

図1;院内心停止時初期心電図調律の日米比較

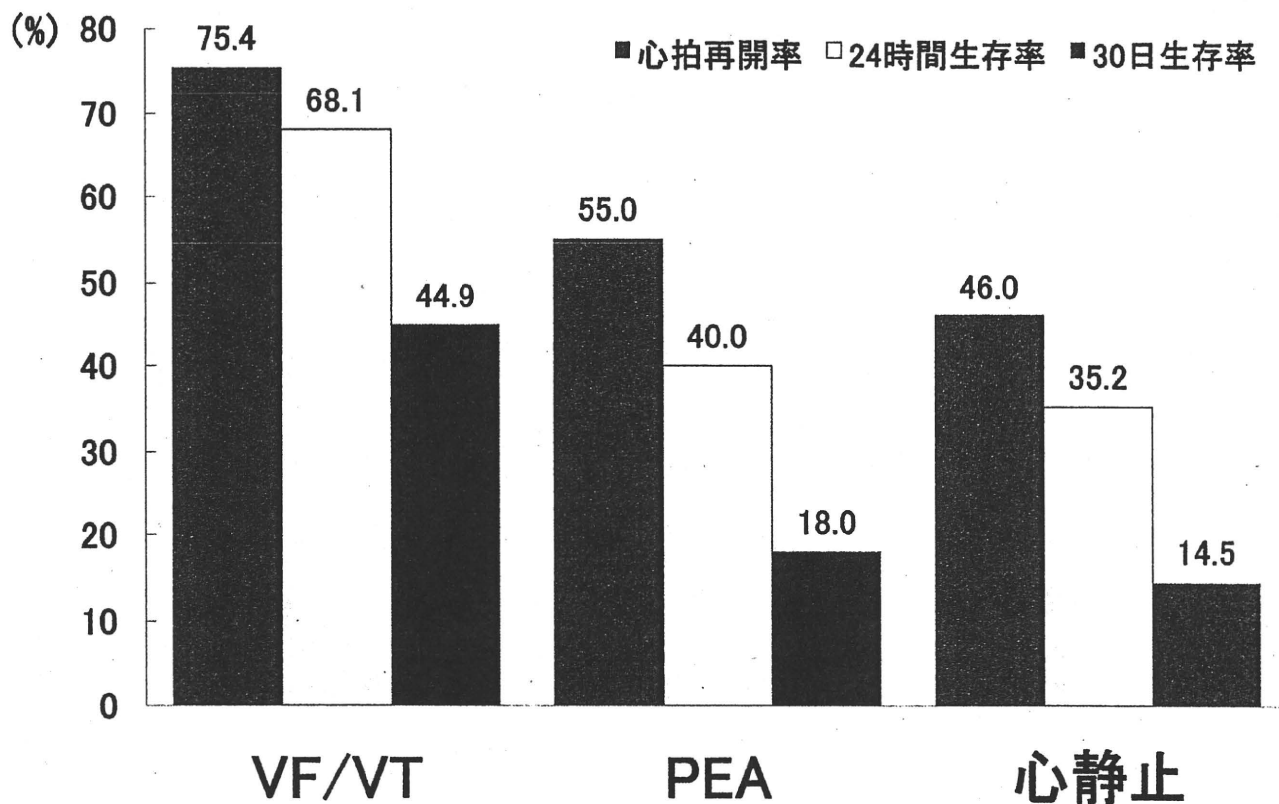


図2 ; J-RCPR における院内心停止時初期心電図調律と予後

厚生労働科学研究
『院内心停止登録』会議議事録
開催地：国立循環器病研究センター 研究所新館 会議室
平成 22 年 10 月 14 日（木） 15 時～17 時

(敬称略)

所属機関	討議内容
国立循環器病研究センター	野々木 宏:院内心停止登録データに関するまとめと今後の展開について、2年間でまとめる、データクリーニングを行う、次のステップは大規模提案:国立病院機構あるいは医療安全パートナーシップへ提言
関門医療センター	大谷 望:心停止発症時間と転帰について、日循抄録提出
岩国医療センター	櫻木 悟
国立精神・神経センター	米本 直裕:統計的な問題点について
坂出市立病院	吉川 圭:第1発見者のCPRトレーニングの有無と転帰、日循提出
山口大学医学部附属病院 集中治療部	若松 弘也:発生場所と転帰
東京都立小児総合医療センター	清水 直樹
静岡こども病院	黒澤 茶茶:小児データとNRCPRとの比較
鹿児島医療センター 循環器科	田中 秀樹:初期調律と転帰、特に心室細動、日循提出
国分生協病院	福崎 雅彦:心停止前の状態の検討
東京医療センター 循環器科	布施 淳:モニター装着と転帰について、日循提出
東京医科歯科大学医学部附属病院	篠岡 太郎:原疾患と予後との関連、AHA発表予定
愛媛大学医学部附属病院	東 晴彦:発症時間(特に深夜帯の予後が不良)AHA発表
国立循環器病研究センター	横山 広行:総論について日循 Latebreaking 提出
国立循環器病研究センター	住田 陽子
国立循環器病研究センター	森岡 理恵:事務局
国立循環器病研究センター	林 久美子:事務局

J-RCPR ; ICU と一般病棟における院内心停止の比較検討

○若松弘也 1)、横山広行 2)、野々木宏 2)、米本直裕 3)、白源清貴 1)、徳光幸生 1)、松田憲昌 1)、松本聡 1)、松本美志也 1)

