# Orthodontic trainee gains award to research cleft palate morphogenesis

Daniel Stonehouse-Smith, a National Institute for Health and Care Research (NIHR) Academic Clinical Fellow and Specialty Registrar (ST3) in Orthodontics at King's Health Partners, has secured funding for a prestigious Clinical Research Training Fellowship from the Medical Research Council. These three-year fellowships enable clinicians to undertake a dedicated period of research training and carry out a PhD and are highly competitive – they are rarely awarded to dentists.

Daniel's PhD will analyse the cellular basis of both normal and cleft palate morphogenesis using mouse models and will be hosted in the Centre for Craniofacial & Regenerative Biology at King's College London under the supervision of Professor Martyn Cobourne and Professor Jeremy Green.

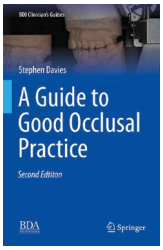
Daniel explains: 'Cleft lip and/or palate is one of the most common human birth defects, and the orthodontist plays a significant role in the rehabilitation of these patients. Orofacial clefts can present a substantial burden for both the individuals affected and their families, requiring multiple surgical interventions, and can have long-term functional challenges, including feeding and speech. Despite advances in our knowledge of the genetic regulatory networks underlying orofacial clefting, what is less well understood is the physical processes of tissue morphogenesis, the "shape-making" that groups of cells achieve when forming complex structures such as the lip and palate in the embryo. This Fellowship will provide insight into the link between gene function and a cleft palate phenotype, focusing on the mechanisms responsible for outgrowth and elevation of the palatal shelves using mouse models of both normal palatal morphogenesis and cleft palate.

'This research will be relevant to patients and their families who may want to understand why they have been born with a cleft palate, and to other researchers interested in embryonic development. In the longer term, better knowledge of how certain genotypes lead to a cleft palate may help us design better tools to diagnose, prevent and potentially treat cleft palate through tissue engineering and early therapeutic interventions.'

Daniel will be commencing the Fellowship at the completion of his pre-CCST training in October 2022 and he will remain clinically active. Specifically, he will gain experience in the orthodontic management of patients with orofacial clefts within the South Thames Cleft Service under the guidance of Alex Cash, Sarah Good and Golfam Khoshkhounejad. The research findings will be shared with both the orthodontic and wider biomedical research communities, as well as advocacy groups for individuals born with a cleft.

Daniel Stonehouse-Smith

BOOK REVIEW




## A GUIDE TO GOOD OCCLUSAL PRACTICE (BDJ CLINICIAN'S GUIDES)

Stephen Davies;
2022; Springer; £119.99; pp. 306;
ISBN: 978-3-030-79225-1

The first edition of this book was published in 2002 as *A clinical guide to occlusion*. It was a collection of a series of ten articles that had been published in the *British Dental Journal*. The format of this second edition remains the same; however, each chapter has been revised and expanded with some chapters now including illustrated case studies.

The book consists of 306 pages and 13 chapters and is generously illustrated throughout. The introductory chapters provide a description of the component parts of the occlusal system and of jaw and tooth relationships. Good practice in relation to systematic clinical assessment and recording of the dental occlusion is described.

Subsequent chapters provide detailed descriptions of what constitutes good occlusal practice in all disciplines of restorative dentistry from the simplest intra-coronal restoration to the complexities of restoration of the worn dentition and dental implant retained restorations. Two additional chapters describe good occlusal practice in orthodontics and paediatric dentistry. There is also a short chapter on bruxism that was not included in the first edition.

Even though the book has multiple contributors, there is a good consistency of style between chapters. This is helped by the way that each chapter begins with clearly stated aims and concludes with a short list of guidelines for good clinical practice. Successive chapters build on the guidelines from the preceding chapters, resulting at the end of the book in the comprehensive list of the 'Guidelines of good occlusal practice' that is the book's philosophy of good occlusal practice.

The BDJ Clinician's Guides series aims to support dental undergraduates and newly qualified clinicians and to act as a refresher for more experienced dentists. Dental occlusion is an area where all the above may benefit from help. This updated book is full of practical clinical information. It is generally up-to-date and evidence-based and is a valuable addition to the series.

**Robert Jagger**