

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
Shimizu W, Ackerman MJ	Provocative (drug) testing in inherited arrhythmias.	Gussak I, Antzelevitch C, Wilde A, Powell B, Ackerman MJ, Shen WK (eds)	Electrical Diseases of the Heart (Second edition)	Springer,	Oxford, UK,	2013	in press
Shimizu W	Acquired form of Brugada syndrome.	Gussak I, Antzelevitch C, Wilde A, Powell B, Ackerman MJ, Shen WK (eds)	Electrical Diseases of the Heart (Second edition)	Springer	UK, Oxford,	2013	in press
清水 渉	23. 突然死の家族歴. (分担)	山下武志	あなたも名医! ああ~ どうする?! この不整脈・ずばっと解決しちゃいます	日本医事新報社	東京	2012	113-117
清水 渉	13章 循環器疾患 12. 不整脈 5) 心臓突然死 (先天性QT延長症候群、Brugada症候群、カテコールアミン誘発性多形性心室頻拍を含む). (分担)	門脇 孝, 永井良三	内科学	西村書店	新潟	2012	663-665
清水 渉	巻頭トピックス7. 早期再分極とJ波症候群. (分担),	堀 正二, 永井良三	循環器疾患 最新の治療 2012-2013	医学書院	東京	2012	32-37
清水 渉	第5章 不整脈. QT延長症候群・QT短縮症候群.(分担)	井上 博, 許俊鋭, 檜垣實男, 代田浩之, 筒井裕之	今日の循環器疾患治療指針(第3版)	医学書院	東京	2012	228-232
清水 渉	第1章 心筋の電気生理. 14) 心室の活動電位の不均一性. (分担)	井上 博, 村川祐二	不整脈学	南江堂	東京	2012	52-54
清水 渉	第13章 特発性心室頻拍と遺伝性の致死性心室頻拍. 5) 臨床像から見た先天性QT延長症候群. (分担)	井上 博, 村川祐二	不整脈学	南江堂	東京	2012	496-499

清水 渉	VI-3. QT 延長症候群・QT 短縮症候群. (分担)	池田隆徳, 山下武志	不整脈学概論 専門医になるためのエッセンシャルブック	メジカルビュー社	東京	2012	376-383
清水 渉	不整脈. (分担)		南山堂医学大辞典 2011	南山堂	愛知	2012	印刷中
清水 渉	刺激伝導障害(ブロック). (分担);, 南山堂,		南山堂医学大辞典 2011	南山堂	愛知	2012	印刷中
清水 渉	5. 循環器系の疾患. 5.4 循環器疾患と遺伝子異常. 3) 遺伝性不整脈. (分担)	矢崎義雄, 永井良三他	内科学	朝倉書店	東京	2012	印刷中
Hayashi H, Horie M.	Prognostic value of P wave for developing atrial fibrillation.	Choi JI	Atrial Fibrillation - Basic Research and Clinical Applications	INTECH	Croatia	2012	189-198
Horie M	Pipette perfusion technique.	Okada Y	Patch Clamp Techniques : from Beginning to Advanced Protocol.	Springer	Germany	2012	219-228
堀江 稔	不整脈の遺伝子異常	井上 博, 村川裕二	不整脈学	南江堂	東京	2012	221-225
堀江 稔	遺伝子疾患としての心房細動	井上 博, 村川裕二	不整脈学	南江堂	東京	2012	405-409
堀江 稔	不整脈	藤田次郎, 大屋祐輔	Nuesing Mook 74 - 慢性疾患の急性増悪とその対応	株式会社学研マーケティング	東京	2012	44-53
Makita N.	Phenotypic overlap of lethal arrhythmias associated with cardiac sodium mutations. Individual-specific or mutation-specific?	Ostadal B.	Genes and Cardiovascular Function	Springer	New York	2012	185-196

蒔田直昌	遺伝子とチャネルからみた先天性QT延長症候群	井上 博, 村川裕二	不整脈学	南江堂	東京	2012	491-495
萩原誠久	不整脈源性右室心筋症	井上 博,許俊鋭,檜垣實男, 代田浩之,筒井裕之	今日の循環器疾患治療指針 第3版	医学書院	東京	2013	618-620
萩原誠久	洞不全症候群	堀 正二, 永井良三	循環器疾患最新の治療 2012-2013	南江堂	東京	2012	307-311
堀米仁志	QT延長症候群	『小児内科』 『小児外科』編集委員会共編	小児内科 Vol.44 2012年増刊号 小児疾患の診断治療基準 第4版	東京医学社	東京	2012	522-523
金丸 浩, 住友直方	就学・学校生活での注意事項	奥村 謙	ペースメーカー・ICD・CRT/CRT-D トラブルシューティングからメンタルケアまで	Medical View社	東京	2012	222-227
住友直方	WPW症候群	大関武彦,古川 漸,横田俊一郎,水口雅	今日の小児治療指針第15版	医学書院	東京	2012	502-503
住友直方	小児のPBLsとPALS、小児の不整脈	笠貫 宏, 野々木宏, 高木厚	心肺蘇生・心血管救急ガイドブック、ガイドラインに基づく実践診療	南江堂	東京	2012	24-27, 115-118
住友直方	カテコラミン誘発多形性心室頻拍(CPVT)	井上 博, 村川裕二	不整脈学	南江堂	東京	2012	511-516
阿部百合子, 住友直方	小児期不整脈の問題点	井上博,許俊鋭,檜垣實男, 代田浩之,筒井裕之	今日の循環器疾患治療指針 第3版	医学書院	東京	2013	264-268
鎌倉史郎	心室細動	山口徹, 北原光夫, 福井次夫	今日の治療指針 2012年版	医学書院	東京	2012	351-352
鎌倉史郎	早期再分極症候群	井上博, 村川祐二	不整脈学	南江堂	東京	2012	517-520
鎌倉史郎	J波症候群.	永井良三,許俊鋭,鄭忠和, 澤芳樹	循環器疾患の最新医療	先端医療技術研究所	東京	2012	126-128

