生物・心理・社会的検査としては陽性・陰性症状評価尺度（Positive and Negative Syndrome Scale、PANSS）、社会機能評価尺度（Social Functioning Scale, SFS）、WHO Quality of Life 26 日本版（WHO-QOL26）、Japanese Adult Reading Test（JART）、統合失調症認知評価尺度（Schizophrenia Cognition Rating Scale, SCoRS）、Family Attitude Scale 日本版（FAS）、陽性症状評価尺度（Scale for the Assessment of Positive Symptoms, SAPS）、陰性症状評価尺度（Scale for the Assessment of Negative Symptoms, SANS）、統合失調症認知機能簡易評価尺度（Brief Assessment of Cognition in Schizophrenia, BACS）、磁気共鳴画像（MRI）検査、光トポグラフィ、事象関連電位検査を行った。

調査結果を匿名化した後に集計し、研究目的に挙げた要因の検討を行った。

（倫理面への配慮）

調査実施にあたってはヘルシンキ宣言を遵守し、「臨床研究倫理指針（平成16年厚生労働省告示第459号）」「疫学研究に関する倫理指針（平成19年文部科学省・厚生労働省告示第1号）」に従った。担当医師は研究の概要、参加者に与えられる利益と不利益、随時撤回性、個人情報保護、費用について文書により対象者に説明し、検査データを研究に用いることについて自由意思による同意を文書で取得した。対象者が未成年の場合、本人および保護者の同意を得た。なお本研究は、金沢医科大学の臨床・疫学研究等に関する倫理委員会の承認を受けている。

C．研究結果

平成25年3月までの「こころのリスク外来」の利用者は5例であった。うちARMSの判定基準を満たした者が1例、FESの統合失調症患者が1例、それ以外が3例であった。「こころの健康検査入院」の利用者は12名であった。

E．結論

石川県におけるFES患者とARMS患者を対象にした臨床サービスを一般市民に周知させるために、メディア等の利用を試みたところ、一定の成果が得られているが、今後も継続した広報活動が必要である。さらにこれらの対象者と頻繁に接触する機会を持つスクールカウンセラーや養護教諭などの学校関係者との連携が有用と考えられるため、次年度は交流の機会を計画している。

F．健康危険情報

総括研究報告書に記載

G．研究発表

1．論文発表

1) Takahashi T, Nakamura K, Ikeda E, Furuichi A, Kido M, Nakamura Y, Kawasaki Y, Noguchi K, Seto H, Suzuki M.: Longitudinal MRI study of the midline brain regions in first-episode schizophrenia. Psychiatry Res., (in press)
2) Higuchi Y, Sumiyoshi T, Seo T, Miyanishi T, Kawasaki Y, Suzuki M.: Mismatch negativity and cognitive performance for the prediction of psychosis in subjects with at-risk mental state. PLoS One, 8:e54080, 2012.
3) Takahashi T, Nakamura Y, Nakamura K, Ikeda E, Furuichi A, Kido M, Kawasaki Y, Noguchi K, Seto H, Suzuki M.: Altered depth of the olfactory sulcus in first-episode schizophrenia. Prog Neuropsychopharmacol Biol Psychiatry, 40:167-72, 2012
4) Nakamura K, Kawasaki Y, Takahashi T, Furuichi A, Noguchi K, Seto H, Suzuki M.: Reduced white matter fractional anisotropy and clinical symptoms in schizophrenia: a voxel-based diffusion tensor imaging study. Psychiatry Res., 202:233-238, 2012.
5) Takahashi T, Kido M, Nakamura K, Furuichi A, Zhou SY, Kawasaki Y, Noguchi K, Seto H, Kurachi M, Suzuki M.: Longitudinal MRI study of the pituitary volume in chronic schizophrenia: a preliminary report. Psychiatry Res., 2012 Apr 30;202(1):84-87, 2012.
6) 鈴木道雄, 川﨑康弘, 高柳陽一郎, 中村主計, 高橋　努：構造ＭＲＩによる統合失調症の補助診断の可能性．精神神経科学雑誌，114：807-810，2012.
7) 川﨑康弘：統合失調症を脳画像で診断するためのＶＢＭ．日磁医誌，32：41-46，2012.