1) 山口大学医学部附属病院集中治療部

2) 国立循環器病研究センター

3) 国立精神・神経医療研究センター

【対象・方法】 Japanese Registry of CPR for In-hospital Cardiac Arrest (JRCPR) に参加した 11 施設において 2008 年 1 月～2009 年 12 月に発生した成人の院内心停止症例 491 例のうち、ICU で CPA となった I 群 (n=116)、一般病棟で CPA となった G 群 (n=258) に群分けし解析を行った。【結果】 目撃、モニタリングのある割合は、I 群 (98.2%、99.1%) が、G 群 (60.9%、81.9%) と比較して多かった ($p < 0.01$)。VF/VT の割合は、I 群 (37.4%) が、G 群 (18.8%) と比較して多かった ($p < 0.01$)。心拍再開は I 群 64.9%、G 群 58.4% ($p = 0.234$)、24 時間生存率は I 群 50.9%、G 群 41.5% ($p = 0.091$)、良好な神経学的転帰 (CPC 1 または 2) は I 群 19.8%、G 群 13.1% ($p = 0.098$) であった。【考察・まとめ】 ICU では心拍再開率や 24 時間生存率や神経学的転帰が一般病棟より高い傾向にあった。ICU ではモニタリング下にあり急変発見までの時間が短く、蘇生の成功率の高い VF/VT の比率が高いことがその一因と考えられた。

全国の救急医療機関からの搬送時間と循環器死亡率の関連:地理的要因の検討

米本直裕(ヨネモトナオヒロ) 嘉田晃子(カダアキコ) 横山広行(ヨコヤマヒロユキ) 野々木宏(ノノギヒロシ):厚生労働科学研究班 J-PULSE:3
(国立循環器病研究センター)

目的:急性心筋梗塞症や脳卒中発症時に高度医療を時間の遅延なく効果的に提供できる救急医療システム構築が必要である。そこで、全国の循環器疾患による死亡状況を把握し、救急医療機関からの距離・時間の情報をあわせて分析し、急性期医療システムのあり方を検討する。

方法:エコロジカル研究。市区町村別死因別死亡率は、厚生労働省人口動態死亡調査のデータを用いた。実際の救急搬送の距離と搬送時間を収集するのは困難であるため、全国の循環器救急二次施設を特定し、施設と市区町村役場との距離を地図上で計測する方法を用いた。性年齢調整死亡率(SMR)、搬送時間、および両者の関連について記述、市区町村別地図に示した。

結果:特定した循環器救急二次施設は、全国で1998施設であり、都市部に集中していた。搬送時間の分布は、中央値:13分、25%点:4分、75%点:32分であり、施設の分布と対応し、施設の少ない地域の時間が長かった。73%の市区町村が30分以内であった。心疾患(高血圧以外)のSMRと搬送時間の関係では、東北や北海道、中国、四国、和歌山などの山間部や半島の先端に、SMRが高く搬送時間が長い地域が認められた。また、脳血管障害のSMRと搬送時間の関係は心疾患と類似していた。

考察:心疾患と脳血管障害について、搬送時間とSMRの関係を全国レベルで評価した。その結果、SMRが高く搬送時間が長い地域が明らかになった。施設の分布が都市部に集中していることから、施設までのアクセスに大きな違いがあり、そのアクセスの不便さがSMRの違いにつながっている可能性が示唆された。ただし、本研究はエコロジカル研究のためバイアスの影響の可能性があり、個人レベルのデータでの評価が今後必要である。

厚生労働科学研究
『院内心停止登録』会議事録
開催地：国立循環器病研究センター 第2会議室
平成23年1月24日（月） 12時～15時

(敬称略)

所属機関	討議内容
国立循環器病研究センター	野々木 宏：AHAでの3題発表内容をポスター原稿で紹介。次に3月日循で発表予定の内容を検討。また横山先生のLate-breaking発表と英文論文の内容を検討。院内心停止登録データに関するまとめと今後の展開について、2年間でまとめる、データクリーニングを行う、次のステップは大規模提案：国立病院機構あるいは医療安全パートナーシップへ提言、フォーム（Version3）をJRCPR作成と記載して公開する。
国立精神・神経センター	米本 直裕：統計的な問題点について、特に多変量解析時の注意点指摘。途中で発生する要因は、項目に採択しない。
坂出市立病院	吉川 圭：第1発見者のCPRトレーニングの有無と転帰、日循提出、このままで論文化する。
山口大学医学部附属病院 集中治療部	若松 弘也：発生場所（ICU、非ICU）と転帰、集中治療医学会で発表、心不全例が一般病棟で心停止を発生し予後不良である点を発表時に触れる。
東京都立小児総合医療センター	清水 直樹：小児と成人の比較について報告予定。 NRCPRに準じた登録が続行中
高松医療センター	辻 哲平：発症前の病態と予後について検討、発症前を10分刻みとして再解析予定。
鹿児島医療センター 循環器科	田中 秀樹：初期調律と転帰、特に心室細動、日循提出、DCまでの時間、AED使用の有無での検討。
東京医科歯科大学医学部附属病院	篠岡 太郎：原疾患と予後との関連、J-ReSSと日循
愛媛大学医学部附属病院	東 晴彦：発症時間（特に深夜帯の予後が不良）J-ReSSと日循発表。時間はNRCPRと同様にしているので妥当。大谷先生と調整が必要。共著として論文化。
国立循環器病研究センター	横山 広行：総論について日循Latebreaking提出、できるだけ総論として方法論を入れ、他の解析者との重複を避ける。
国立循環器病研究センター	高田 幸千子：Version3の紹介とカルテ記録としたことを紹介。JRCPR作成として全国医療安全共同行動へ提案。また病院機能評価への働きかけも検討する。

厚生労働科学研究

国立循環器病研究センター	住田 陽子：データベース構築として参加
国立循環器病研究センター	森岡 理恵：事務局
国立循環器病研究センター	林 久美子：事務局

欠席者へ最終データと会議資料を送付する。第4回 J-ReSS 案内を配布。

AHA2010 採択課題 スライド

2011.1.24会議資料



Survival From In-Hospital Cardiac Arrest During Nights and Weekends

From Japanese Registry of CPR(JRCPR)