研究成果の刊行に関する一覧表

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
Kawata H, Noda T, Yamada Y, Okamura H, Satomi K, Aiba T, Takaki H, Aihara N, Isoe M, <u>Kamakura S</u> , <u>Shimizu W</u>	Effect of sodium-channel blockade on early repolarization in inferior/lateral leads in patients with idiopathic ventricular fibrillation and Brugada syndrome.	Heart Rhythm	9	77-83	2012
Makimoto H, <u>Kamakura S</u> , Aihara N, Noda T, Nakajima I, Yokoyama T, Doi A, Kawata H, Yamada Y, Okamura H, Satomi K, <u>Aiba T</u> , <u>Shimizu W</u>	Clinical impact of the number of extrastimuli in programmed electrical stimulation in patients with Brugada type 1 electrocardiogram.	Heart Rhythm	9	242-248	2012
Miyoshi T, Maeno Y, Sago H, Inamura N, Yasukohchi S, Kawataki M, <u>Horigome H</u> , Yoda H, Taketazu M, Shozu M, Nii M, Kato H, Hayashi S, Hagiwara A, Omoto A, <u>Shimizu W</u> , <u>Shiraishi I</u> , Sakaguchi H, Nishimura K, Ueda K, Katsuragi S, Ikeda T	Evaluation of transplacental treatment for fetal congenital bradyarrhythmia: A nationwide survey in Japan.	Circulation Journal	76	469-476	2012
Nishimoto O, Matsuda M, Nakamoto K, Nishiyama H, Kuraoka K, Taniyama K, Tamura R, <u>Shimizu W</u> , Kawamoto T	Peripartum cardiomyopathy presenting with syncope due to Torsades de pointes: a case of long QT syndrome with a novel KCNH2 mutation.	Intern Med	51	461-464	2012
<u>Makita N</u> , Seki A, <u>Sumitomo N</u> , Chkourko H, Fukuhara S, Watanabe H, <u>Shimizu W</u> , Bezzina CR, Hasdemir C, Mugishima H, <u>Makiyama T</u> , Baruteau A, Baron E, <u>Horie M</u> , Hagiwara N, Wilde AA, Probst V, Le Marec H, Roden DM, Mochizuki N, Schott JJ, Delmar M	A Connexin 40 mutation associated with a malignant variant of progressive familial heart block type-1.	Circ Arrhythmia and Electrophysiol	5	163-172	2012

Costa J, Lopes CM, Barsheshet A, Moss AJ, Migdalovich D, Ouellet G, McNitt S, Polonsky S, Robinson JL, Zareba W, Ackerman MJ, Benhorin J, Kaufman ES, Platonov PG, <u>Shimizu W</u> , Towbin JA, Vincent GM, Wilde AA, Goldenberg I	Combined assessment of sex- and mutation-specific information for risk stratification in type 1 long QT syndrome.	Heart Rhythm	9	892-898	2012
Baranchuk A, Nguyen T, Ryu MH, Femenía F, Zareba W, Wilde AAM, <u>Shimizu W</u> , Brugada P, Pérez-Riera AR	Brugada phenocopy: new terminology and proposed classification.	Ann Noninvasive Electrocardiol	17	299-314	2012
Barsheshet A, Goldenberg I, O-Uchi J, Moss AJ, Christian Jons C, <u>Shimizu W</u> , Wilde AA, McNitt S, Peterson DR, Zareba W, Robinson JL, Ackerman MJ, Cypress M, Gray DA, Hofman N, Kanters JK, Kaufman ES, Platonov PG, Qi M, Towbin JA, Vincent GM, Lopes CM	Mutations in cytoplasmic loops of the KCNQ1 channel and the risk of life-threatening events. Implications for mutation-specific response to beta-blocker therapy in type-1 long QT syndrome.	Circulation	125	1988-1996	2012
<u>Watanabe H</u> , Nogami A, Ohkubo K, Kawata H, Hayashi Y, Ishikawa T, <u>Makiyama T</u> , Nagao S, Yagihara N, Takehara N, Kawamura Y, Sato A, Okamura K, Hosaka Y, Sato M, Fukae S, Chinushi M, Oda H, Okabe M, Kimura A, Maemura K, Watanabe I, <u>Kamakura S</u> , <u>Horie M</u> , Aizawa Y, <u>Shimizu W</u> , <u>Makita N</u>	Clinical characteristics and risk of arrhythmia recurrences in patients with idiopathic ventricular fibrillation associated with early repolarization.	International J Cardiol	159	238-240	2012
Takigawa M, Kawamura M, Noda T, Yamada Y, Miyamoto K, Okamura H, Satomi K, <u>Aiba T</u> , <u>Kamakura S</u> , Sakaguchi T, Mizusawa Y, Itoh H, <u>Horie M</u> , <u>Shimizu W</u>	Seasonal and circadian distributions of cardiac events in genotyped patients with congenital long QT syndrome.	Circulation Journal	76	2112-2118	2012
Egashira T, Yuasa S, Suzuki T, Aizawa Y, Yamakawa H, Matsuhashi T, Ohno Y, Tohyama S, Okata S, Seki T, Kuroda Y, Yae K, Hashimoto H, Tanaka T, Hattori F, Sato T, Miyoshi S, Takatsuki S,	Disease characterization using LQTS-specific induced pluripotent stem cells.	Cardiovasc Res	95	419-429	2012

Murata M, Kurokawa J, Furukawa T, <u>Makita N</u> , <u>Aiba T</u> , <u>Shimizu W</u> , <u>Horie M</u> , Kamiya K, Kodama I, Ogawa S, <u>Fukuda K</u>					
<u>Shimizu W</u>	Clinical features of Brugada syndrome.	J Arrhythmia	29	65-70	2013
Nakashima K, Kusakawa I, Yamamoto T, Hirabayashi S, Hosoya R, <u>Shimizu W</u> , <u>Sumitomo N</u>	A left ventricular noncompaction in a patient with long QT syndrome caused by a KCNQ1 mutation: a case report.	Heart Vessels	28	126-129	2013
Makimoto H, Satomi K, Wada M, <u>Shimizu W</u>	Double tachycardia after slow pathway ablation for atrioventricular nodal tachycardia: what is the mechanism?	J Cardiovasc Electrophysiol.	24	233-236	2013
Iguchi K, Noda T, <u>Kamakura S</u> , <u>Shimizu W</u>	Beneficial effects of cilostazol in a patient with recurrent ventricular fibrillation associated with early repolarization syndrome.	Heart Rhythm	10	604-606	2013
<u>Watanabe H</u> , Ohkubo K, Watanabe I, Matsuyama TA, Ishibashi-Ueda H, Yagihara N, <u>Shimizu W</u> , <u>Horie M</u> , Minamino T, <u>Makita N</u>	SCN5A mutation associated with ventricular fibrillation, early repolarization, and concealed myocardial abnormalities	Int J Cardiol	165	e21-e23	2013
Miyoshi T, Kamiya CA, Katsuragi S, Ueda H, Kobayashi Y, Horiuchi C, Yamanaka K, Neki R, Yoshimatsu J, Ikeda T, Yamada Y, Okamura H, Noda T, <u>Shimizu W</u>	Safety and efficacy of implantable cardioverterdefibrillator during pregnancy and after delivery.	Circulation Journal	77	1166-1170	2013
Mathias A, Moss AJ, Lopes CM, Barsheshet A, McNitt S, Zareba W, Robinson JL, Locati EH, Ackerman MJ, Benhorin J, Kaufman ES, Platonov PG, Qi M, <u>Shimizu W</u> , Towbin JA, Michael Vincent G, Wilde AA, Zhang L, Goldenberg I	Prognostic implications of mutation specific QTc standard deviation in congenital long QT syndrome.	Heart Rhythm	10	720-725	2013