2．学会発表

1) Matsuda Y., Kawasaki Y., Takahashi T., Kido M., Nakamura K., Furuichi A., and Suzuki M.: Progressive gray mater changes in first-episode schizophrenia : Longitudinal DARTEL study of voxel-based morphometry. IPRN Conference, 2012, 4, 13, Florence.
2) Kawasaki Y., Matsuda Y., Takahashi T., Kido M., Nakamura K., Furuichi A., and Suzuki M.: Longitudinal voxel-based morphometric study to evaluate progressive gray mater changes in first-episode schizophrenia. 3rd Biennial Schizophrenia International Research Society Conference, 2012, 4, 14-18, Florence.
3) 川﨑康弘, 高柳陽一郎, 中村主計, 高橋　努, 鈴木道雄：構造MRIによる統合失調症の補助診断の可能性．シンポジウム：精神疾患の予防と脳画像研究．第16回日本精神保健予防学会，2012，12，16，東京．（招待講演）

H．知的財産権の出願・登録状況

1．特許取得

なし

2．実用新案登録

なし

3.その他
なし

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Ⅲ.　研究成果の刊行に関する一覧表

研究成果の刊行に関する一覧表

書籍

著者氏名	論文タイトル名	書籍全体の編集者名	書　籍　名	出版社名	出版地	出版年	ページ
水野雅文	機能性精神障害のリハビリテーションA.総論	鹿島晴雄	リハビリテーションと精神医学	医歯薬出版株式会社	東京	2012	125-128
水野雅文	精神科地域ケアのストラテジー	水野雅文	これからの退院支援・地域移行	医学書院	東京	2012	2-10
舩渡川智之、根本隆洋、武士清昭、水野雅文	早期介入におけるチーム医療	石郷岡純、後藤雅博、水野雅文、福田正人	統合失調症	医薬ジャーナル社	大阪	2012	35-43
笠井清登，川﨑康弘，鈴木道雄，根本清貴，橋本龍一郎，八幡憲明，山下典生	MRIを用いた多施設共同研究へ向けた技術開発	三國雅彦・福田正人・功刀　浩	精神疾患診断のための脳形態・機能検査法	新興医学出版社	東京	2012	126-136
川﨑康弘，鈴木道雄	頭部MRI画像における形態異常の簡便な評価法	三國雅彦・福田正人・功刀　浩	精神疾患診断のための脳形態・機能検査法	新興医学出版社	東京	2012	18-25
鈴木道雄，川﨑康弘，高橋　努，高柳陽一郎，中村主計	構造MRI画像を用いた統合失調症の診断法	三國雅彦・福田正人・功刀　浩	精神疾患診断のための脳形態・機能検査法	新興医学出版社	東京	2012	7-17
下寺信次	心理教育と家族援助	大野裕	うつ病治療ハンドブック	金剛出版	東京	2011	226-233

下寺信次	3．診断および治療の進め方　C.治療の進め方　4.心理教育	山内俊雄	専門医を目指す人の精神医学　第3版	医学書院	東京	2011	267-269
下寺信次	うつ状態	日本医師会学術企画委員会　監修：跡見裕	症状からアプローチするプライマリケア	医歯薬出版	東京	2011	215-218
下寺信次	第15章　非薬物療法・心理社会療法　心理教育	松下正明	精神医学キーワード事典	中山書店	東京	2011	660-661
下寺信次	第2章　精神科研修でマスターすべきこと　E.治療法　9.患者や家族へのわかりやすい心理教育	総監修：永井良三　編集：笠井清登	精神科研修ノート	診断と治療社	東京	2011	234-235
下寺信次	第8章　精神医療と福祉および関連機関との間における連携の重要性 第1節　治療の導入に向けた支援 第2節　再発予防のための支援	日本精神保健福祉士養成校協会	新・精神保健福祉士養成講座　1　精神疾患とその治療	中央法規	東京	2012	302-312
下寺信次	23　その他の臨床的諸問題　病名告知	樋口輝彦	今日の精神疾患治療指針	医学書院	東京	2012	954-956
下寺信次	統合失調症（維持療法とリハビリテーション）		今日の治療指針　2013年度版	医学書院	東京	2013	875-876

雑誌

発表者氏名	論文タイトル名	発表誌名	巻号	ページ	出版年
Masafumi Mizuno, Takahiro Nemoto, Naohisa Tsujino, Tomoyuki Funatogawa, Kiyoaki Takeshi.	Early psychosis in Asia: Insights from Japan.	Asian Journal of Psychiatry	5	93-97	2012.
Kumazaki H, Kobayashi H, Niimura H, Kobayashi Y, Ito S, Nemoto T, Sakuma K, Kashima H, Mizuno M.	Lower subjective quality of life and the development of social anxiety symptoms after the discharge of elderly patients with remitted schizophrenia: a 5-year longitudinal study.	Compr Psychiatry	53(7)	946-51	2012
Nemoto T, Funatogawa T, Takeshi K, Tobe M, Yamaguchi T, Morita K, Katagiri N, Tsujino N, Mizuno M	Clinical practice at a multi-dimensional treatment centre for individuals with early psychosis in Japan.	East Asian Arch Psychiatry	22(3)	110-3	2012
Asian Network of Early Psychosis Writing Group(including Nakao Iwata, Kazunori Matsumoto, Masafumi Mizuno, Shinji Shimodera, Michio Suzuki from Japan)	Early psychosis declaration for Asia by the asian network of early psychosis.	East Asian Arch Psychiatry	22(3)	90-3	2012

