

Hess charts interpreted. A book of real life examples

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The aim of this book (as stated by the authors) is 'to provide a guide to interpreting Hess charts' with the purpose 'to provide real life examples of extraocular muscle defects and their sequelae as they appear on Hess charts'.

The book is divided into eight chapters, following a brief historical introduction. Chapter 1 covers 'Background information and method of interpretation'. The overview of extraocular muscle innervation, extraocular muscle actions, muscle sequelae and laws of extra ocular motor control is useful. This section could also have provided information about conditions/situations where it is impossible or inappropriate to plot a Hess chart. How to set the patient up accurately could also have been included, as could the number of degrees represented by each of the small squares on the charts. No mention is made that Hess charts cannot identify whether displacement of field indicates underaction or mechanical limitation of movement, although only underactions are mentioned in this book. Further reading is helpfully suggested for those seeking more detail, but texts listed are incompletely referenced. 'Method of Interpretation' includes many pertinent points, but the novice would find it difficult to fully

interpret Hess charts without further teaching. The stepwise interpretation of the example does help, although it would have been useful to mention the *maximum* displacement of lines away from direction of action of the muscle in identifying the primary underaction. The description of the underaction of the contralateral lateral rectus is misconceived, showing a residual convergent deviation, as the size of the deviation is much less than in the primary position. Such misconceptions occur more than once in the book.

The authors, quite rightly, point out that Hess charts should not be used in isolation, although the book verges on encouraging this, whilst warning against it! Hess charts without full Orthoptic reports can indeed be misleading. Brief additional information is given with each Hess chart, however, this is sometimes not the vital clinical information that would clinch the diagnosis or leaves us wanting to know more.

Chapter 2 presents Hess charts of patients with neurogenic ocular pareses and secondary muscle sequelae. It would have been extremely useful to have the Cover Test results and Ocular Movements in addition to the information that is presented. Absence of this vital information limits the usefulness of the text that is included. Again there is confusion at times about exactly what the Hess chart shows. This is even more pertinent in Chapter 3 (Myogenic) and Chapter 4 (Mechanical) with the issue regarding underactions *vs* restrictions/limitations inadequately addressed.

Chapter 5 gives examples of Internuclear Ophthalmoplegia, Duane's syndrome and Brown's syndrome and Chapter 6 concentrates on two examples of

concomitant deviations as a result of muscle sequelae development over long periods of time. The chapter titled 'Progression' (Chapter 7) is a good idea, showing changes in Hess charts over time, more commonly found in case reports rather than text books. Unfortunately the very brief additional information leaves the reader with many unanswered questions. The final chapter gives the reader the chance to 'Try your own interpretative skills' for 12 Hess chart examples, stressing again that Hess charts should not be used in isolation, yet providing no additional information at all. Answers are provided.

The Bibliography and Further Reading sections again contain incomplete entries and are inconsistent in style of recording. Mistakes like these should not be present, especially in a textbook.

Overall this book has good intentions and could be used effectively by experienced orthoptists when teaching students, should a Hess chart example be required showing one of the conditions included. I would, however, not recommend orthoptic students or junior ophthalmologists to purchase it for private study, as it can be misleading at worst and introduce more questions than it answers at best. The cost of the book also seems excessive when compared to other, more professionally produced publications that provide Hess chart examples alongside substantial information about the aetiology, investigation and management of conditions.

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