the major figures of the past such as Peter Kerley, Ralston Paterson, Douglas Lea, Louis Harold Gray, and James Brailsford are readily available. We can read the classic papers from the early days of radiotherapy, radiobiology, medical physics, nuclear medicine, ultrasound, CT scanning and magnetic resonance imaging (MRI). There is a tremendous wealth of material. As an example, the Manchester group made huge contributions to our understanding of cancer and to its treatment using radiotherapy. In 1947 the highly influential book “Radium Dosage, The Manchester System” (Fig 4) was published by E & S Livingstone and edited by the physicist WJ Meredith. The book was simply a collection of the papers that had been published in *The British Journal of Radiology* since 1934 by Ralston Paterson, Herbert Parker, FW Spiers, SK Stevenson, Margaret Tod and WJ Meredith.

The journal has however changed following changes in emphasis of the BIR. The early journals contained much more general X-ray publications, including more veterinarian, general science and industrial radiology. The journal continues to develop with the times and the needs of the community. *BJR* is now more devoted to radiological sciences as applied to human medical care.

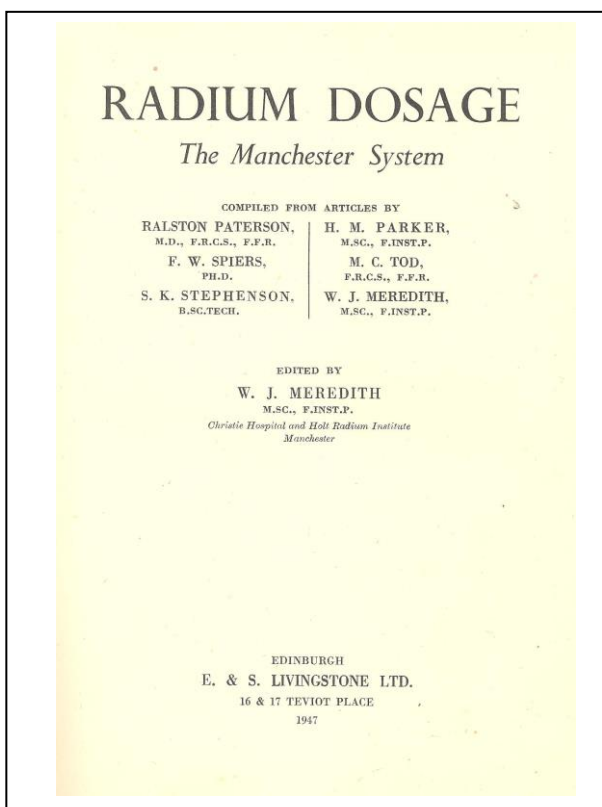


Fig. 4 Radium Dosage, The Manchester System 1947

## V. THE JOURNAL TODAY

Today *BJR* is a fully international journal with contributions from all over the world on topics covering all aspects of diagnostic radiology, radiography, radiotherapy, nuclear medicine, radiobiology and medical physics. Papers are published online via a continuous publication method; no longer do articles have page numbers, but each article stands alone with its own unique identifier assigned at the moment of acceptance [11]. As soon as a paper is recommended for acceptance by the editors, the author's version is made available online for all to read, while the final version of record is edited and prepared for final publication. The paper itself has evolved to include new types of media with functionality for video and audio content available as supplementary information along with multiple choice CPD questions included with some articles to allow the reader to get the most out of the research. *BJR* also publishes up to four themed special features per year; topical collections of articles on a noteworthy subject that are guest-edited by leading experts from around the world.

*BJR* is no longer a lone title but the head of a family: in 2015 *BJR/case reports* [12] was launched as a separate spin off to fill the gap left when Case Report articles ceased being accepted. Following its success, *BJR/Open* [13] was launched earlier this year. Both these new additions are open access meaning that everyone in the world has unlimited free access to the content.

Celebrating 125 years of publishing since its origins in *Archives of Clinical Skiagraphy*, 2020 will be a landmark year for *BJR*. A specially commissioned series of articles will be published throughout the year to celebrate the world's first radiology journal and look ahead to the future of this exciting and ever developing discipline.

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