Alison R Yung, Scott W Woods, Stephan Ruhrmann, Jean Addington, Frauke Schultze-Lutter, Barbara A Cornblatt, G Paul Amminger1, Andreas Bechdolf, Max Birchwood, Stefan Borgwardt, Tyrone D Cannon, Lieuwe de Haan, Paul French, Paolo Fusar-Poli, Matcheri Keshavan, Joachim Klosterkötter, Jun Soo Kwon, Patrick D McGorry, Philip McGuire, Masafumi Mizuno, Anthony P Morrison, Anita Riecher-Rössler, Raimo KR Salokangas, Larry J Seidman, Michio Suzuki, Lucia Valmaggia, Mark van der Gaag, Stephen J Wood, Thomas H McGlashan.	Whither the Attenuated Psychosis Syndrome?	Schizophr Bull.	;38(6)	1130-4	2012
水野雅文、稲垣中、藤原修一郎、榎戸芙佐子、辻野尚久、根本康、野崎昭子、小島卓也	わが国における精神科医・精神科医療の実態把握に関する調査結果（その１）実数ならびに分布についての基礎資料	精神経誌	114(12)	1374-1384	2012
稲垣中、水野雅文、藤原修一郎、榎戸芙佐子、辻野尚久、根本康、野崎昭子、小島卓也	わが国における精神科医・精神科医療の実態把握に関する調査結果（その２）：精神科医師の職域および地域の異動に関する検討	精神経誌	114(12)	1374-1384	2012
舩渡川智之、根本隆洋、武士清昭、水野雅文	イル ボスコにおける早期介入に向けた包括的取り組み	精神障害とリハビリテーション	16(1)	10-15	2012
藤井千代、舩渡川智之、水野雅文	児童・思春期患者への薬物治療における説明と同意	臨床精神薬理	15	1793-1800	2012

舩渡川智之、水野雅文	精神病早期介入のための未治療期間（DUP）短縮を目的としたプライマリケアとの連携、関係づくり	臨床精神医学	41	1375-1379	2012
藤井千代、水野雅文	早期介入の臨床倫理	臨床精神医学	41	1387-94	2012
辻野尚久、水野雅文	発症危険状態(ARMS)の評価 -CAARMS, SIPS/SOPS-	臨床精神医学	41	1407-1412	2012
辻野尚久、山口大樹、水野雅文	ARMS	分子精神医学	13(1)	45-47	2013
舩渡川智之、根本隆洋、武士清昭、齋藤淳一、山口大樹、辻野尚久、水野雅文	デイケア施設を活用した包括的早期介入の試み：イルボスコ	精神経誌	115	154-159	2013
Takahashi T, Nakamura K, Nishiyama S, Furuichi A, Ikeda E, Kido M, Nakamura Y, Kawasaki Y, Noguchi K, Seto H, Suzuki M	Increased pituitary volume in subjects at risk for psychosis and patients with first-episode schizophrenia	Psychiatry and Clinical Neurosciences	in press		
Kikuchi M, Shitamichi K, Yoshimura Y, Ueno S, Hiraishi H, Hirosawa T, Munesue T, Nakatani H, Tsubokawa T, Haruta Y, Oi M, Niida Y, Remijn GB, Takahashi T, Suzuki M, Higashida H, Minabe Y	Altered brain connectivity in 3- to 7-year-old children with autism spectrum disorder	NeuroImage: Clinical	in press		
Takahashi T, Nakamura K, Ikeda E, Furuichi A, Kido M, Nakamura Y, Kawasaki Y, Noguchi K, Seto H, Suzuki M	Longitudinal MRI study of the midline brain structures in first-episode schizophrenia.	Psychiatry Research Neuroimaging	in press		