Villafañe J, Atallah J, Gollob MH, Maury P, Wolpert C, Gebauer R, <u>Watanabe H</u> , <u>Horie M</u> , Anttonen O, Kannankeril P, Faulknier B, Bleiz J, <u>Makiyama T</u> , <u>Shimizu W</u> , Hamilton R, Young ML	Long-term follow-up of a pediatric cohort with short QT syndrome.	J Am Coll Cardiol	61	1183-1191	2013
Takigawa M, Kiso K, Noda T, Kurita T, Yamada Y, Okamura H, Satomi K, Suyama K, Aihara N, Nanasato M, Hirayama H, <u>Kamakura S</u> , <u>Shimizu W</u> , Ishida Y.	Usefulness of scintigraphy to predict electrical storms in severe idiopathic dilated cardiomyopathy.	Ann Nucl Med		in press	2013
Wu J, Ding WG, Zhao J, Zang WJ, Matsuura H, <u>Horie M</u> .	Irbesartan-mediated AT1 receptor blockade attenuates hyposmotic-induced enhancement of IKs current and prevents shortening of action potential duration in atrial myocytes.	Journal of the Renin-Angiotensin-Aldosterone System.		in press	
Nakano Y, Chayama K, Ochi H, Toshisige M, Hayashida Y, Miki D, Hayes C. N, Suzuki H, Tokuyama T, Oda N, Suenari K, Uchimura Makita Y, Kajihara K, Sairaku A, Motoda C, Fujiwara M, Watanabe Y, Yoshida Y, Ohkubo K, Watanabe I, Nogami A, Hasegawa K, <u>Watanabe H</u> , Endo N, <u>Aiba T</u> , <u>Shimizu W</u> , Ono S, <u>Horie M</u> , Arihiro K, Tashiro S, <u>Makita N</u> , Kihara Y.	A nonsynonymous polymorphism in Semaphorin 3A as a risk factor for human unexplained cardiac arrest with documented ventricular fibrillation.	PLOS Genetics	9	e1003364	2013
Wang Q, Ohno S, Kato K, Fukuyama M, <u>Makiyama T</u> , Kimura H, Naiki N, Kawamura M, Hayashi H, <u>Horie M</u> .	Genetic Screening of KCNJ8 in Japanese Patients with J-wave Syndromes or Idiopathic Ventricular Fibrillation.	Journal of Arrhythmia		in press	
Ohno S, Nagaok I, Fukuyama M, Kimura H, Itoh H, <u>Makiyama T</u> , Shimizu A, <u>Horie M</u> .	Age-dependent clinical and genetic characteristics in Japanese patients with arrhythmogenic right ventricular cardiomyopathy/dysplasia.	Circulation Journal		in press	
Lin L, <u>Horigome H</u> , Nishigami N, Ohno S,	Drug-induced QT-interval prolongation and	Journal of	45(6)	770-3	2012

<u>Horie M</u> , Sumazaki R.	recurrent torsade de pointes in a child with heterotaxy syndrome and KCNE1 D85N polymorphism.	Electrocardiology			
Miyamoto A, Hayashi H, Yoshino T, Kawaguchi T, Taniguchi A, Ito H, Sugimoto Y, Ito M, <u>Makiyama T</u> , Xue JQ, Murakami Y, <u>Horie M</u> .	Clinical and electrocardiographic characteristics of patients with short QT interval in a large hospital-based population.	Heart Rhythm	9(1)	66-74	2012
Hattori T, <u>Makiyama T</u> , Akao M, Ehara E, Ohno S, Iguchi M, Nishio Y, Sasaki K, Itoh H, Yokode M, Kita T, <u>Horie M</u> , Kimura T.	A novel gain-of-function KCNJ2 mutation associated with short QT syndrome impairs inward rectification of Kir2.1 currents.	Cardiovasc Res.	93(4)	666-673	2012
Wu J, Ding WG, Matsuura H, <u>Horie M</u> .	Regulatory mechanisms underlying the modulation of GIRK1/GIRK4 heteromeric channels by P2Y receptors.	Pflugers Arch.	463(4)	625-33	2012
Aizawa Y, Sato A, <u>Watanabe H</u> , Chinushi M, Furushima H, <u>Horie M</u> , Kaneko Y, Imaizumi T, Okubo K, Watanabe I, Shinozaki T, Aizawa Y, Fukuda, Joo K, Haissaguerre M.	Dynamicity of the J wave in idiopathic ventricular fibrillation with a special reference to pause-dependent augmentation of the J wave.	J Am Coll Cardiol	59(22)	1948-53	2012
Okayasu H, Ozeki Y, Fujii K, Takano Y, Saeki Y, Hori H, <u>Horie M</u> , Higuchi T, Kunugi H, Shimoda K.	Pharmachotherapeutic determinants for QTc interval prolongation in Japanese patients with mood disorder.	Pharmacopsychiatry	45(7)	279-283	2012
Kinoshita T, Asai T, Suzuki T, Matsubayashi K, <u>Horie M</u> .	Time course and prognostic implications of QT interval in patients with coronary artery disease undergoing coronary bypass surgery.	J Cardiovasc Electrophysiol	23(6)	645-649	2012
<u>Watanabe H</u> , Nogami A, Ohkubo K, Kawata H, Hayashi Y, Ishikawa T, <u>Makiyama T</u> , Nagao S, Yagihara N, Takehara N, Kawamura Y, Sato A, Okamura K, Hosaka Y, Sato M, Fukae S, Chinushi M, Oda H, Okabe M, Kimura A, Maemura K, Watanabe I, <u>Kamakura S</u> ,	Electrocardiographic Characteristics and SCN5A Mutations in Idiopathic Ventricular Fibrillation Associated With Early Repolarization".	Circulation Arrhythmia and Electrophysiology.	4(6)	874-881	2012

