

A REVIEW OF MEDICAL LABORATORY SERVICES IN THE EASTERN CAPE PROVINCE SINCE 1894

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The first 'branch' laboratory founded by the South African Institute for Medical Research was opened at Port Elizabeth on 1 June 1930, approximately 18 years after the foundation of the parent Institute in Johannesburg.

A fact that is often overlooked is that this was not the first laboratory of its kind in the Eastern Cape Province, and it would be of interest to review briefly the medical laboratory history in this Province from its earliest inception.

In 1891 the Colonial Bacteriological Institute was established in Grahamstown and was the first of its kind in the subcontinent.¹ The laboratory was in the charge of Alexander Edington, M.D., C.M. (Edin.), D.P.H. (Edin.), D.T.M. (Edin.), F.R.S. (Edin.). Edington was a man of extraordinary ability—indeed one of Edinburgh's most brilliant scholars. He retired from the Colonial Service on 1 July 1905, went to Scotland until 1906, and subsequently returned to South Africa where he was in general practice in various localities until his death at Greytown, Natal, in 1928.²

The early activities of the laboratory at Grahamstown were primarily concerned with the diagnosis and treatment of animal diseases. Towards the end of 1894, however, the examination of human material was undertaken. Investigations included general, bacteriological, and pathological examinations and preparation of vaccines, but the chief interest seems to have centred around the investigation and treatment of diphtheria.³ In July 1894 Robert Sinclair Black, M.A., M.B., C.M., D.P.H. (Aberdeen)⁴ arrived in South Africa to take up the post of assistant to Dr. Edington, and in December of the same year he was instructed to prepare, with the means at his disposal, some 'toxin' with a view to the inoculation of animals and the preparation of immunized blood serum, viz. antitoxin.⁵ As a result of this directive, diphtheria antitoxin was prepared for the first time in Southern Africa at Grahamstown during the year 1895. In his report Dr. Edington stated that owing to the excessive heat of our climate this material, and likewise other vaccines, were prepared under difficulties unknown in Europe.⁶

The Colonial Bacteriological Institute at Grahamstown ceased its concern with human pathology on 1 July 1905, and its work was taken over by a small public health laboratory which had been established at Cape Town in 1901.⁷ How few of us realize at present that during the years 1895 to 1901 all laboratory material from Cape Town and the Peninsula was submitted to Grahamstown for examination! The following announcement in the *South African Medical Journal* of December 1894 makes interesting reading: 'We are glad to be in a position to announce that the Government is maturing a plan whereby the necessary outfits for the purpose of making cultures for the bacteriological diagnosis (of diphtheria) will be kept at convenient stations—usually chemist shops—throughout the Cape Peninsula for the use of medical men desiring to take advantage of the system. After inoculation the tubes will be despatched to the Bacteriological Institute

at Grahamstown where cultures will be submitted to examination'.

However, after 1905 the position was reversed and practitioners in the Eastern Cape Province were obliged to submit laboratory specimens to Cape Town for diagnosis. The foundation of the Institute in Johannesburg offered a choice of laboratories to which specimens could be submitted. Because of the distances involved this was indeed Hobson's choice!

The fact remains, however, that for 25 years the vast area comprising the Eastern Cape Province was without a medical laboratory service of its own. Indeed, by 1929 there were only 3 pathological laboratories in the whole of the Cape Province, an area of 276,966 square miles and a population of approximately 3 million inhabitants. It is true that in some centres there were what were called municipal laboratories, but facilities at these were certainly not adequate. The 3 laboratories referred to earlier were all situated in Cape Town. The Editor of the *South African Medical Journal* in February 1928 put the matter succinctly when he wrote,⁸ concerning laboratory services, 'and it remains a fact that large and important centres like Port Elizabeth, East London, Grahamstown and the whole of the vast Native territory are without pathological laboratories. Indeed it is a saddening reflection that public opinion in this country is so dead to the sense of fairness and justice that it has tolerated a state of affairs in the territories that is a disgrace to the departments concerned. Indeed the case for a pathological laboratory supported out of public funds at Port Elizabeth is so strong that it is extraordinary that the public has not insisted that it should be considered by the Government'. This neglect becomes still more perplexing when one recalls that parts of this large area provided much of the Native labour for the country's vast gold mining industry. More than two years elapsed before anything concrete was done to ease the situation.

