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COVER LEGEND

Claudius Regaud (1870—1940), professor of histology at the University of Lyon, was a distinguished exponent of radiobiology and curietherapy and the founder of the Radium Institute (Institut du Radium) of the University of Paris in 1906. He developed original staining techniques and wrote a thesis on the lymphatics of the testes (Les vaisseaux lymphatiques du testicule. Compt. Rend. Soc. Biol., 40: 659—661, 1897). Regaud became an early student of Emile Roux at the Pasteur Institute. This led him to research on the effects of ionizing radiations on various tissues; with Blanc he discovered the varied radiosensitivity of the testicular tubular cells (Action des rayons X sur les diverses générations de la lignée spermatique. Extrême radiosensibilité des spermatoagonies à ces rayons. Compt. Rend. Soc. Biol., 61: 163—165, 1906). With Nogier he studied radiophysiological effects on irradiated skin and described moist radioepidermitis (Les effets produits sur la peau par les hautes doses de rayons X. Arch. d’Élect. Med., 20: 321—334, 1912). In 1912, he was chosen to organize the biomedical services of the Radium Institute in a twin building to the one in which Madame Curie pursued her physicochemical research. Mobilized by World War I, he recruited his future collaborators (Lacassagne, Coutard, Ferroux, Monod, and Roux-Berger). With Deherme he developed an early system of radium dosimetry (Sur l’emploi de l’emanation condensée en tubes clos et sur le dosage en millicuries détruits. Compt. Rend. Acad. Sci., 161: 422—424, 1915). Using the ram testes as an experimental model, he proved the advantage of a dose of radiation fractionated in ten days over a greater total dose administered in a single exposure (Influence de la durée d’irradiation sur les effets déterminés dans le testicule par le radium. Compt. Rend. Soc. Biol., 86: 787—790, 1922). This observation on the time-dose relationship became the most important radiobiological contribution to modern radiotherapy. Regaud was also responsible for the development of gadgets (Colpostat, Columbia paste) and of techniques of interstitial and intracavitary radium therapy which have been widely accepted.

Henri Coutard (1876—1950), radiotherapist of the Radium Institute of Paris, the Chicago Tumor Institute, and the Penrose Cancer Hospital of Colorado Springs, did early work on the utilization of radium emanation (Sur l’émanation du radium et son utilisation thérapeutique. Congress of the Association Française pour l’Avancement des Sciences, Nimes, August 1912); in 1919, he joined the staff of the Radium Institute. With a single piece of radiological equipment and interchangeable tubes, he studied experimental radiophysics and radiodiagnosis and practiced radiotherapy. In 1922, he described the mucous membrane reaction which he named radio-epithelitis (Sur les délais d’apparition et d’évolution des réactions de la peau, et des muqueuses de la bouche et du pharynx, provoquées par les rayons X. Compt. Rend. Soc. Biol., 86: 1140—1141, 1922). He originated the radiographic study of the larynx (Note préliminaire sur la radiographie du larynx normal et larynx cancerereux. J. Radiol. d’Electr., 8: 461—465, 1924). Refusing to accept the theoretical limitations of Regaud’s fractionation, Coutard dared to extend the daily irradiation of patients to periods of several weeks. His unprecedented results in the treatment of cancer of the larynx attracted worldwide attention (Considerations sur le cancer de la bande et de la cavité ventriculaire du larynx. Ann. des Mal. de l’Oreille, 46: 467—521, 1927). This method was dubbed the protracted-fractional treatment. His contributions are now indistinguishably incorporated into the everyday practice of radiotherapy (Principles of X-ray Therapy of Malignant Diseases. Lancet, 2: 1—12, 1934). Coutard was primarily responsible for placing radiotherapy on a clinical footing.

We are indebted to Dr. J. A. del Regato for both the portraits and the legend. Regaud is shown on the left; Coutard, on the right.