<u>Horie M</u> , <u>Aizawa Y</u> , <u>Shimizu W</u> , <u>Makita N</u> .					
Kimura H, Zhou J, Kawamura M, Itoh H, Mizusawa Y, Ding WG, Wu J, Ohno S, <u>Makiyama T</u> , Miyamoto A, Naiki N, Wang Q, Xie Y, Suzuki T, Tateno S, Nakamura Y, Zang WJ, Ito M, Matsuura H, <u>Horie M</u> .	Phenotype Variability in Patients Carrying KCNJ2 Mutations.	Circulation Cardiovascular Genetics.	5	344-353	2012
Nakajima T, Wu J, Kaneko Y, Ashihara T, Ohno S, Irie T, Ding WG, Matsuura H, Kurabayashi M, <u>Horie M</u> .	KCNE3 T4A as a genetic background of Brugada-pattern electrocardiogram.	Circulation Journal	76(12)	2763-2772	2012
Kawaguchi T, Hayashi H, Miyamoto A, Yoshino T, Taniguchi A, Naiki N, Sugimoto Y, Ito M, Xue JQ, Murakami Y, <u>Horie M</u> .	Prognostic implications of progressive cardiac conduction disease.	Circulation Journal	77(1)	60-67	2013
Kaneshiro T, Naruse Y, Nogami A, Tada H, Yoshida K, Sekiguchi Y, Murakoshi N, Kato Y, <u>Horigome H</u> , Kawamura M, <u>Horie M</u> , <u>Aonuma K</u> .	Successful catheter ablation of bidirectional ventricular premature contractions triggering ventricular fibrillation in catecholaminergic polymorphic ventricular tachycardia with RyR2 mutation.	Circulation Arrhythmia and Electrophysiology	5	e14-e17	2012
Naruse Y, Tada H, Harimura Y, Hayashi M, Noguchi Y, Sato A, Yoshida K, Sekiguchi Y, <u>Aonuma K</u>	Early repolarization is an independent predictor of occurrences of ventricular fibrillation in the very early phase of acute myocardial infarction	Circulation Arrhythm Electrophysiol	5(3)	506-513	2012
<u>Watanabe H</u> , <u>Makita N</u> , Tanabe N, Watanabe T, Aizawa Y.	Electrocardiographic abnormalities and risk of complete atrioventricular block.	Int J Cardiol	155	462-4	2012
<u>Watanabe H</u> , Nogami A, Ohkubo K, Kawata H, Hayashi Y, Ishikawa T, <u>Makiyama T</u> , Nagao S, Yagihara N, Takehara N, Kawamura Y, Sato A, Okamura K, Hosaka Y, Sato M, Fukae S, Chinushi M, Oda H, Okabe M, Kimura A, Maemura K, Watanabe I, <u>Kamakura S</u> , <u>Horie M</u> , Aizawa Y, <u>Shimizu W</u> , <u>Makita N</u> .	Response to Letter Regarding Article, "Electrocardiographic Characteristics and SCN5A Mutations in Idiopathic Ventricular Fibrillation Associated With Early Repolarization"	Circulation: Arrhythmia and Electrophysiology	5	e60-e61	2012

Delmar M, <u>Makita N.</u>	Cardiac Connexins, Mutations and Arrhythmias	Curr Opin Cardiol	27	236-241	2012
Ishikawa T, Sato A, Marcou, C. A, Tester, D. J, Ackerman, M. J, Crotti L, Schwartz, P. J, On, Y. K, Park, J. E, Nakamura K, Hiraoka M, Nakazawa K, Sakurada H, Arimura T, <u>Makita N</u> , Kimura A.	A Novel Disease Gene for Brugada Syndrome: Sarcolemmal Membrane-Associated Protein Gene Mutations Impair Intracellular Trafficking of hNav1.5.	Circ Arrhythm Electrophysiol	5	1098-107	2012
Ishikawa T, Takahashi N, Ohno S, Sakurada H, Nakamura K, On YK, Park JE, <u>Makiyama T</u> , <u>Horie M</u> , Arimura T, <u>Makita N</u> , Kimura A.	Novel SCN3B Mutation Associated With Brugada Syndrome Affects Intracellular Trafficking and Function of Nav1.5	Circulation Journal			in press
Shimada T, Ohkubo K, Abe K, Watanabe I, <u>Makita N.</u>	A novel 5' splice site mutation of SCN5A associated with Brugada syndrome resulting in multiple cryptic transcripts	Int J Cardiol	158	441-3	2012
<u>蒔田 直昌</u>	特発性心室細動とJ波症候群の遺伝子診断	CIRCULATION Up-to-Date	7	20-25	2012
<u>蒔田 直昌</u>	早期再分極とJ波症候群: オーバービュー	心臓	44	1226-1231	2012
Ejima K, Shoda M, Miyazaki S, Yashiro B, Wakisaka O, Manaka T, <u>Hagiwara N</u>	Localized reentrant tachycardia in the aorta contiguity region mimicking perimitral atrial flutter in the context of atrial fibrillation ablation.	Heart Vessels	(Epub)		2012
Sekiguchi H, Ii M, Jujo K, Thorne T, Ito A, Klyachko E, Hamada H, Kessler JA, Tabata Y, Kawana M, Asahi M, <u>Hagiwara N</u> , Losordo DW.	Estradiol promotes neural stem cell differentiation into endothelial lineage and angiogenesis in injured peripheral nerve.	Angiogenesis.	16(1)	45-58	2012
Momose M, Miyake Y, Fukushima K, Nakajima T, Kondo C, <u>Hagiwara N</u> , Sato A, Uchigata Y, Sakai S.	Prognostic Value of (123)I-Betamethyl-p-Iodo phenyl-Pentadecanoic Acid Single-Photon Emission Computed Tomography in Diabetic Patients With Suspected Ischemic Heart Disease.	Circulation Journal	76(11)	2633-9.	2012
Matsuura K, Wada M, Shimizu T, Haraguchi Y, Sato F, Sugiyama K,	Creation of human cardiac cell sheets using	Biochem Biophys Res Commun.	425(2)	321-7	2012

