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RESEARCH ARTICLE

A BRIEF FAMILY HISTORY OF THE DEPARTMENT OF ORTHOPAEDIC SURGERY, UNIVERSITY OF THE WITWATERSRAND

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ABSTRACT

A brief overview of the orthopaedic surgery division of the University of the Witwatersrand (Wits). A review of the literature from 1962 to 2023: this is one of the departments that has contributed greatly to the country, the orthopaedic community, and the world. For the past sixty-one years, the Wits Orthopaedic Surgery department has been led by seven chairs of the department. Under their guidance, the university has produced over hundreds of orthopaedic graduates, including undergraduate and postgraduate students and leaders. Orthopaedic eponyms are regarded as prestigious honours bestowed upon those who have made noteworthy achievements. Eponyms are gradually being replaced by orthopaedic vernacular around the world. Nonetheless, the department still prides itself on Mirels classification, Lautenbach technique, and numerous other eponyms.

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INTRODUCTION

The birth of the University: The University of the Witwatersrand (Wits), Johannesburg was the name given to the University College in Johannesburg once it achieved full university status. The South African School of Mines, founded in Kimberley in 1896 and moved to Johannesburg as the Transvaal Technical Institute in 1904, is where Wits had its start. In 1906, the Institute changed its name to the Transvaal University College, and four years later, it became the South African School of Mines and Technology. The University College was awarded full university status on 01 March, 1922. The University's inauguration took place seven months later, and it was appropriately commemorated (6, 34).

Orthopaedic Surgery is a branch of surgery: In 1920, the first Professor of Surgery was appointed. George Ritchie Thomson, who held the position until 1958 (37). Francois Petrus (Fookie) Fouché was assigned as an assistant in the Department of General Surgery in 1927 and retired in 1946 (Figure 1). He became the first employee to oversee Orthopaedic patients (3,6,7,37). From 1947 to 1962, this responsibility was given to Professor Joseph Melvin (Jock) Edelstein (1). The FP Fouché lecture is presented annually at the South African Orthopaedic Association (SAOA) congress to celebrate the legacy of the Orthopaedic Surgeons' Group's renowned founder and first president (17). Francois Fouché passed away on 20 August, 1962 (7). Professor Daniel Jacob (Sonny) du Plessis was appointed as the second incumbent from 1958 to 1977 (37).

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The birth of the Wits Orthopaedic Department: The Orthopaedic Surgery Department was born in 1962 and currently has 61 years old. Professor Joseph Melvin (Jock) Edelstein, MBChB, FRCS, FCS Orth (SA), was the first chair. He received recognition from the Orthopaedic Surgery community around the world for his contribution to the field [Figure 2] (1,20,21). The JM Edelstein Medal to a College of Medicine of South Africa (CMSA) Orthopaedic candidate has not been revoked, and it was awarded to top candidates (19). Professor Edelstein died on 18 August, 1966, after a long illness (1). Professor William Donald Graham, MD, FRCS (Eng.), FRCS (Edin.), FRCS (Glasg.), FACS was the second incumbent in 1966 and served as vice president of the South African Society of Physiotherapy in 1965 [Figure 3]. He edited *Modern Trends in Orthopaedics*, volume 5, in 1967 (4,5,12). In 1967, Professor Louis Solomon, MBChB, FRCS Edin, FRCS MD, was appointed the third chair of the Orthopaedic Surgery department at the age of 38 years [Figure 4]. He co-edited a concise Orthopaedic and fracture system with Alan Apley. Professor Solomon continued editing the textbook after Apley died, and the new editorial team renamed it *Apley and Solomon's System of Orthopaedics* in honour of the duo. In the Bristol Royal Infirmary, on the 19th of August 2014, Professor Solomon suddenly passed away from a heart attack (13,14,22). In 1986, Professor Einhard Hermann Wilhelm Erken, FCS (SA) Orth, was appointed to be the 4th head of department in Orthopaedic Surgery [Figure 5]. In September 2011, the South African Orthopaedic Association awarded him the Medal of Education in recognition of his contributions to the Orthopaedic Surgery community. Sadly, Professor Erken passed away in September 2016 (36). Professor Mkhululi (Mac) Lukhele, MBChB, FCS (Orth) SA, MMed (Orth) was appointed the 5th head of department in orthopaedic surgery, and he joined in December 2002 [Figure 6].