At the request of the local authorities and the local branch of the Medical Association of South Africa the Board of the SAIMR decided to establish a branch laboratory at Port Elizabeth. An agreement to this effect was made between the City Council of Port Elizabeth and the Board of the Institute on 6 February 1929. By this agreement a site, one acre in extent, within the grounds of the Port Elizabeth Hospital, was sold by the Hospital Board to the SAIMR, and the Institute undertook to establish (at a cost of not less than £5,000) and maintain a laboratory for the performance of routine pathological, bacteriological, parasitological and biochemical examinations. To these were added in 1935 certain medicolegal investigations which concerned the Eastern Cape Province.

At the time of its opening, the building consisted in the main of 2 large laboratories, one for biochemical investigations and the other for bacteriological, serological, haematological, etc. investigations. In addition there were administrative offices, a small media room, animal and store rooms. No additions were made until 1948, but

even as early as 1939 the laboratory and offices were inadequate and plans for a quite considerable extension were prepared. The outbreak of World War II prevented the proposed extension, which was finally carried out during 1948. During 1957 it was found imperative to expand again, and 4 rooms, chiefly for the administrative staff, were added. Considerable expansion to its present size was carried out during the year 1961.

In spite of the extensions to the main branch in Port Elizabeth it has been found necessary to establish a laboratory at the large non-European Livingstone Hospital in Port Elizabeth and at the Provincial Hospital, Uitenhage, which is situated 20 miles north of Port Elizabeth. The establishment of a laboratory in the large Oasim Medical Centre in Port Elizabeth has proved convenient for medical practitioners.

The branch also works in close collaboration with the Eastern Province Blood Transfusion Service and for this purpose maintains a small laboratory in the Provincial Hospital, Port Elizabeth. This 'on the spot' service has proved of great value. In addition this small laboratory carries out after-hours emergency work for the Livingstone and other hospitals in Port Elizabeth, thus giving a full 24-hour service.

During the first 6 months the branch was in the charge of Dr. J. H. Harvey Pirie, at that time Deputy Director of the South African Institute for Medical Research. With him were the late Dr. F. C. Gray as its future superintendent, the late Mr. Paul Roux, B.A., as chief technologist, and Mr. A. G. Clegg, branch secretary. Francis Gray was a man of great ability and vision and his choice as superintendent could not have been bettered. His untimely death in North Africa was a severe loss to this Institute.

So much then for the Institute's branch laboratory in Port Elizabeth, which for 8 years supplied a service for the whole of the Eastern Cape Province, including the Transkei and Border regions. The position was eased when the East London Municipality established a laboratory in that city during 1938. This was at first situated in the Frere Hospital, but during 1941 it was housed in a separate building. This laboratory and another one which was opened at Umtata in 1958 are maintained by the Cape Provincial Administration. East London has also its own blood transfusion service run by the Red Cross Society.

In conclusion one should record that possibilities for medical laboratory services are by no means exhausted in the Eastern Cape Province. The advantages of being 'on the spot', as it were, can never be offset by a 'pathology by post' service. Thus it is that well-equipped laboratories for towns such as Cradock, George and possibly others, still have to be considered in the not too distant future. Furthermore, with our increasing knowledge and more frequent routine use of diagnostic methods in virus diseases, the establishment of a virus diagnostic laboratory, preferably in Port Elizabeth, is due for consideration.

Finally I should like to acknowledge and say thank you for the many kindnesses, assistance and cooperation which have been accorded this branch of the Institute by local authorities and many others during the 32 years since its establishment.

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