Higuchi Y, Sumiyoshi T, Seo T, Miyanishi T, Kawasaki Y, Suzuki M	Mismatch negativity and cognitive performance for the prediction of psychosis in subjects with at-risk mental state	PLoS ONE	in press		
Aleksic B, Kushima I, Hashimoto R, Ohi K, Ikeda M, Yoshimi A, Nakamura Y, Ito Y, Okochi T, Fukuo Y, Yasuda Y, Fukumoto M, Yamamori H, Ujike H, Suzuki M, Inada T, Takeda M, Kaibuchi K, Iwata N, Ozaki N	Analysis of the VAV3 as candidate gene for schizophrenia: evidences from voxel based morphometry and mutation screening	Schizophrenia Bulletin	in press		
Nakamura K, Takahashi T, Nemoto K, Furuichi A, Nishiyama S, Nakamura Y, Ikeda E, Kido M, Noguchi K, Seto H, Suzuki M	Gray matter changes in subjects at high risk for developing psychosis and first-episode schizophrenia: a voxel-based structural MRI study	Frontiers in Psychiatry	4	16	2013
Takahashi T, Nakamura Y, Nakamura K, Ikeda E, Furuichi A, Kido M, Kawasaki Y, Noguchi K, Seto H, Suzuki M	Altered depth of the olfactory sulcus in first-episode schizophrenia	Progress in Neuro-Psychopharmacology & Biological Psychiatry	40	137-142	2013
Nakamura K, Kawasaki Y, Takahashi T, Furuichi A, Noguchi K, Seto H, Suzuki M	Reduced white matter fractional anisotropy and clinical symptoms in schizophrenia: a voxel-based diffusion tensor imaging study	Psychiatry Research Neuroimaging	202	233-238	2012

Kushima I, Aleksic B, Ito Y, Nakamura Y, Shiino T, Okochi T, Fukuo Y, Ujike H, Suzuki M, Inada T, Hashimoto R, Takeda M, Kaibuchi K, Iwata N, Ozaki N	Resequencing and association analysis of the KALRN and EPHB1 genes and their contribution to schizophrenia susceptibility	Schizophrenia Bulletin	38	552-56-	2012
Uematsu A, Matsui M, Tanaka C, Takahashi T, Noguchi K, Suzuki M, Nishijo H	Developmental trajectories of amygdala and hippocampus from infancy to early adulthood in healthy individuals	PLoS ONE	7	e46970	2012
Koide T, Aleksic B, Banno M, Yamashita S, Kikuchi T, Kohmura K, Adachi Y, Kawano N, Kushima I, Nakamura Y, Ikeda M, Ohi K, Yasuda Y, Hashimoto R, Inada T, Ujike H, Iidaka T, Suzuki M, Takeda M, Iwata N, Ozaki N	Common variants in MAGI2 gene are associated with increased risk for cognitive impairment in schizophrenic patients	PLos ONE	7	e36836	2012
川﨑康弘，鈴木道雄	統合失調症を脳画像で診断するためのVBM	日本磁気共鳴医学会雑誌	32	41-47	2012
高橋 努，中村主計，鈴木道雄	アットリスク精神状態のMRI研究	臨床精神医学	41	1421-1426	2012
Takeshi Nakano, Shinji Ono, Junji Yamaguchi, Ryu Sugimoto,Naohiro Yamaguchi, Yoshiro Morimoto,Tatsuya Kubo,Hiroki Ozawa,Naohiro Kurotaki	Modified electroconvulsive therapy for the treatment of refractory schizophrenia-like psychosis associated with Huntington's disease	J Neurol.	260.	312–314	2013

野中俊輔, 一ノ瀬仁志, 木下裕久, 中根秀之	統合失調症の疫学	日本臨床	71(4)	583-588	2013
野中俊輔, 一ノ瀬仁志、木下裕久, 中根秀之	一般住民、医療従事者への精神障害に対する啓発活動およびアンチスティグマ研究	臨床精神医学	41 (10)	1439-1446	2012
今村明, 小野慎治, 辻田高弘, 橋田あおい, 黒滝直弘, 小澤寛樹, 岡崎祐士	一卵性双生児精神疾患不一致例におけるコピー数解析	日本生物学的精神医学会誌	23(1)	23-28	2012
M Ikeda, B Aleksic, K Yamada, Y Iwayama-Shigeno, K Matsuo, S Numata, Y Watanabe, T Ohnuma, T Kaneko, Y Fukuo, T Okochi, T Toyota, E Hattori, S Shimodera, M Itakura, A Nunokawa, N Shibata, H Tanaka, H Yoneda, H Arai, T Someya, T Ohmori, T Yoshikawa, N Ozaki and N Iwata	Genetic evidence for association between NOTCH4 and schizophrenia supported by a GWAS follow-up study in a Japanese population	Mol Psychiatry	In press		
Takahashi T, Nakamura K, Ikeda E, Furuichi A, Kido M, Nakamura Y, Kawasaki Y, Noguchi K, Seto H, Suzuki M.	Longitudinal MRI study of the midline brain regions in first-episode schizophrenia.	Psychiatry Res	212	150-153	2013