Konishi K, Shiba Y, Ichikawa H, Tachibana A, Ikeda U, Yamato M, <u>Hagiwara N</u> , Okano T.	pluripotent stem cells.				
Yashiro B, Shoda M, Tomizawa Y, Manaka T, <u>Hagiwara N</u> .	Long-term results of a cardiovascular implantable electronic device wrapped with an expanded polytetrafluoroethylene sheet.	J Artif Organs.	15(3)	244-9	2012
Sekiguchi H, Ii M, Jujo K, Renault MA, Thorne T, Clarke T, Ito A, Tanaka T, Klyachko E, Tabata Y, <u>Hagiwara N</u> , Losordo D.	Estradiol triggers sonic-hedgehog-induced angiogenesis during peripheral nerve regeneration by downregulating hedgehog-interacting protein.	Lab Invest.	2(4)	532-42	2012
Naganuma M, Shiga T, Sato K, Murasaki K, Hashiguchi M, Mochizuki M, <u>Hagiwara N</u> .	Clinical outcome in Japanese elderly patients with non-valvular atrial fibrillation taking warfarin: a single-center observational study.	Thromb Res.	130(1)	21-6	2012
Yoshikane Y, <u>Yoshinaga M</u> , Hamamoto K, Hirose S.	A case of long QT syndrome with triple gene abnormalities: Digenic mutations in KCNH2 and SCN5A and gene variant in KCNE1.	Heart Rhythm	Dec 12	Epub ahead of print	2012
<u>Yoshinaga M</u> , Kucho Y, Sarantuya J, Ninomiya Y, <u>Horigome H</u> , Ushinohama H, <u>Shimizu W</u> .	Genetic Characteristics of Children and Adolescents with Long QT Syndrome Diagnosed by School-Based Electrocardiographic Screening Programs.	In submission			
吉永正夫	乳児突然死症候群とQT延長症候群	日本小児科学会雑誌	117(1)	44-48	2013
吉永正夫、長嶋正實.	自動計測とマニュアル計測でのQT時間の差に関する検討.	心電図	32(5)	427-435	2013
Mitchell JL, Cuneo BF, Etheridge SP, <u>Horigome H</u> , Weng HY, Benson DW	Fetal Heart Rate Predictors of Long QT Syndrome	Circulation	126	2688-2695	2012
Kato Y, <u>Horigome H</u> ,	Tachycardia associated	Pacing Clin	35(10)	e302-5	2012

Takahashi-Igari M, <u>Sumitomo N</u> , <u>Aonuma K</u>	with twin atrioventricular nodes in an infant with heterotaxy and interruption of inferior vena cava	Electrophysiol			
Chida A, Shintani M, Yagi H, Fujiwara M, Kojima Y, Sato H, Imamura S, Yokozawa M, Onodera N, <u>Horigome H</u> , Kobayashi T, Hatai Y, Nakayama T, Fukushima H, Nishiyama M, Doi S, Ono Y, Yasukouchi S, Ichida F, Fujimoto K, Ohtsuki S, Teshima H, Kawano T, Nomura Y, Gu H, Ishiwata T, Furutani Y, Inai K, Saji T, Matsuoka R, Nonoyama S, Nakanishi T	Outcomes of childhood pulmonary arterial hypertension in BMPR2 and ALK1 mutation carriers.	Am J Cardiol	110(4)	586-93	2012
Kato Y, Takahashi-Igari M, Inaba T, Sumazaki R, <u>Horigome H</u>	Comparison of PR intervals determined by fetal magnetocardiography and pulsed Doppler echocardiography	Fetal Diagn Ther	32(1-2)	109-15	2012
<u>Horigome H</u> , Katayama Y, <u>Yoshinaga M</u> , Kato Y, Takahashi H, Sumazaki R	Significant associations among hemostatic parameters, adipokines, and components of the metabolic syndrome in Japanese preschool children.	Clin Appl Thromb Hemost	18(2)	189-94	2012
石川康宏、堀畑 聡、堀米仁志、戸田 浩、章 忠	第3世代のwaveletと独立成分分析による心電図・心磁図の解析.	心臓	44 suppl 1	21-28	2012
Nakashima K, Kusakawa I, Yamamoto T, Hirabayashi S, Hosoya R, <u>Shimizu W</u> , <u>Sumitomo N</u>	A left ventricular non-compaction in a patient with long QT syndrome caused by a KCNQ1 mutation – a case report –	Heart Vessels	26	In press	2012
<u>Watanabe H</u> , van der Werf C, Roses-Noguer F, Adler A, <u>Sumitomo N</u> , Veltmann C, Rosso R, Bhuiyan ZA, Bikker H, Kannankeril PJ, <u>Horie M</u> , Minamino T, Viskin S, Knollmann BC, Till J, Wilde AA	Effects of Flecainide on Exercise-Induced Ventricular Arrhythmias and Recurrences in Genotype-Negative Patients with Catecholaminergic Polymorphic Ventricular Tachycardia	Heart Rhythm	9	In press	2012
Fukunaga H, Akimoto K, Furukawa T, Takahashi K,	Improvement in non-tachycardia induced	Heart Vessels	28	In press	2013