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²Department of Epidemiology and Biostatistics, National Center of Neurology and Psychiatry, Kodaira, Japan

No Conflict of Interest to Disclose

Background

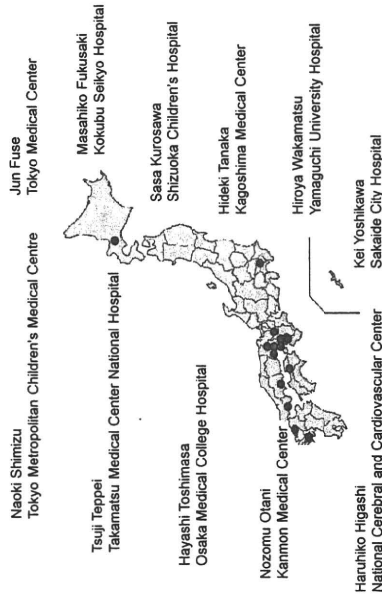
- It has been reported that survival rates from in-hospital cardiac arrest were lower during nights and weekends from the National Registry of Cardiopulmonary Resuscitation (NRCPR).
- However, available data about in-hospital cardiac arrest is extremely limited and has not been investigated from aspects of time of day and day of week in Japan.

Aim

The aim of this study was to investigate whether there are differences in survival rate between day/evening and night or weekdays and weekends in Japan.

Methods

- The patients with in-hospital cardiopulmonary arrest (CPA) were registered prospectively from 11 hospitals, between January 2008 and December 2009 in Japan.

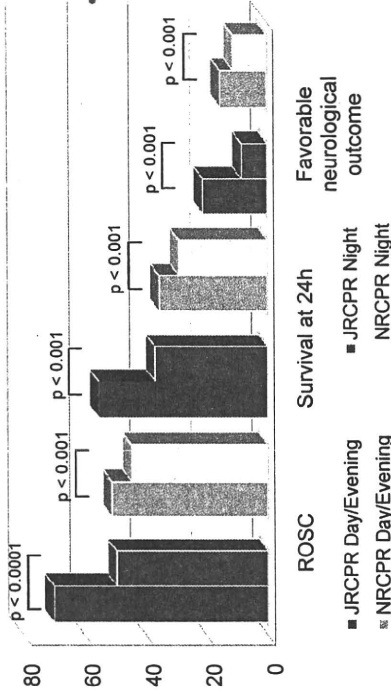


- We divided into two groups (Day/evening group and night group) based on the onset time of CPA.
- Day/evening was defined as 7:00 AM to 10:59 PM and night as 11:00 PM to 6:59 AM.
- Rate of return of spontaneous circulation (ROSC), survival at 24 hours, and favorable neurological outcomes were compared.

Results

- A total of 358 cases of in-hospital cardiac arrest occurred during day/evening hours (including 274 on weekdays and 84 on weekends), and 133 cases occurred during night hours (including 103 on weekdays and 30 on weekends).
- Rate of ROSC (70.2% vs. 49.6%; $p < .0001$), survival at 24 hours (55.3% vs. 36.8%; $p < .001$), and favorable neurological outcomes (20.9% vs. 8.2%; $p < .001$) were significantly lower during the night compared with day/evening.

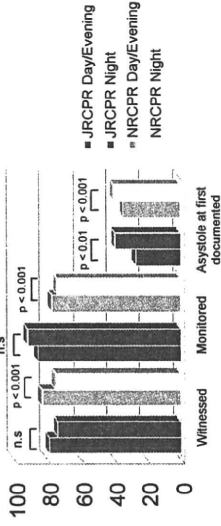
Cardiac Arrest Outcomes by Day/Evening vs Night



NRCPR data: Peberdy MA, et al. Survival from in-hospital cardiac arrest during nights and weekends. JAMA 2008;299(7):785-792.

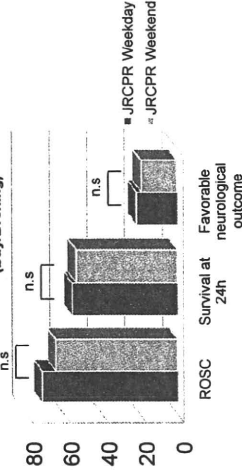
- Incidence of witnessed CPA and percentage of monitored patients were not significantly different between day/evening and night. However, the prevalence of asystole at first documented pulseless rhythm was higher in night group.

Cardiac Arrest Characteristics by Day/Evening vs Night



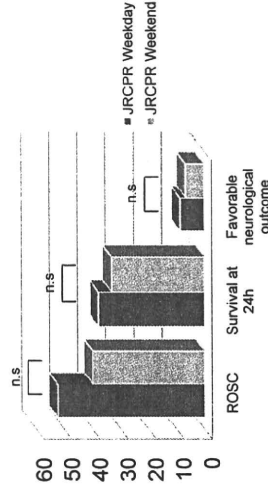
- During day/evening hours, in contrast to NRCPR, rate of ROSC (71.9% vs. 64.6%; $p = 0.22$), survival at 24 hours (55.8% vs. 53.6%; $p = 0.80$) and favorable neurological outcomes (21.5% vs. 19.0%; $p = 0.76$) were not significantly different between weekdays and on weekends.

Cardiac Arrest Outcomes by Weekdays vs Weekends



- During night hours, these endpoints were similar between day/evening and night as well as the report from NRCPR.

Cardiac Arrest Outcomes by Weekdays vs Weekends (Night)



Conclusion

According to JRCPR, survival rates from in-hospital cardiac arrest are lower during nights. Unlike NRCPR, survival rates on weekdays are similar to weekends in Japanese population.



