Comprehensive Guide to Müller-Weiss Disease

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ISBN 978-3-031-66643-8 ISBN 978-3-031-66644-5 (eBook)
https://doi.org/10.1007/978-3-031-66644-5

This Springer imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

I dedicate this, my first textbook, to my first wife who has tolerated the numerous countless hours spent not only at the hospital, but researching and writing on the computer, a.k.a. the second wife.

Foreword

It gives me great pleasure to introduce *Comprehensive Guide to Müller-Weiss Disease*. It is the first truly comprehensive textbook on this condition. This condition is complex, to say the least. There are only a few papers published based on a large cohort of patients in the International literature on this subject. These usually involve classifications which do not necessarily help the individual surgeon as to how to treat and manage this condition. So it comes as a "breath of fresh air" that somebody has written a comprehensive text on this subject based on his large series. The author I have known since we were colleagues in medical school. Since then, he and I trained and become Consultant Orthopaedic Foot and Ankle Surgeons. Over the years, I have noted his diligence and enquiring nature into orthopaedic Foot and Ankle problems.

This book brings together all what is known about Müller-Weiss Disease published in the International literature and then developed by his own large experience of treating patients with this condition. It certainly clarifies the condition, as much as it can, with our present knowledge. It does however, with his own classification which is published, guide the reader into an appropriate treatment programme. However, being the condition that it is, it then stimulates the reader to consider what further research can be done to move forward our knowledge on this condition. The number of patients with this condition is relatively small worldwide. There is nothing that is better than a book that tells the history of a disease and the hypotheses that relate to its aetiology. Treatment programmes will assist the reader of this book to manage the condition. However, more importantly, it may stimulate the way forward to develop a greater understanding which I am sure will require significant global collaboration between large Foot and Ankle Orthopaedic surgical centres.

Dublin, Ireland
February 2024

Professor Michael M. Stephens, M.Sc. (BioEng.), FRCSI
Founding Editor, *Foot and Ankle Surgery*

Preface

Writing a book demands as much effort and perseverance, if not more than writing a research paper for publication. Why write? An internet search reveals the many purposes of writing: (1) to inform, (2) to express, (3) to describe, (4) to explore and learn, (5) to explain, (6) to argue, (7) to persuade, (8) to evaluate, (9) to problem solve, (10) to mediate and (11) to entertain.

So, why a book on Müller-Weiss disease? While not initially recognizing what the condition was in the first case that presented to our service, we subsequently published on 19 feet—marking the beginning of our journey to *inform* with "Recognition and Management of Müller-Weiss Disease" in *Foot and Ankle International* in 2012. Nine years later, the number of feet diagnosed at our unit with Müller-Weiss disease rose to 68. In "Radiographic Analysis of Müller-Weiss Disease" published in *Foot and Ankle Surgery* in 2021, we *explored, learnt and argued* that the heel was not always in varus as previously purported by Spanish investigators. And by 2023, an extensive province-wide analysis of radiographs of 95 feet enabled formulation of a grouping system. Published in July 2023 in *Foot and Ankle Surgery*, "Towards Understanding Müller-Weiss Disease from an Analysis of 95 Cases" aimed to *problem solve* through provision of a standardized platform for reporting and studying the condition and its treatment. The last article in press in the Journal of *Foot and Ankle Surgery* at the time of writing, "Outcomes of Selective Arthrodesis Based on Joints Affected in 33 Feet with Müller-Weiss Disease," reports the author's experience with selective arthrodesis surgery based on the joints involved. It was actually meant to be the second, but only achieved peer review acceptance this year.

The purpose of this book then is to continue with the same mission—to *inform, describe, explore and learn, explain, evaluate, argue* and *problem solve*—towards defining gold standards in the treatment of Müller-Weiss disease. Perforce, a book grants the author a certain degree of *carte blanche,* to *express* personal views, even *persuade* a little and in choosing what to write—including perhaps some thought processes deemed provocative by some but intended to stimulate further research, discussion and brainstorming.

This book shares the author's journey with a relatively rare condition, which somehow is frequent in Northern Ireland, particularly in the North-West.

In addition, it includes a comprehensive and critical review of the recent barrage of literature available on the subject. Each reference has been carefully scrutinized and its essence distilled into this book. The chapters are purposefully short and concise for easy reading. Illustrations are provided to complement the written description. Where relevant, diagrams are included to give the readership a wide picture of what authors worldwide are describing, with the aim of reaching a universal common platform, for there also appears to be geographical differences in distribution and pathology.

The last chapter entitled "Past, Present and Future Directions" summarizes controversies surrounding aetiology, classification, obligatory heel varus and the array of different procedures advocated in its surgical management. It emphasizes the need for a common platform when reporting disease outcomes. It ends with a list of numerous questions and unknowns that remain to be answered and suggestions for future areas of research.

The overarching aims of this book are to advance understanding of a disease which we still do not fully comprehend, from its aetiology to its classification, and in so doing create pathways to determine its optimum management.

We are all born. We go to Primary School, Secondary School, College, University and then to the Workplace. As we advance through these stages, we are often unaware of the people who truly made a difference in our lives. Until we have passed through these life's stages, that is.

I take this opportunity to gratefully acknowledge the important people who shaped my Education, without which this book would never have reached fruition. Starting from Primary School, Monsieur Charlotte and Miss Nadeige Rosette taught me French and English Grammar and Comprehension. In Secondary School, Monsieur Georges Espitalier-Noël taught me English Literature and essay writing, besides being a great source of life inspiration. Monsieur Wan Hok Chee (Maths), Monsieur Roger Perdreau (Chemistry) and Monsieur Sultan (Physics) transferred their unique styles of teaching and learning, which have served me throughout the rest of university and working life. Professor Tim O'Brien and Dr. Munro Strong encouraged and coached me in Research and writing in Scientific English. I also thank my mentors, Martin Walsh and Frank McManus for their help and support during and after my training years.

I also acknowledge the support of Alistair Wilson, who has provided selfless guidance throughout my journey in *Foot and Ankle Surgery*; the Orthopaedic Residents, Raymond McKenna, Andrew Walls, Matthew Lynch-Wong, Andrew Blythe and Matthew Arneill; Liam Fleming, Physical Therapist; and Elaine Lynch, Physician Associate—all of whom patiently listened to my ramblings about Müller-Weiss disease throughout the past few years. And finally, Michael Stephens, the grandfather of the Irish Orthopaedic Foot and Ankle Society (IOFAS), who has supported my works and efforts throughout the years.

My sincere hope is that this book will be of service to the Health Professionals who treat Foot and Ankle conditions and in turn benefit those who suffer from Müller-Weiss disease.

Belfast/Londonderry, UK Professor John Wong-Chung

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