

Cambridge University Press
978-1-107-01557-9 - The Behavioral and Cognitive Neurology of Stroke
Edited by Olivier Godefroy
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Edited by

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CAMBRIDGE UNIVERSITY PRESS
 Cambridge, New York, Melbourne, Madrid, Cape Town,
 Singapore, São Paulo, Delhi, Mexico City

Cambridge University Press
 The Edinburgh Building, Cambridge CB2 8RU, UK

Published in the United States of America by
 Cambridge University Press, New York

www.cambridge.org
 Information on this title: www.cambridge.org/9781107015579

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First published 2013

Printed and bound in the United Kingdom by the MPG Books Group

A catalogue record for this publication is available from the British Library

Library of Congress Cataloguing in Publication data
 The behavioral and cognitive neurology of stroke / edited by
 Olivier Godefroy. – 2nd ed.

p. ; cm.

Behavioral and cognitive neurology of stroke
 Includes bibliographical references and index.

ISBN 978-1-107-01557-9 (hardback)

I. Godefroy, Olivier, 1960– II. Title: Behavioral and cognitive neurology of stroke.

[DNLM: 1. Stroke – complications. 2. Stroke – psychology.

3. Cognition Disorders. 4. Dementia, Vascular – therapy.

5. Neurobehavioral Manifestations. WL 356]

616.8'1 – dc23 2012036786

ISBN 978-1-107-01557-9 Hardback

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Contents

<i>List of contributors</i>	vii
<i>Preface</i>	xi
<hr/>	
Part 1 – Vascular cognitive impairment	
1 Introduction: what is vascular cognitive impairment?	1
José G. Merino and Vladimir Hachinski	
2 Vascular cognitive impairment in the memory clinic	9
Paige Moorhouse and Kenneth Rockwood	
3 Vascular cognitive impairment in the stroke unit and after the acute stage	22
Olivier Godefroy, Claire Leclercq, and Martine Roussel	
 Part 2 – Analytic approach: the behavioral and cognitive neurology of stroke	
4 Cognitive and behavioral disorders according to stroke site and side	32
Isabel P. Martins, Lara Caeiro, and José M. Ferro	
 Section I – Motor and gestural disorders	
5 Abnormal movement and motor behavior	43
Luc Defebvre and Pierre Krystkowiak	
6 Limb apraxia: a disorder of gesturing and object use	55
Tim Vanbellingen and Stephan Bohlhalter	
 Section II – Aphasic, arthric, calculation, and auditory disorders	
7 Vascular aphasias	65
Alexandre Croquelois and Olivier Godefroy	
 Section III – Hemineglect, Anton–Babinski, and right hemisphere syndromes	
8 Dysarthria	76
Pascal Auzou	
9 Alexia and agraphia in acute and chronic stroke	86
Argye E. Hillis	
10 Acalculia	101
Laurent Cohen and Stanislas Dehaene	
11 Auditory disorders related to strokes	114
Bernard Lechevalier, Jany Lambert, Sylvain Moreau, Hervé Platel, and Fausto Viader	
 Section IV – Visual agnosia and Bálint syndrome	
12 Hemispatial neglect	126
Patrik Vuilleumier and Arnaud Saj	
13 Anosognosia and denial after right hemisphere stroke	158
Phillippe Azouvi and Anne Peskine	
14 Asomatognosia: disorders of the bodily self	170
Sebastian Dieguez and Jean-Marie Annoni	
15 Disorders of visuoconstructive ability	193
Diane Dupuy and Olivier Godefroy	
16 Topographical disorientation	202
Bertille Périn and Olivier Godefroy	
 Section IV – Visual agnosia and Bálint syndrome	
17 Cortical blindness	209
Alain Vighetto and Pierre Krolak-Salmon	