Higuchi Y, Sumiyoshi T, Seo T, Miyanishi T, Kawasaki Y, Suzuki M.	Mismatch negativity and cognitive performance for the prediction of psychosis in subjects with at-risk mental state.	PLoS One	8	e54080	2012
Takahashi T, Kido M, Nakamura K, Furuichi A, Zhou SY, Kawasaki Y, Noguchi K, Seto H, Kurachi M, Suzuki M.	Longitudinal MRI study of the pituitary volume in chronic schizophrenia: a preliminary report.	Psychiatry Res	202	84-87	2012
Kinoshita M, Numata S, Tajima A, Shimodera S, Imoto I, Ohmori T	Plasma total homocysteine is associated with DNA methylation in patients with schizophrenia.	Epigenetics	in press		
Ando S, Yamasaki S, Shimodera S, Sasaki T, Oshima N, Furukawa TA, Astukai N, Kasai K, Mino Y, Inoue S, Okazaki Y, Nishida A	A greater number of somatic pain sites is associated with poor mental health in adolescents: a cross-sectional study.	BMC Psychiatry	17	13-30	2013
Shimodera S, Imai Y, Kamimura N, Morokuma I, Fujita H, Inoue S, Furukawa TA	Near-infrared spectroscopy(NIRS) of bipolar disorder may be distinct from that of unipolar depression and of healthy controls.	Asia-Pac Psychiatry	in press		
Furukawa TA, Watanabe N, Kinoshita Y, Kinoshita K, Sasaki T, Nishida A, Okazaki Y, Shimodera S	Public speaking fears and their correlates among 17,615 Japanese adolescents.	Asia-Pac Psychiatry	in press		

Watanabe N, Nishida A, Shimodera S, Inoue K, Oshima N, Sasaki T, Inoue S, Akechi T, Furukawa TA, Okazaki Y	Help seeking behaviors among Japanese school students who self-harm; results from a self-report survey with 18,104 adolescents.	Neuropsychiatr Dis Treat	8	561-569	2012
An SK, Chan SK, Chang WC, Chen EY, Chong SA, Chung YC, Hui CL, Hwu HG, Iwata N, Irmansyah I, Jang JH, Kwon JS, Lee JC, Lee HM, Lee EH, Li T, Liu Z, Ma X, Mangala R, Marchira C, Matsumoto K, Mizuno M, Shimodera S, Subandi MA, Suzuki M, Tay SA, Thara R, Verma SK, Wong GH	Early psychosis declaration for Asia by the Asian network of early psychosis.	East Asian Arch Psychiatry	22	90-93	2012
Tochigi M, Nishida A, Shimodera S, Okazaki Y, Sasaki T	Season of birth effect on psychotic-like experiences in Japanese adolescents.	Eur Child Adolesc Psychiatry	22(2)	89-93	2013
Shimodera S, Yonekura Y, Yamaguchi S, Kawamura A, Mizuno M, Inoue S, Furukawa TA, Mino Y	Bipolar I disorder and expressed emotion of families; a cohort study in Japan.	OJPsych	2	258-261	2012
Tochigi M, Nishida A, Shimodera S, Oshima N, Inoue K, Okazaki Y, Sasaki T	Irregular bedtime and nocturnal cellular phone usage as risk factors for being involved in bullying; a cross-sectional survey of Japanese adolescents.	PLoS ONE	7(9)	1-6	2012

Kinoshita M, Numata S, Tajima A, Shimodera S, Ono S, Imamura A, Iga J, Watanabe S, Kikuchi K, Kubo H, Nakataki M, Sumitani S, Imoto I, Okazaki Y, Ohmori T	DNA methylation signatures of peripheral leukocytes in schizophrenia.	Neuromol Med	Mar;15(1)	95-101	2013
Kinoshita M, Numata S, Tajima A, Ohi K, Hashimoto R, Shimodera S, Imoto I, Itakura M, Takeda M, Ohmori T	Meta-analysis of association studies between DISC1 missense variants and schizophrenia in the Japanese population.	Schizophr Res	141	271-273	2012
Kubo T, Sato T, Noguchi T, Kitaoka H, Yamasaki F, Kamimura N, Shimodera S, Iiyama T, Kumagai N, Kakinuma Y, Diedrich A, Jordan J, Robertson D, Doi YL	Influences of donepezil on cardiovascular system - possible therapeutic benefits for heart failure —DOnepezil Cardiac TEst Registry(DOCTER) study		60(3)	310-314	2012
Shimodera S, Kato T, Sato H, Miki K, Shinagawa Y, Kondo M, Fujita H, Morokuma I, Ikeda Y, Akechi T, Watanabe N, Yamada M, Inagaki M, Yonemoto N, Furukawa TA	The first 100 patients in the SUN-D trial(strategic use of new generation antidepressants for depression); examination of feasibility and adherence during the pilot phase	Trials	13(80)	1-11	2012
Watanabe N & Nishida A, Shimodera S, Inoue K, Oshima N, Sasaki T, Inoue S, Akechi T, Furukawa TA, Okazaki Y	Deliberate self-harm in adolescents aged 12 - 18; a cross-sectional survey of 18,104 students.	Suicide Life Threat Behav	42(5)	550-560	2012