Kishiro M, Shimizu T, Kamiyama H, <u>Sumitomo N</u>	cardiac failure after radiofrequency catheter ablation in a child with a right-sided accessory pathway				
Mitani Y, Ohta K, Yodoya N, Otsuki S, Ohashi H, Sawada H, Nagashima M, <u>Sumitomo N</u> , Komada Y	Public access defibrillation improved the outcome after out-of-hospital cardiac arrest in school-age children: a nationwide, population-based Utstein registry study in Japan	Europace		In press	2013
Okada Y, Kubo M, Ohmiya H, Takahashi A, Kumasaka N, Hosono N, Maeda S, Wen W, Dorajoo R, Go MJ, Zheng W, Kato N, Wu J-Y, Lu Q, GIANT consortium, Tsunoda T, Yamamoto K, Nakamura Y, Kamatani N, <u>Tanaka T</u>	Common variants at CDKAL1 and KLF9 are associated with body mass index in east Asian populations	Nature Genetics	44	302-306	2012
Wen W, Cho YS, Zheng W, Dorajoo R, Kato N, Qi L, Chen CH, Delahanty RJ, Okada Y, Tabara Y, Gu D, Zhu D, Haiman CA, Mo Z, Gao YT, Seang Saw MS, Go MJ, Takeuchi F, Chang LC, Kokubo Y, Liang J, Hao M, Marchand LL, Zhang Y, Hu Y, Wong TY, Long J, Han BG, Kubo M, Yamamoto K, Su MH, Miki T, Henderson BE, Song H, Tan A, He J, Ng DPK, Cai Q, Tsunoda T, Tsai FJ, Iwai N, Chen GK, Shi J, Xu J, Sim XL, Xiang YB, Maeda S, Ong RTH, Li C, Nakamura Y, Aung T, Kamatani N, Liu JJ, Lu W, Yokota M, Seielstad M, Fann CSJ, The GIANT Consortium, Wu JY, Lee JY, Hu F, <u>Tanaka T</u> , Tai ES, Shu XO	Meta-analysis identifies common variants associated with body mass index in east Asians	Nature Genetics	44	307-311	2012
<u>森田 宏</u>	J波症候群及びBrugada症候群の活動電位、心電図、電気生理学的検査の特徴	心電図	32	S4-56-71	2012
<u>森田 宏</u>	早期再分極症候群とJ波症候群—細胞学的成因について	心臓	44	1232-1236	2012
Take Y, <u>Morita H</u>	Identificaiton of high-risk syncope related to	Heart Rhythm	9	752-759	2012

	ventricular fibrillation in patients with Brugada syndrome				
<u>Morita H</u>	The compound mutation, a model for acquire long QT syndrome	Journal of Cardiology Cases	6	e187-e188	2012
Take Y, <u>Morita H</u>	Fragmented QRS: what is the meaning?	Indian Pacing and Electrophysiology Journal	12	213-225	2012
<u>Morita H</u>	Ion channel complex disease in long QT syndrome	Heart Rhythm	10	In press	2013
Wada T, <u>Morita H</u>	Clinical outcome and risk stratification in Brugada syndrome	J Arrhythmia	29	In press	2013
Kamakura T, <u>Makiyama T</u> , Sasaki K, Yoshida Y, Wuriyanghai Y, Chen J, Hattori T, Ohno S, Kita T, Horie M, Yamanaka S, Kimura T.	Ultrastructural Maturation of Human-Induced Pluripotent Stem Cell-Derived Cardiomyocytes in a Long-Term Culture.	Circulation Journal	77(5)	1307-14	2013
Liu L, <u>Hayashi K</u> , Kaneda T, Ino H, Fujino N, Uchiyama K, Konno T, Tsuda T, Kawashiri MA, Ueda K, Higashikata T, Shuai W, Kupersmidt S, Higashida H, Yamagishi M.	A novel mutation in the transmembrane nonpore region of the KCNH2 gene causes severe clinical manifestations of long QT syndrome.	Heart Rhythm.	1	61-7	2013
Fujino N, Konno T, <u>Hayashi K</u> , Hodatsu A, Fujita T, Tsuda T, Nagata Y, Kawashiri MA, Ino H, Yamagishi M.	Impact of Systolic Dysfunction in Genotyped Hypertrophic Cardiomyopathy.	Clin Cardiol.	36(3)	160-5	2013
Kamakura T, Kawata H, Yamada Y, Miyamoto K, Okamura H, Noda T, Satomi K, <u>Aiba T</u> , Takaki H, Aihara N, <u>Kamakura S</u> , kimura T, <u>Shimizu W</u> .	Significance of latent anterior early repolarization in patients with inferolateral early repolarization syndrome.	J Am Coll Cardiol			
Morisaki H, Yamanaka I, Iwai N, <u>Miyamoto Y</u> , Kokubo Y, Okamura T, Okayama A, Morisaki T.	CDH13 Gene Coding T-Cadherin Influences Variations in Plasma Adiponectin Levels in the Japanese Population.	Hum Mutat.	33(2)	402-10	2012
<u>Aiba T</u> , Barth AS, Hesketh GG, Hashamboy YL, Chakir K, Tunin RS, Greenstein JL, Winslow RL, Kass DA, Tomaselli GF.	Cardiac Resynchronization Therapy Improves Altered Na Channel Gating in Canine Model of	Circ Arrhythm Electrophysiol.	May 6	(Epub)	2013

	Dyssynchronous Heart Failure.				
Das S, <u>Aiba T</u> , Rosenberg M, Hessler K, Xiao C, Quintero PA, Ottaviano FG, Knight AC, Graham EL, Boström P, Morissette MR, del Monte F, Begley MJ, Cantley LC, Ellinor PT, Tomaselli GF, Rosenzweig A.	Pathological role of serum- and glucocorticoid-regulated kinase 1 in adverse ventricular remodeling.	Circulation	126(18)	2208-19	2012
<u>Aiba T</u> , Tomaselli G.	Electrical remodeling in dyssynchrony and resynchronization.	J Cardiovasc Transl Res	5(2)	170-9.	2012
Sachse FB, Torres NS, Savo-Galimberti E, <u>Aiba T</u> , Kass DA, Tomaselli GF, Bridgeman JH.	Subcellular structures and function of myocytes impaired during heart failure are restored by cardiac resynchronization therapy.	Circ Res	110(4)	588-97	2012
Egashira T, Yuasa S, <u>Fukuda K</u> .	Novel insights into disease modeling using induced pluripotent stem cells.	Biol Pharm Bull.	36(2)	182-8	2013
Seki T, Yuasa S, <u>Fukuda K</u> .	Generation of induced pluripotent stem cells from a small amount of human peripheral blood using a combination of activated T cells and Sendai virus. Nat Protoc.	Nat Protoc.	7(4)	718-28	2012
Yoshimura K, Nakayama T, <u>Sekine A</u> , Matsuda F, Kosugi S, Yamada R, Shimizu Y, Kanematsu A, Yoshimura K, Ogawa O; Nagahama Cohort Research Group.	B-type natriuretic peptide as an independent correlate of nocturnal voiding in Japanese women.	Neurourology and urodynamics	31	1266-12	2012
Hotta K, Kitamoto A, Kitamoto T, Mizusawa S, Teranishi H, So R, Matsuo T, Nakata Y, Hyogo H, Ochi H, Nakamura T, Kamohara S, Miyatake N, Kotani K, Komatsu R, Itoh N, Mineo I, Wada J, Yoneda M, Nakajima A, Funahashi T, Miyazaki S, Tokunaga K, Masuzaki H, Ueno T, Chayama K, Hamaguchi K, Yamada K, Hanafusa T, Oikawa S, Yoshimatsu H, Sakata T, Tanaka K,	Association between type 2 diabetes genetic susceptibility loci and visceral and subcutaneous fat area as determined by computed tomography.	Journal of human genetics	57	305-310	2012