Impact of Underlying Diseases on the Prognosis in Patients with In-hospital Cardiac Arrest; from the Japanese Registry of CPR for In-hospital Cardiac Arrest (J-RCPR)

Taro Sasaoka¹, Naohiro Yonemoto², Hiroyuki Yokoyama¹, Hiroshi Nonogi¹ and J-RCPR investigators

¹Department of Cardiovascular Medicine, National Cerebral and Cardiovascular Center, Suita, Japan

²Department of Epidemiology and Biostatistics, National Center of Neurology and Psychiatry, Kodaira, Japan

No Conflict of Interest to Disclose

Background

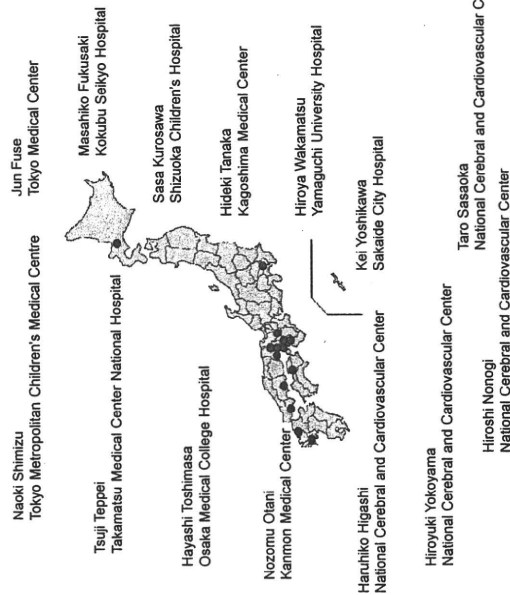
- ◆ In-hospital cardio pulmonary arrest (IHCPA) is an important factor of all cause of death.
- ◆ Although National Registry of Cardio Pulmonary Resuscitation (NRCPR) from United States has reported the rate of discharge was 18%, the impact of underlying disease on IHCPA remains unknown.

Purpose

- ◆ The purpose of this study was to investigate whether there are differences in survival rate between cardiovascular disease and non-cardiovascular disease in patients with IHCPA.

Methods

- ◆ A total of 491 adults with IHCPA were registered prospectively from 11 hospitals in JRCPR from January 2008 to December 2009.

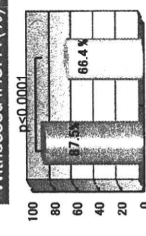


Results

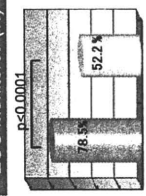
- ◆ Baseline characteristics of sex, age were not significantly different in Group C and Group N.



Witnessed IHCPA (%)

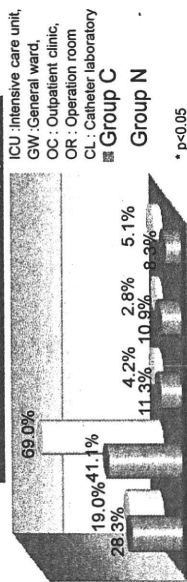


ECG monitored (%)



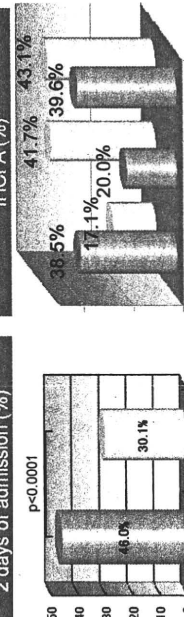
- ◆ Percentages of witnessed IHCPA and ECG monitored were significantly higher in Group C than Group N.

Place of IHCPA confirmed (%)



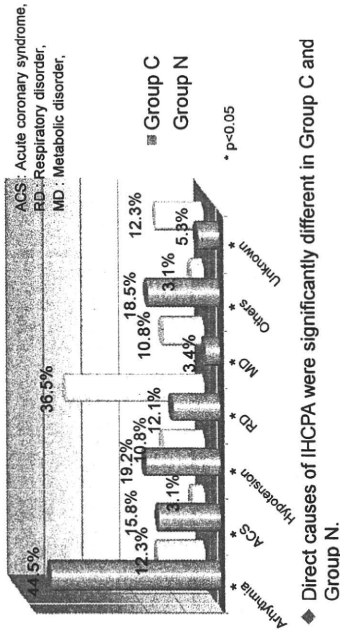
- ◆ ICU* GW* OC* OR or CL* Others Patients in Group C showed significantly higher prevalence of IHCPA confirmed in ICU, OC, OR or CL. On the other hand, Group N showed higher rate of IHCPA confirmed in GW.

First documented rhythm of IHCPA (%)



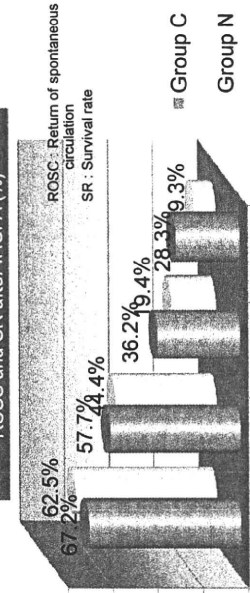
- ◆ The percentages of IHCPA occurrence within 2days of hospital admission was significantly higher in Group C than Group N.
- ◆ Patients in Group C showed higher prevalence of VFVT as first documented rhythm, lower prevalence of Aystole than Group N, whereas there was no difference in PEA.

Direct cause of IHCPA (%)



- ◆ Direct causes of IHCPA were significantly different in Group C and Group N.