Kinoshita K, Kinoshita Y, Shimodera S, Nishida A, Inoue K, Watanabe N, Oshima N, Akechi T, Sasaki T, Inoue S, Furukawa TA, Okazaki Y	Not only body weight perception but also body mass index is relevant to suicidal ideation and self-harming behavior in Japanese adolescents.		200(4)	305-309	2012
Oshima N, Nishida A, Shimodera S, Tochigi M, Ando S, Yamasaki S, Okazaki Y, Sasaki T	The suicidal feelings, self-injury, and mobile phone use after lights out in adolescents	J Pediatr Psychol	37(9)	1023-1030	2012
Ikeda M, Aleksic B, Yamada K, Iwayama-Shigeno Y, Matsuo K, Numata S, Watanabe Y, Ohnuma T, Kaneko T, Fukuo Y, Okochi T, Toyota T, Hattori E, Shimodera S, Itakura M, Nunokawa A, Shibata N, Tanaka H, Yoneda H, Arai H, Someya T, Ohmori T, Yoshikawa T, Ozaki N, Iwata N	Genetic evidence for association between NOTCH4 and schizophrenia supported by a GWAS follow-up study in a Japanese population.	Mol Psychiatr	1-2	1-8	2012
Shimodera S, Furukawa TA, Mino Y, Shimazu K, Nishida A, Inoue S	Cost-effectiveness of family psychoeducation to prevent relapse in major depression; results from a randomized controlled trial.	BMC Psychiatry	12(40)	1-6	2012
Shimodera S, Imai Y, Kamimura N, Morokuma I, Fujita H, Inoue S, Furukawa TA	Mapping hypofrontality during letter fluency task in schizophrenia; a multi-channel near-infrared spectroscopy study	Schizophr Res	136	63-69	2012

Shimodera S, Kawamura A, Furukawa TA	Physical pain associated with depression;results of a survey in Japanese patients and physicians.	Compr Psychiat	53	843-849	2012
Lihong Q, Shimodera S, Fujita H, Morokuma I, Nishida A, Kamimura N, Mizuno M, Furukawa TA, Inoue S	Duration of untreated psychosis in a rural/suburban region of Japan.	Early Interv Psychiatry	6	239-246	2012
Shimodera S	Author's reply to Bichitra N.Patra.	Br J Psychiatry	200	82-83	2012
下寺信次，井上新平，藤田博一，須賀楓介	アーリーサイコーシス外来における早期介入	精神神経学雑誌	115(2)	168-173	2013
下寺信次，井上新平，藤田博一，須賀楓介	我が国における統合失調症早期介入の現状	第108回日本精神神経学会学術総会特集号（電子版）		SS33-SS38	2013
藤田博一，下寺信次	認知・行動療法と家族療法の併用と治療効果	臨床精神医学	41(8)	1017-1022	2012
下寺信次	思春期の精神障害の疫学と精神疾患の早期介入	精神科治療学	26(6)	677-680	2011

下寺信次，藤田博一，河村葵	うつ病の心理教育ポイントとコツ	Medical Practice	28(10)	1827-1830	2011
上村直人，福島章恵，弘田りさ，今城由里子，下寺信次	高齢者・認知症と性的問題行動	精神科	19(2)	192-197	2011
下寺信次	統合失調症の家族心理教育；現場でいかに実践するか	認知療法研究	4(2)	111-118	2011
橋本和典、岸本年史	統合失調症と喫煙	日社精医誌	21	89-93	2012
岸本年史	統合失調症―過去・現在・未来―	日社精医誌	21	84-88	2012
伊藤慎也、長谷川友紀、松本邦愛、辻野尚久、東儀奈生、水野雅文	診療記録を用いたDUP評価における評価者間の一致度について	精神医学	53	559-562	2011

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Early psychosis in Asia: Insights from Japan