Matsuzawa Y, Nakao K, <u>Sekine A.</u>					
Li H, Kilpeläinen TO, Liu C, Zhu J, Liu Y, Hu C, Yang Z, Zhang W, Bao W, Cha S, Wu Y, Yang T, <u>Sekine A</u> , Choi BY, Yajnik CS, Zhou D, Takeuchi F, Yamamoto K, Chan JC, Mani KR, Been LF, Imamura M, Nakashima E, Lee N, Fujisawa T, Karasawa S, Wen W, Joglekar CV, Lu W, Chang Y, Xiang Y, Gao Y, Liu S, Song Y, Kwak SH, Shin HD, Park KS, Fall CH, Kim JY, Sham PC, Lam KS, Zheng W, Shu X, Deng H, Ikegami H, Krishnaveni GV, Sanghera DK, Chuang L, Liu L, Hu R, Kim Y, Daimon M, Hotta K, Jia W, Kooner JS, Chambers JC, Chandak GR, Ma RC, Maeda S, Dorajoo R, Yokota M, Takayanagi R, Kato N, Lin X, Loos RJ.	Association of genetic variation in FTO with risk of obesity and type 2 diabetes with data from 96,551 East and South Asians.	Diabetologia	55	981-995	2012
Hotta K, Kitamoto A, Kitamoto T, Mizusawa S, Teranishi H, Matsuo T, Nakata Y, Hyogo H, Ochi H, Nakamura T, Kamohara S, Miyatake N, Kotani K, Komatsu R, Itoh N, Mineo I, Wada J, Yoneda M, Nakajima A, Funahashi T, Miyazaki S, Tokunaga K, Masuzaki H, Ueno T, Chayama K, Hamaguchi K, Yamada K, Hanafusa T, Oikawa S, Yoshimatsu H, Sakata T, Tanaka K, Matsuzawa Y, Nakao K, <u>Sekine A</u>	Genetic variations in the CYP17A1 and NT5C2 genes are associated with a reduction in visceral and subcutaneous fat areas in Japanese women.	Journal of Human Genetics	57	46-51	2012

IV. 研究成果の刊行物・別刷り

Effect of sodium-channel blockade on early repolarization in inferior/lateral leads in patients with idiopathic ventricular fibrillation and Brugada syndrome

Hiro Kawata, MD,*† Takashi Noda, MD, PhD,* Yuko Yamada, MD,* Hideo Okamura, MD,* Kazuhiro Satomi, MD, PhD,* Takeshi Aiba, MD, PhD,* Hiroshi Takaki, MD,* Naohiko Aihara, MD,* Mitsuaki Isobe, MD, PhD,† Shiro Kamakura, MD, PhD,* Wataru Shimizu, MD, PhD*

From the *Division of Arrhythmia and Electrophysiology, Department of Cardiovascular Medicine, National Cerebral and Cardiovascular Center, Suita, Osaka, Japan; †Department of Cardiovascular Medicine, Tokyo Medical and Dental University, Tokyo, Japan.

BACKGROUND A high incidence of early repolarization (ER) pattern in the inferolateral leads has been reported in patients with idiopathic ventricular fibrillation (IVF). Brugada syndrome (BS) is characterized by J-point or ST-segment elevation in the right precordial leads and ventricular fibrillation, and some patients with BS also have ER in the inferolateral leads.

OBJECTIVE To compare the clinical characteristics and effects of sodium-channel blockade on ER between IVF patients with ER (early repolarization syndrome [ERS]) and BS patients with or without ER.

METHODS Fourteen patients with ERS and 21 patients with BS were included in this study. ER was defined as an elevation of at least 0.1 mV from baseline in the QRS-T junction in the inferolateral leads. Provocative tests with sodium-channel blockers were conducted in all patients with ERS to distinguish ERS from BS.

RESULTS In the ERS group, all patients were male and most patients experienced ventricular fibrillation during sleep or low activity (79%). ER was attenuated by sodium-channel blockers in most patients with ERS (13/14, 93%) and BS (5/5, 100%), whereas ST-segment elevation was augmented in the right precordial leads in the BS group. The rates of positive late potentials

were significantly higher in the BS group (60%) than in the ERS group (7%) ($P < .01$).

CONCLUSIONS Some similarities were observed between ERS and BS, including gender, arrhythmia triggers, and response of ER to sodium-channel blockers. Unlike the ST segment in the right precordial leads in BS, ER was attenuated in patients with both ERS and BS, suggesting a differential mechanism between ER in the inferolateral leads and ST elevation in the right precordial leads.

KEYWORDS Early repolarization; J wave; Idiopathic ventricular fibrillation; Brugada syndrome; Sudden death; Sodium-channel blocker

ABBREVIATIONS BS = Brugada syndrome; ECG = electrocardiogram; ER = early repolarization; ERS = early repolarization syndrome; IVF = idiopathic ventricular fibrillation; LPS = late potentials; QTc = corrected QT interval; SAECG = signal-averaged electrocardiogram; SCD = sudden cardiac death; VF = ventricular fibrillation; VT = ventricular tachycardia

(Heart Rhythm 2011;xx:xxx) © 2011 Heart Rhythm Society. All rights reserved.