ROSC and SR after IHCPA (%)



- ◆ ROSC SR after 24 hours* 30 days* 1 at 30 days* p<0.001

- ◆ In group C, the rate of survival on 24 hours and 30 days after IHCPA was significantly higher than Group N, even though the rate of return of spontaneous circulation was not significantly different.
- ◆ The rate of the favorable neurological function (CPC 1-2) among patients survived at 30 days after IHCPA was also higher in Group C (82.4% vs. 45.9%, p<0.001).

Conclusion

- ◆ Patients in Group C showed higher incidence of IHCPA in the early period of hospitalization and VFVT as first documented rhythm.
- ◆ Also, they showed significantly better survival and neurological outcome from IHCPA.
- ◆ These results may suggest the importance of intensive care in the early period of hospitalization in patients with cardiovascular disease.



The Detail of Individual Cardiovascular Disease on In-hospital Cardiopulmonary Arrest; from the Japanese Registry of CPR for In-hospital Cardiac Arrest (J-RCPR)

Taro Sasaoka¹, Naohiro Yonemoto², Hiroyuki Yokoyama¹, Hiroshi Nonogi¹ and J-RCPR investigators

¹Department of Cardiovascular Medicine, National Cerebral and Cardiovascular Center, Suita, Japan
²Department of Epidemiology and Biostatistics, National Center of Neurology and Psychiatry, Kodaira, Japan

No Conflict of Interest to Disclose

Background

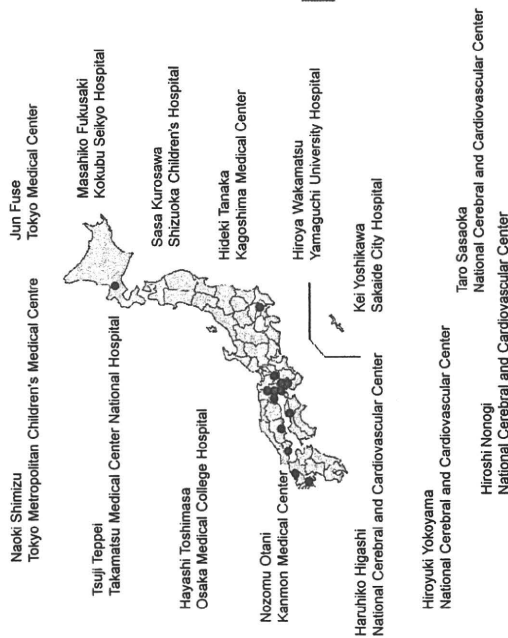
- ◆ In-hospital cardiopulmonary arrest (IHCPA) is still a serious problem.
- ◆ Some studies have shown almost one half of all the IHCPA patients are based on cardiovascular diseases. However, the detail of individual cardiovascular disease remains unknown.

Purpose

- ◆ The purpose of this study was to investigate whether there is a difference in survival rate in individual cardiovascular disease among patients with IHCPA.

Methods

- ◆ A total of 491 adults with IHCPA were registered prospectively from 11 hospitals in JRCPR from January 2008 to December 2009.

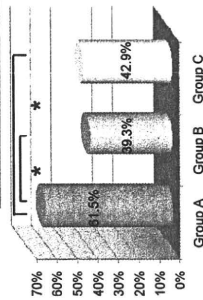


- ◆ Among those patients registered, 222 (45%) patients were hospitalized with the treatment of cardiovascular diseases; acute coronary syndrome (ACS, Group A, n=78), heart failure (HF, Group B, n=56), and arrhythmia (Group C, n=77).

Results

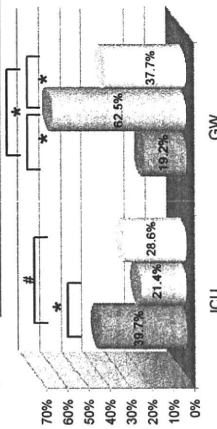
- ◆ IHCPA patients hospitalized with cardiovascular disease (n=222)
- ◆ Group A (ACS) n=78
- ◆ Group B (Heart Failure) n=56
- ◆ Group C (Arrhythmia) n=77
- ◆ Baseline characteristics of sex, age were not significantly different in each group.

IHCPA occurrence within 2 days of admission (%)



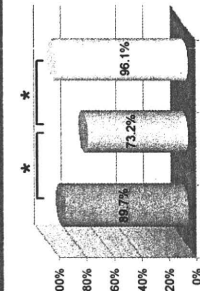
- ◆ The percentage of IHCPA within 2 days of hospitalization was significantly higher in Group A than Group B and Group C.

Place of IHCPA confirmed (%)



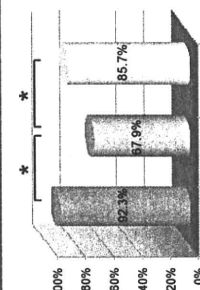
- ◆ Percentages of IHCPA confirmed at ICU was significantly higher in Group A than Group B and tended to be higher than Group C.
- ◆ Group B patients showed significantly higher prevalence of IHCPA confirmed in general ward than Group A and Group C.

Witnessed IHCPA (%)

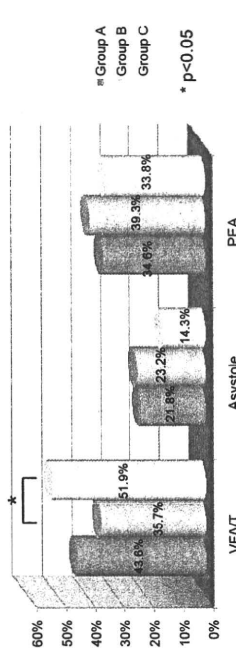


- ◆ Percentages of witnessed IHCPA was significantly lower in Group B than Group A and Group C.
- ◆ Number of patients ECG monitored was also significantly smaller in Group B than Group A and C.

