Autism spectrum disorders: Phenotypes, mechanisms and treatments, M. Leboyer, P. Chaste, editors (Karger, Basel Switzerland) 2015. 170 pages.

This book constitutes the vol.180 of the ongoing series ‘Key Issues in Mental Health’. It is exhaustive and provides a fundamental overview of recent developments in the concerned area. The first chapter dealing with the evolution of the term ‘Autism Spectrum Disorders (ASD)’ acknowledges the heterogeneity of presentations, compared with the relatively ideographic original description, over 60 years ago. This chapter focuses on the Diagnostic and Statistical Manual of Mental Disorders (DSM) 5 with little or no reference to International Statistical Classification of Diseases and Related Health Problems (ICD) 10 or ICD 11. The second chapter on psychiatric co-morbidity recognizes the overlaps with developmental disorders in childhood and with personality/ mood disorders in adulthood, both of which confound assessment of contributions to distress and dysfunction. The chapter on medical co-morbidities lists gastrointestinal conditions, oral health, sleep disorders and epilepsy, largely stopping from making causal attributions towards ASD. Inborn errors of metabolism are also briefly covered. That there is no attempt to specify a diagnostic protocol may remain the only criticism on these otherwise well-planned chapters.

The chapter on cognitive profile in ASD highlights the challenges in studying cognition in ASD, while also briefly acknowledging the oft reported associations with executive dysfunction, weak central coherence and reduced Theory of Mind ability. A scholarly debate on the research methods follows and finally the multiple single-case study approach is described. The call for comparing the cognitive heterogeneity in ASD with that seen in typical development (and across neuro-developmental disorders) can be a useful starting point for researchers. The chapter on social functioning explores the role of social attentional processes, along with a valid focus on oxytocin.

The chapter on sensory issues is timely, given the addition of such symptoms to the DSM 5 criteria for ASD. It provides a good summary for the uninitiated, while keeping the expert interested with models and the new findings on cortical variability in ASD. Ruefully agreeing with the authors on the need for newer interventions in this area, the clinician will also find synergy with the last two chapters. These deal with early identification and interventions including pharmacological interventions (a brief account of available options and exciting new developments). That specialist skill only can bolster the desirable sensitivity and specificity to early diagnosis, may be a dampener for efforts to apply available screening tools. A table with listing of screening and interview tools along with a note on broader phenotypes would have been helpful. Quoting from reviews and meta-analyses, the authors remark on the low quality (non randomized, inadequately controlled studies) of available interventions/ literature. Written by experts who understand interventional research, the succinct note on complementary and alternative medicine, that is rampant in ASD, is noteworthy for its compassionate handling.

Descriptions of the efforts towards understanding the aetiopathogenesis of ASD as seen in chapters 7-10 is what marks out the book for its value. Abnormal brain growth and altered connections (and possibly the relationship between the two) are summarized. The summary on genetics helpfully asserts that the ‘genetic architecture of ASD is coming together nicely’. This chapter brings great clarity for all those in the field. It lists the meaning of heritability, the role of common and rare variants and attempts to build a ‘comprehension of the neurobiology of autism’. The chapter on molecular pathways builds on the growing evidence for genetics, focusing on single gene syndromes and rare mutations (neuroligin, neurexin and SHANK)
while also introducing the readers to the increasing role of bioinformatic pathways in unraveling functional molecular mechanisms. After justifying the search for potential environmental factors in ASD, a chapter discusses teratogenicity and congenital viral infections at length. Looking at an area filled with controversial claims, this chapter asserts the need for careful reading of environmental datasets. The role of pesticides, air pollution, halogenated toxins and heavy metals are well summarized and argues for dispassionate logic to assist further exploration.

A glaring omission in the book is absence of focus on adults with autism as also the sociological account of the ASD phenomenon. This book is part of a series, formerly known as Bibliotheca Psychiatrica, published since 1917. This includes a book on autism (Kindlischer Autismus, vol 157). Excerpts from this 1978 book could have embellished this volume with a delightful cross-temporal perspective. That there are only stray references to Indian research can be disconcerting, but then this book, like many we read, is a summary of transatlantic knowledge.

Culling from massive lists of references, the authors have ensured that the chapters offer clear information, even as many of them introduce a new idea. This would keep both the clinician and the researcher interested. The summary knowledge in the book would be of special interest to post graduates in psychiatry, neurologists, paediatrics and basic doctors looking to get acquainted with this condition.

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