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ABSTRACT

The largest task for psychiatry in Japan today is the deinstitutionalization of patients with psychiatric disorders. In Japan, all citizens are covered by a national health plan, and about 70% of the total cost is covered by the national health insurance scheme. At present, however, there is still no category for early intervention in the national health reimbursement schedule. Recent research has shown that the mean duration of untreated psychosis (DUP) at seven university hospitals in Japan was 17.6 months. We present data using case vignettes suggesting that pharmacotherapy might be overused in prodromal cases. The concept of an At-Risk Mental State (ARMS)/prodromal state might not yet be widely recognized among Japanese psychiatrists. We outline early intervention initiatives in Japan; The Japanese Society for Prevention and Early Intervention in Psychiatry (JSEIP), and a representative early intervention facility for young people is the "Il Bosco" in Tokyo. There are several leading centers for early intervention research and practice in Japan. Most of them are driven by university departments of psychiatry with respect to both research and clinical activities. The development of services for early intervention is expected to reduce stigmatization, prevent suicide among young persons, and promote general knowledge about mental health. There are several common or similar issues among Asian countries, including service systems, community attitudes to psychiatric illness including stigma, and dependence on pharmacotherapy.

1. Introduction

1.1. Historical background of psychiatric services in Japan

In Japan today, "mental disorder" is usually taken to mean "depression" or "adjustment disorder." The stigma against consulting a psychiatrist or mental health service has decreased for subjects with depression. Depression is a very common disorder among working populations. Recently, the number of outpatient clinics for psychiatry has increased rapidly, especially in urban areas. On the other hand, the department in charge of the Ministry of Health, Welfare, and Labour has sent a warning note to clinicians regarding the inappropriate prescription of antipsychotic drugs, including inappropriate doses or treatment durations, and the polypharmacy of benzodiazepines. Japan has long had the tradition of administering traditional herbs in an add-on manner. Combination of many different types of herb was historically regarded an art (Takei et al., 2002). Patients who have attempted suicide by taking overdoses of prescribed medicine are frequently admitted to emergency and critical care medical centers in Japan. Many of them are females who had previously consulted a psychiatric clinic and had been diagnosed with stress-related poor personality disorders (Ozaki et al., 2007).

However, the real world of psychiatric services in Japan is more serious, with psychiatric wards containing more than 300,000 beds per 120 million population and around 32,000 suicides occurring every year. The number of mental hospitals in Japan increased during the rapid economic growth after World War II, when a comprehensive renewal of the nation's infrastructure was undertaken. Since then, even more mental hospitals have been built and, driven by the lack of social acceptance, more and more psychiatric patients have been institutionalized and forced into social isolation. Thus, the largest task for psychiatry in Japan today is deinstitutionalization of these patients (Mizuno and Murakami, 2002).

In Japan, all citizens are covered by a national health plan and have access to a wide range of medical resources, including medication, for which they pay only 10–30% of the actual cost, while the remaining cost is covered by the national health insurance scheme. At present, however, there is still no category for early intervention in the national health reimbursement schedule. Also, there is a paucity of efforts toward facilitating community level service delivery in psychiatry. Perhaps this slow and incomplete transition toward community-based psychiatry has prevented Japan from becoming an 'inclusive society' and

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remains a reason for the stigmatization of patients with schizophrenia.

Despite these conditions, following a trend toward early intervention and the raising of several issues regarding mental health services, the Japanese Ministry of Health, Welfare, and Labour (MHWL) has finally started research into early intervention by providing a Health Labour Sciences Research Grant (principal investigator: Masafumi Mizuno). According to the results obtained so far, the mean duration of untreated psychosis (DUP) was 17.6 months at seven university hospitals, where people could seek assistance without suffering much stigmatization. The DUP would probably be longer if data from specialist psychiatric hospitals were included, especially those in rural areas where the stigma associated with mental illness is stronger. Unexpectedly, about 10% of patients with their first episode of schizophrenia on the first day of consulting a psychiatrist had already attempted suicide using a potentially lethal method. This suggests that quite a large number of suicides are caused by untreated psychosis in Japan. It is regrettable that the DUP is relatively long, even though Japan is an advanced country with abundant medical resources with a public health insurance system for all citizens. Recently, the MHWL created a web site for young adolescents to inform them about the importance of early intervention for mental illness (http://www.mhlw.go.jp/kokoro/youth/).