Figure 1. FP Fouché [7]



Figure 2. JM Edelstein [20]



Figure 3. WD Graham [5]

Professor Lukhele conducted clinical research on spinal trauma, deformities of the spine, and Tuberculosis. After serving for ten years as head of department in Orthopaedic Surgery, Professor Lukhele was named head of the Clinical Medicine School. In 2015, he successfully organized the school first research day, backed by scientific papers, as he persisted in advocating for research (9,18,23). He is currently in private practice (2,8). Professor Mmampapatla Thomas (Billy) Ramokgopa, MBChB, MScMed, FCS (Orth), has been the 6th Head of the Department of Orthopaedic Surgery since his appointment in February 2013 and he is the current incumbent [Figure 7] (11,18,24).



Figure 4. L Solomon [22]



Figure 5. EHW Erken [36]

The Orthopaedic Surgery training: The registrar programme began in 1969, and the department established the following units: Orthopaedic Trauma, Hand Unit, Spinal, Paediatric Orthopaedic, Adult Reconstructive, Neuromuscular Disorder, and Arthritis and Rheumatism units (6,18). The department has the most registrars in the country, with 61, under the current Head Of Department (HOD), Professor Ramokgopa, and all the registrars are currently doing MMed (Orth) and FCS Orth (SA), a programme introduced by Professor Erken (25,36). This department has produced a significant increase in the number of Master of Medicine (MMed) in Orthopaedic Surgery graduates and more work being done to improved PhDs [Table 1] (6,26-30). Professor Ramokgopa and the Orthopaedics Research Committee introduced a Wits Orthopaedic Surgery Research Day on 10 November 2021, in support of MMeds and research in the department (31). The department also introduced a PhD Symposium on the 11 August 2021, intending to assist candidates gain a better experience during their PhD journey (32). Registrars continue to take the CMSA examinations as per the

requirement to be surgeons by the Health Professions Council of South Africa (HPCSA) (10).



Figure 6. M Lukhele [23]



Figure 7. MT Ramokgopa [18]

Our Orthopaedic Surgery hospitals: The Wits Orthopaedic Surgery Department circuit comprised of three primary academic institutions located at the Charlotte Maxeke Johannesburg Academic, Chris Hani Baragwanath Academic, and Helen Joseph/RahimaMoosa Complex Hospitals. Additionally, it has three satellite hospitals: Sebokeng, Klerksdorp, and Thelle Mogoerane (25). At the Charlotte Maxeke Johannesburg Academic Hospital, Professor Mkhululi Lukhele was head of clinical unit and succeeded by Professor Anthony Robertson. He is executing the following Orthopaedic units: paediatrics, soft tissue knee, arthroplasty, spine, foot and ankle, trauma, tumour, and sepsis (5,33). Professor Ramokgopa, the Orthopaedic Chief of the clinical unit of the Chris Hani Baragwanath Academic Hospital, after Professor George. He presently has more Orthopaedic units at the Wits Circuit; Hand, Sports and General, Paediatrics, Polyclinic, Trauma, Arthroplasty, Tumour and Sepsis, and Spine units (5,33). Professor Abdirashid Aden was succeeded as chair of the Helen Joseph Hospital orthopaedics by Dr Aftab Younus. His current units include foot and ankle unit, trauma unit, hand surgery unit, arthroplasty unit, spine unit, shoulder and elbow unit (33). Each of the satellite hospitals has around two registrars, which is another aspect of community outreach. Fellowships are offered in the Orthopaedic department (24).

The Association involvement by the Wits Orthopaedic Surgery department: The Department of Orthopaedic Surgery has been an affiliate of SAOA since its inception, and it has been led by a number of Orthopaedic surgeons and Head of department (7). Dr Lipalo

Mokete in the South African Arthroplasty Society, Dr Grant Biddulph in the South African Society for Surgery of the Hand, and Dr Dina Simmons in the South African Paediatric Orthopaedic Society were the 2023 leaders in the SAOA subgroups from Wits Orthopaedic surgery (16). Since 2022, the SAOA associate members have been represented on the SAOA executive committee, and Dr Collen Sandile Nkosi, the Wits registrar, served as the leader in time period: 2022 – 2023 of the South African Orthopaedic registrars association (15).

Table 1. Wits Orthopaedic degrees output (6, 26-30)

| Degrees | 1962 – 1980 | 1981 – 2012 | 2013 – 2021 | 2022 – 2023 |
|---------|-------------|-------------|-------------|-------------|
| MMed | 0 | 18 | 57 | 29 |
| PhD | 0 | 6 | 1 | 1 |

Summary: The department has produced hundreds of Orthopaedic surgeons through the College of Medicine in South Africa, which are not included in this review due to a lack of data available online. The department is highly diverse, with a significant number of female registrars and a diverse representation of genders and ethnic groups.

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