Introduction

Early repolarization (ER) pattern is often found in the general population and has been considered a benign electrocardiographic finding. Its prevalence has been estimated to

be between 1% and 5% of healthy adults.¹⁻⁴ Idiopathic ventricular fibrillation (IVF) presenting prominent ST-segment elevation in the inferior leads has been considered as a variant of Brugada syndrome (BS).^{5,6} BS⁷ is characterized by ST-segment elevation in the right precordial leads V1 to V3 and is considered to have a high propensity toward sudden cardiac death (SCD).^{8,9} Recently, several reports have suggested the association of IVF with ER in the inferior and/or lateral lead in the electrocardiogram (ECG).^{3,10-14} ER is reported to be found more frequently among patients with IVF than among healthy control subjects.^{10,15} However, little is known about the clinical and electrocardiographic characteristics and the pharmacological response of ER in patients with IVF and BS associated with ER and their different re-

Dr Shimizu was supported in part by the Research Grant for the Cardiovascular Diseases (21C-8, 22-4-7, H23-114) from the Ministry of Health, Labour and Welfare, Japan, and Grant-in-Aid for Scientific Research on Innovative Areas (22136011). This article was presented in part at the American Heart Association 2010, Chicago, Illinois, November 13-17, 2010, and published as an abstract (Circulation 2010;122:A14948).
Address for reprints and correspondence: Dr Wataru Shimizu, MD, PhD, Division of Arrhythmia and Electrophysiology, Department of Cardiovascular Medicine, National Cerebral and Cardiovascular Center, 5-7-1 Fujishiro-dai, Suita, Osaka 565-8565, Japan. E-mail address: wshimizu@hsp.ncvc.go.jp. (Received April 4, 2011; accepted August 13, 2011.)

sponse from that of ST elevation in the right precordial leads in patients with BS. The present study aimed to investigate the similarities and differences between IVF with ER (early repolarization syndrome [ERS]) and BS with or without ER.

Methods

Patient characteristics

Among 38 patients with IVF, admitted to the National Cerebral and Cardiovascular Center between 1994 and 2009, ER in the inferior and/or lateral ECG leads was recorded in 14 patients (37%). These 14 patients were included in this study as an ERS group (all males, aged 27–64 years, mean age 44.7 ± 13.6 years). Twenty-one patients with BS with a history of ventricular fibrillation (VF) or aborted SCD were also included in this study. According to the published guidelines,^{16,17} patients were diagnosed as suffering from IVF if they had no structural heart disease confirmed by noninvasive studies (physical examination, ECG, exercise stress test, echocardiogram, and cardiac magnetic resonance imaging or computed tomography) and invasive studies (coronary angiography and left ventricular cineangiography). Long QT syndrome (corrected QT [QTc] interval ≥ 440 millisecond), short QT syndrome (QTc interval < 340 millisecond), and BS were also excluded to diagnose a patient as suffering from IVF. To exclude BS, all subjects in the ERS group were proven to be negative with a pharmacological challenge with pilsicainide.^{8,18}

The BS group consisted of 21 patients (19 males, aged 20–64 years, mean age 39.7 ± 12.6 years) with an episode of documented VF or aborted SCD. Eleven had a sponta-

neous type 1 ECG, and in the remaining, it was induced by a sodium-channel blocker. Ethical approval of the present study was obtained from the Institutional Review Committee of the National Cerebral and Cardiovascular Center.

Electrocardiography

All available conventional ECGs (25 mm/s, 10 mm/mV) were investigated in the search for ER. ER was defined as an elevation of at least 1 mm (0.1 mV) in the J point (QRS–ST junction) in at least 2 leads (Figure 1), either as QRS slurring (smooth transition from QRS to the ST segment) or as notching (a positive J deflection inscribed on the S wave).¹⁰ The inferior (II, III, and aVF) and lateral (I, aVL, and V4–V6) leads were evaluated. To exclude BS, no J-point elevation must exist in the right precordial leads (V1–V3).

All ECGs were interpreted blindly by 2 independent cardiologists (H.K., W.S.). The following parameters were assessed in lead II, which include P-wave duration and PQ and RR intervals. QRS duration and QT interval were assessed in leads II and V5. The QTc interval was calculated using Bazett's method. The amplitude of ER was assessed in the inferior leads (II, III, and aVF), the lateral leads (I, aVL, and V4–V6), or both, and the maximum ER amplitude was measured. We selected leads II and V5 as representative of inferior and lateral leads for the analysis of ER amplitude.

BS was diagnosed when a type 1 coved-type ST-segment elevation (≥ 0.2 mV at J point) was observed in >1 of the right precordial leads (V1–V3) in the presence or absence of

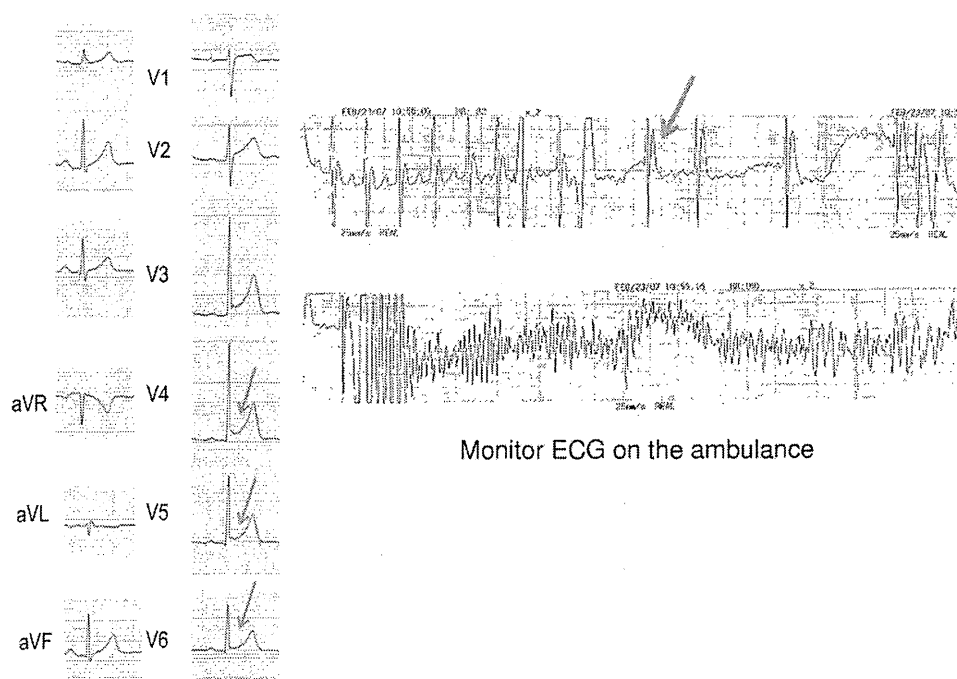


Figure 1 A: Twelve-lead ECG in a patient with early repolarization syndrome. ER (arrow) was seen in the lateral leads (V4–V6) under baseline conditions. B: Monitor ECG recorded during the arrhythmic periods in the same patient showed a consistent increase in the amplitude of ER, followed by initiation of ventricular fibrillation. ECG, electrocardiogram; ER, early repolarization.