ECG monitored (%)

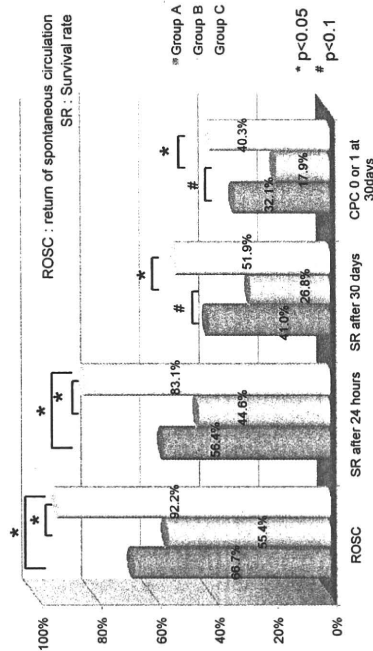


First documented rhythm of IHCPA (%)



- ◆ In group C, percentages of VF/VT as first documented rhythm was tended to be higher than Group B.
- ◆ Percentages of Asystole and PEA were not different in each group.

ROSC and SR after IHCPA (%)



- ◆ Patients in Group C showed significantly higher rate of ROSC and SR after 24 hours than Group A and Group B.
- ◆ The percentages of SR after 30days and favorable neurological function (CPC0 or 1) after IHCPA was significantly lower in Group B than Group and tended to be lower than Group A.

Conclusion

- ◆ ACS patients showed higher rate of IHCPA within 2days of hospitalization. Thus, we need to pay special attention to ACS patients in acute phase of hospitalization.
- ◆ In addition, we found the difference in outcome after IHCPA; HF patients showed poor prognosis compared with other groups.
- ◆ Further studies are necessary to explore the mechanism of these findings.

日循学会抄録 採択課題

1. Effect of CPR training on favorable neurologic outcome for in-hospital cardiac arrest from the Japanese Registry of CPR for In-hospital Cardiac Arrest (JRCPR) 吉川先生
2. The Impact of Individual Cardiovascular Disease on In-Hospital Cardiopulmonary Arrest (J-RCPR) 篠岡先生
3. Cardiovascular and Non-cardiovascular Disease on the Prognosis of In-Hospital Cardiac Arrest (J-RCPR) 篠岡先生
4. Clinical Outcome from In-Hospital Cardiac Arrest During Nights and Weekends: Japanese Registry of CPR for In-Hospital Cardiac Arrest(JRCPR) 大谷先生
5. The Impact of Therapeutic Hypothermia in the Treatment with Patients with out-of-Hospital Cardiopulmonary arrest from J-Pulse-Hypo registry 横山先生
6. The Report from The Japanese Registry of CPR for In-hospital Cardiac Arrest (J-RCPR) 横山先生
7. Factors Related to Clinical Outcome in Patients with Ventricular tachycardia and fibrillation as Initial Arrest Rhythm in In-hospital Cardiopulmonary Arrest 田中先生

Effect of CPR training on favorable neurologic outcome for in-hospital cardiac arrest from the Japanese Registry of CPR for In-hospital Cardiac Arrest (JRCPR)

Background:

Many training courses for CPR have been performed to medical personnel but few data have been reported those effect.

Method:

From 2008 to 2009, during 24 month, 491 patients were registered in the Japanese Registry of CPR for In-hospital Cardiac Arrest (JRCPR). In this study, 445 patients treated by the first responder received the CPR training (Group T n=357) and non-trained first responder (group n-T n=88) were analyzed.

We evaluated the ratio of return of spontaneous circulation (ROSC), 24 hours survival, survival discharge, good neurological function patients at discharge (CPC1 or 2 in Glasgow-Pittsburgh cerebral performance category) in each groups. We also analyzed each indexes initial rhythm VF/VT arrest (n=122) and PEA/Asystole (n=316).

Result:

The ratio of ROSC, 24hr survival, survival discharge and good neurological performance were 65.8%, 47.1%, 28.0%, 21.1% in group T, and 59.1%, 48.9%, 28.4%, 10.3% in group n-T (In good CPC $p < 0.05$). In VF/VT, the ratio were 80.2%, 70.3%, 50.5%, 45.5% in group T, and 74.2%, 64.5%, 35.5%, 15.4% in group n-T (In good CPC $p < 0.05$). In PEA/Asystole, the ratio were 60.8%, 38.5%, 19.6%, 12.6% in group T, 50.0%, 39.3%, 23.2%, 5.9% in group n-T.

Conclusion:

In-hospital cardiac arrest treated by the first responder with the CPR training is significantly associated with higher rate of favorable neurologic outcome, especially in VF/VT.

The Impact of Individual Cardiovascular Disease on In-Hospital Cardiopulmonary Arrest (J-RCPR)

Author Block Taro Sasaoka, Natl Cerebral and Cardiovascular Ctr, Osaka, Japan; Naohiro Yonemoto, Natl Ctr of Neurology and Psychiatry, Tokyo, Japan; Hiroyuki Yokoyama, Hiroshi Nonogi, Natl Cerebral and Cardiovascular Ctr, Osaka, Japan; J-RCPR Investigators

Abstract:

Background: Some studies have shown almost one half of in-hospital cardiopulmonary arrest (IHCPA) patients are based on cardiovascular diseases. However, the detail of individual cardiovascular disease remains unknown. **Method:** A consecutive series of 491 adults with IHCPA were registered in Japanese registry of CPR for in-hospital cardiac arrest (J-RCPR). Among them, 222 patients (45%) were hospitalized for cardiovascular diseases; acute coronary syndrome (ACS, Group A, n=78), heart failure (HF, Group B, n=56), and arrhythmia (Group C, n=77). **Result:** Baseline characteristics IHCPA did not show significant difference in each group. Compared with other groups, Group B showed lower rate of ECG monitoring (Group A: 90%, Group B: 70%, Group C: 95%, $p<0.001$). Patients in Group A showed greater rate of IHCPA within 2 days of hospitalization (61% vs. 39% vs. 43%, $p<0.05$). The prevalence of first documented rhythm of IHCPA was not different in each group; however, the rate of return of spontaneous circulation (ROSC) was significantly higher in Group C (67%, 55%, 92%, $p<0.001$) and survival rate after 30days of IHCPA was significantly lower in Group B (41%, 27%, 52%, $p<0.001$). **Conclusion:** ACS patients showed higher rate of IHCPA within 2days of hospitalization. Interestingly, patients with HF showed poorer prognosis even though the prevalence of first documented rhythm was not different.

Cardiovascular and Non-cardiovascular Disease on the Prognosis of In-Hospital Cardiac Arrest (J-RCPR)

Author Block Taro Sasaoka, Natl Cerebral and Cardiovascular Ctr, Osaka, Japan; Naohiro Yonemoto, Natl Ctr of Neurology and Psychiatry, Tokyo, Japan; Hiroyuki Yokoyama, Hiroshi Nonogi, Natl Cerebral and Cardiovascular Ctr, Osaka, Japan; The Japanese Registry of CardioPulmonary Resuscitation (J-RCPR) Investigators

Abstract:

Background: In-hospital cardiopulmonary arrest (IHCPA) is an important factor of death; however, the detail of underlying disease remains unknown.

Method: 491 consecutive patients were registered in Japanese registry of CPR for in-hospital cardiac arrest (J-RCPR). They were divided into two groups; definitive cardiovascular disease (Group C, n=265), and non-cardiovascular disease (Group N, n=226).

Result: The prevalence of Vf/VT as first documented rhythm was 38.5% (16.4%, $p<0.0001$), asystole was 20.8% (39.8%, $p<0.0001$) in Group C (Group N). The survival rate was significantly higher in Group C, even though the rate of return of spontaneous circulation (ROSC) was not different. The rate of favorable neurological function was also higher in Group C (82.4% vs. 45.9%, $p<0.001$).

Conclusion: Patients with cardiovascular disease showed better outcome in IHCPA compared to patients with non-cardiovascular disease.

	Cardiovascular disease (Group C)	Non-Cardiovascular disease (Group N)	p-value
N	265	226	
Witness of IHCPA	85.7%	66.4%	<0.0001
First documented rhythm at IHCPA			
Vf or VT	38.5%	16.4%	<0.0001
Asystole	20.8%	39.8%	<0.0001
IHCPA within 2 days of hospitalization	46.0%	30.1%	<0.001
Place of IHCPA confirmed			
General Ward	41.1%	65.9%	<0.01
Intensive Care Unit	28.3%	18.1%	<0.0001
Outcome 30 days after IHCPA			
Death	63.4%	81.4%	<0.0001
Discharge	26.8%	18.1%	<0.0001
Favorable Neurological outcome (among pts survived at 30 days)	82.4%	45.9%	<0.001

演題名 : Clinical Outcome from In-Hospital Cardiac Arrest During Nights and Weekends: Japanese Registry of CPR for In-Hospital Cardiac Arrest(JRCPR)

抄録用図表の有無 : なし

抄録本文 :

Purpose: To examine whether outcomes after in-hospital cardiac arrest during nights and weekends differ from those during days and weekdays. Method: We examined survival from cardiac arrest in hourly time segments, defining day the time as from 8:00 to 15: 59, evening as from 16:00 to 23: 59, night as from 0:00 to 7:59, and weekends as Saturday and Sunday, in 488 adult, consecutive in-hospital cardiac arrest events in JRCPR obtained from 11 hospitals from January 1, 2008 though December 31, 2009. Results: 203 cases of in-hospital cardiac arrest occurred during day (106 on weekdays and 40 on weekends), 152 cases occurred during evening (106 on weekdays and 46 on weekends), 133 occurred during night (106 on weekdays and 27 on weekends). Rates of return of spontaneous circulation (ROS) during day were 79.1% on weekdays and 65.0% on weekends. Rates of ROS during evening were 64.2% and 58.7%, respectively. Rates of ROS during night were 53.8% and 37.0%, respectively. Survivals at 24 hours during day were 58.9% on weekdays and 50.0% on weekends. Survivals at 24 hours during evening were 47.2% and 47.8%, respectively. Survivals at 24 hours during night were 45.2% and 26.0%, respectively. Conclusion: Survival rates from in-hospital cardiac arrest are lower during nights and weekends.

第75回日本循環器学会総会・学術集会 Late Breaking Clinical Trials

以下のデータが登録番号 100056 で登録されました。

筆頭著者の会員番号：116982 筆頭著者の姓：横山 筆頭著者の名：広行

筆頭著者の姓 (フリガナ)：ヨコヤマ 筆頭著者の名 (フリガナ)：ヒロユキ

筆頭著者の姓 (英語表記)：Yokoyama 筆頭著者の名 (英語表記)：Hiroyuki

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筆頭著者の所属機関名 (英語表記) 1：The Division of Cardiology and CCU, National Cerebral and Cardiovascular Center

共著者1 長尾 建

共著者2 野々木 宏

キーワード1 :hypothermia キーワード2 :cardiac arrest

演題名：

The Impact of Therapeutic Hypothermia in the Treatment with Patients with out-of-Hospital Cardiacpulmonary arrest from J-Pulse-Hypo registry

抄録本文：

[Background] Mild hypothermia is an effective therapy for patients with return of spontaneous circulation after out-of-hospital cardiac arrest. However, the evidence of the efficacy of therapeutic hypothermia remains unclear. The purpose is to resolve clinical questions concerning therapeutic hypothermia by using multicenter registry database.