Contents

18 **Bálint syndrome** 218
Alain Vighetto and Pierre Krolak-Salmon

19 **Prosopagnosia** 231
Thomas Busigny, Eugene Mayer, and
Bruno Rossion

20 **Object and color agnosia** 247
Georg Goldenberg

Section V – Executive and
memory disorders

21 **Dysexecutive syndromes** 255
Olivier Godefroy and Donald T. Stuss

22 **Disorders of episodic memory** 277
Michael P. Alexander and Chun Lim

23 **Working memory dysfunction in
stroke patients** 297
Abid Qureshi and Argye E. Hillis

Section VI – Behavioral and
mood disorders

24 **Alterations of level of consciousness
related to stroke** 312
Marc D. Reichhart and Reto Meuli

25 **Akinetic mutism and related disorders** 334
Didier Leys and Hilde Hénon

26 **Delirium and confusional state in
stroke patients** 340
Hilde Hénon and Didier Leys

27 **Delusion, mania, and personality
changes** 351
Pierre Thomas

28 **Depression after stroke and
cerebrovascular disease** 363
Maree Hackett

29 **Fatigue after stroke** 375
Mansur A. Kutlubaev and Gillian E. Mead

Part 3 – Dementia and
management of vascular cognitive
impairment

30 **Vascular dementia** 387
Hugues Chabriat and Olivier Godefroy

31 **Cognitive and behavioral assessment
of vascular cognitive impairment** 410
David Nyenhuis and Sandra Black

32 **Treatment of patients with
post-stroke dementia** 423
Marie-Anne Mackowiak and Florence Pasquier

Index 432

The color plates will be found between pages 276
and 277.

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Preface

The care of stroke patients has dramatically changed over recent years with the advent of stroke units, thrombolysis, standardized management procedures, and the development of secondary prevention. Following the acute phase, the battle to maintain autonomy is also evolving, with the development of specialized rehabilitation units, treatment of dementia, and new hopes for the future such as pharmacotherapy, regenerative therapy, or transcranial stimulation. These advances highlight the need for accurate determination of pre-stroke status, stroke diagnosis, and complications at both the acute and late phases. This is a vast domain in view of the extraordinary complexity of the brain and the multiple mechanisms involved in stroke. This domain is also rapidly evolving owing to the major advances in neurosciences and neuropsychology.

For the clinician, the development of cognitive and clinical neurosciences has shed light on the diagnosis; assessment and prognostic value of pre-stroke status, stroke signs, and residual signs; and their treatments. The objectives of cognitive examination differ according to the phase. At the hyperacute phase, cognitive examination is systematically performed for diagnostic purposes and to determine pre-stroke cognitive status, which markedly influences outcome. Following the hyperacute phase, the identification of complications and their significance, the recognition of persistent signs, and the determination of appropriate care are essential and this covers a very wide range of cognitive and behavioral changes. After the acute phase, it is essential to identify residual signs and sequelae, including post-stroke dementia and

complications that appear in the long term. In neurology clinics and general wards, cerebrovascular disorders also frequently present as primary behavioral or cognitive disorders. They remain underdiagnosed, justifying a better knowledge and systematic assessment of vascular brain damage in these patients. These major objectives have led to the promotion of standardized assessment and management for vascular cognitive impairment.

At the same time, neuropsychology and cognitive neurosciences are developing at a tremendous rate with the use of various methods that now extend well beyond the simple study of brain damage in patients. The objective of this book is to fill the gap between clinical and cognitive neurosciences in the field of stroke. For this purpose, it, therefore, provides basic information on the main brain functions (perception, motor, behavior, and cognition) and brain disorders in the light of recent developments from basic neurosciences. It continues to provide a comprehensive review of the specificity of the disorders observed in stroke patients (including the hyperacute phase), their relationships with stroke mechanisms, and their assessment (including validated tests) and management.

The goal of this book is to provide valuable information for all clinicians involved in the care of stroke patients – in stroke units, neurology departments, and rehabilitation departments – and all clinicians involved with patients with behavioral and cognitive impairment, particularly in memory clinics. It is also intended to be useful for neuroscientists and neuropsychologists and to encourage further research in the field of cognitive neurosciences in stroke.