Our previous study from Japan (Yamazawa et al., 2008) showed that none of the subjects were referred to the psychiatric services by the so-called "general practitioners" (GPs). The GP system does not exist in Japan, and certification as a specialist in primary care is not available. Family practitioners with offices in the community provide primary care for patients as "GPs", but they are not specialists in primary care. Instead, they have been trained in other specialties, such as internal medicine, pediatrics, or surgery. However, in Japan, about half of the patients who experienced an initial episode of mental disorder had consulted a GP or internist at a general hospital before consulting a psychiatrist (Koizumi et al., 2007). Unfortunately, GPs in Japan do not perform screening for the early detection of mental illness. The provision and modification of psychiatric services for easy access and a system for the early recognition and detection of mental illness are needed in Japan, rather than increasing the number of psychiatry clinics. The above results highlight the importance of further education for GPs about mental disorders to provide early and appropriate care for patients and to change prevailing attitudes regarding schizophrenia.

1.2. Recognition and decisions regarding the treatment of early psychosis by Japanese psychiatrists

Existing clinical guidelines (International Early Psychosis Association Writing Group, 2005) do not recommend antipsychotic use outside clinical trials unless rapid deterioration or stigmatizing behavior occurs in conjunction with attenuated psychotic symptoms. However, a proportion of patients receiving antipsychotic medication are not suffering from these conditions. The data from North American Prodrome Longitudinal Study (NAPLS) indicated that nearly 25% of prodromal individuals had been prescribed an antipsychotic, despite having never been psychotic according to the operationalized criteria (Cannon et al., 2008).

The concept of early intervention for psychosis has not been extensively acknowledged among professional psychiatrists in Japan. Partly, this might be related to controversies associated with the early intervention approaches like false positive assessments; early treatment, particularly antipsychotic medication during the prodromal phase, has been an area of increased interest and ethical debate over the last decades. Several studies have reported that antipsychotics improved the outcome of the prodromal phase, however, it has been postulated that antipsychotics could be hazardous to the health of young people.

2. Methods

To clarify the approach toward clinical diagnosis of early psychosis as well as to ascertain the strategies for the treatment of patients in the prodromal phase of psychosis, we sent a questionnaire by mail to 659 Japanese psychiatrists in Tokyo (Tsujino et al., 2010). The investigative period was from November to December 2007. The questionnaire consisted of four vignettes and questions regarding the diagnoses, interventions, and medications associated with each vignette. The vignettes included three cases of psychosis prodrome and one full-threshold schizophrenia case. We designed the vignettes so as to conceal the diagnosis. We created the vignettes based on the Criteria of Prodromal Syndrome (COPS) (McGlashan et al., 2001), which were used in the Structured Interview for Prodromal Symptoms and Scale of Prodromal Symptoms (SIPS/SOPS) (Miller et al., 1999). COPS-A referred to Brief intermittent psychotic syndrome; COPS-B: Attenuated positive symptom syndrome; and COPS-C: Genetic risk and deterioration syndrome.

3. Results

A total of 160 replies from psychiatrists in Tokyo Metropolitan City were received; the majority of respondents were practicing clinical psychiatry for 10–19 years. The questionnaire contained the following questions: (a) Which diagnosis would you make for these cases? (b) Using which approach should the people in each vignette be treated? (c) If you selected "pharmacotherapy" in question 2, which type of medication would you select? (d) If you selected "antipsychotic" in question 3, which type of antipsychotic would you select? and (e) Which dose would you prescribe as the initial dose for risperidone?

The majority of the diagnoses were 'schizophrenia' for the COPS-A, COPS-B and schizophrenia vignettes. For COPS-C, the respondents made a diagnosis of 'neurotic disorders' more frequently than a diagnosis of 'schizophrenia'. A few responders gave 'psychotic prodrome' or 'suspected schizophrenia' as their answer (Table 1).

Most responders answered 'pharmacotherapy' for all the vignettes. The frequencies of 'family psychoeducation' and 'observation' differed between the 'psychotic prodrome' and 'schizophrenia' responses. 'Family psychoeducation' was more frequently selected for 'schizophrenia' than for 'psychotic prodrome', while 'observation' was selected more frequently for 'psychotic prodrome' than for 'schizophrenia' (Table 2).

'Antipsychotic' was the most favored pharmacotherapy for all the vignettes, but the frequency of its use for COPS-C was lower than for the other groups. Anxiolytics and antidepressants were more favored in the COPS-C group than in the other groups (Table 3).

Risperidone was the most favored antipsychotic in all the vignettes, but it was less favored for the 'psychotic prodrome' responses than for the 'schizophrenia' responses. On the other hand, aripiprazole and perospirone were more favored for the 'psychotic prodrome' response. Perospirone is a serotonin-dopamine antagonist that is only prescribed in Japan; the potency of perospirone is lower than that of risperidone (Table 4).

A lower dose of risperidone was used for the 'psychotic prodrome' responses than for the 'schizophrenia' responses (Table 5).