[Methods] We conducted a multicenter retrospective registry in Japan (J-Pulse-Hypo) from 14 institutions, to evaluate the effect of therapeutic hypothermia on out-of-hospital cardiac arrest, between January 2005 and December 2009. The committee entrusted each hospital with the timing of cooling, cooling methods, target temperature, duration, rewarming rate. Selection of cooling procedure was left to each institution.

[Results] In this study period, 452 patients (375 men) were enrolled into the registry. The age was 59±13 years. Initial ECG are VF/VT 78%, PEA 14%, asystole 8%. The median interval from collapse to return of spontaneous circulation was 25 (17-40) minutes. Mean temperature was 33.9±0.4 degrees C and mean cooling time was 32 hours. 102 patients (22.6%) were treated with percutaneous cardiopulmonary assisted devices, used in case with hemodynamic compromised state. The rates of favorable outcomes, Cerebral Performance Category of 1-2, at 30 days after onset was 69%. The rates of favorable outcomes were 63% in VF group, 32% in PEA group and 19% in asystole group.

[Conclusions] We conducted a multicenter retrospective registry and showed clinical aspect of therapeutic hypothermia.

第75回日本循環器学会総会・学術集会 Late Breaking Clinical Trials

以下のデータが登録番号 100055 で登録されました。

筆頭著者の会員番号：116982 筆頭著者の姓：横山 筆頭著者の名：広行

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筆頭著者の所属機関名（英語表記）1：The Division of Cardiology and CCU, National Cerebral and Cardiovascular Center

共著者 野々木 宏

キーワード1：cardiac arrest キーワード2：resuscitation

演題名：

The Report from The Japanese Registry of CPR for In-hospital Cardiac Arrest (J-RCPR)

抄録本文：

[Backgrounds] In-hospital cardiopulmonary arrest (CPA) is an important matter and National Registry of Cardiopulmonary Resuscitation (NRCPR) from the United States reported that the rate of survival of hospital discharge following CPA was 18%. However, limited data are available in-hospital CPA in Japan. [Methods] Major pre- cardiac arrest and event, therapeutic interventions and time intervals and the data about condition of patients finally confirmed alive before CPA were collected. The patients with in-hospital CPA were registered prospectively from 11 hospitals, during January 2008 to December 2009 in Japan. All patients, visitors, employees, and staff within the facility campus, who experience a cardiopulmonary resuscitation event defined as either a pulselessness or a pulse with inadequate perfusion requiring chest compressions and/or defibrillation of ventricular fibrillation or pulseless ventricular tachycardia were registered with J-RCPR. [Results] 490 adults (71.0%±14.9, M/F 310/180) enrolled. The prevalence of VF/VT as first documented rhythm was 28.3%, asystole was 30.0% and PEA was 41.7%. ROSC (return of spontaneous contraction) was 64.7%, rates of survival on 24 hr after CPA was 50.2%, and rates of good neurological outcome at 30 days after CPA was 21.4%. These prognosis of in-hospital CPA were similar as the report from NRCPR. Immediate cause(s) of event were arrhythmia 31.0%, hypotension 15.9%, and acute respiratory insufficiency 26.3%. 67.1% of the patients were confirmed alive within 10 min before CPA, 53.9% of the patients were monitored and 78.

0% of the patients were witnessed at CPA. [Conclusion] This is the first report of in-hospital CPA in Japan. These results were similar as the results reported from NRCPR in the United States.

カテゴリー：Cardiopulmonary and critical care / ACLS

キーワード1：arrhythmia

キーワード2：cardiopulmonary resuscitation

演題名：

Factors Related to Clinical Outcome in Patients with Ventricular tachycardia and fibrillation as Initial Arrest Rhythm in In-hospital Cardiopulmonary Arrest

抄録用図表の有無：なし

抄録本文：

(Background) Better survival rate had been reported in case of ventricular tachycardia (VT) and ventricular fibrillation (VF) as initial arrest rhythm compared with other rhythms (PEA or Asystole) in in-hospital cardiopulmonary arrest. It is still unknown about predictive factors related to clinical mortality in patients with VT and VF as initial arrest rhythm.

(Methods) In a prospective observational study from multicenter registry (JRCPR) from 2008 to 2009, 24 month, total of 137 adults (≥ 20 years, age: 66 ± 15) with VT and VF were assessed. Survival data (ratio of Return of Spontaneous Circulation (ROSC), 24-hour survival, survival to hospital discharge) and arrest variables were collected, including preexisting conditions and therapeutic interventions. To detect predictive factors related to mortality, multivariate logistic regression analysis were performed. (Result) Of 137 patients, ratio of ROSC, 24-hour survival and survival to hospital discharge were 78.8%, 72.3% and 47.4%. After multivariate logistic regression analysis, advancing age, events during night and epinephrine use were significantly associated with poor outcome of both ROSC and survival to hospital discharge.

(Conclusion) For cardiac arrest with VT and VF as initial rhythm, high age, night event and epinephrine use appear to relate to poor outcome in in-hospital cardiopulmonary arrest. Further studies are needed to clarify the factors determining the prognosis of VT and VF in in-hospital cardiopulmonary arrest.

院内心停止登録コンセンサス会議
開催地：国立循環器病研究センター 第2会議室
平成23年1月24日（月） 12時～16時

出席者名簿

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心肺蘇生記録記載要項

1. 目的

心肺蘇生の患者の正確な情報や客観的具体的事実を迅速に記載することで、各治療、処置の一連の過程を把握し心肺蘇生の質の向上を図る。

2. 記載内容

- 1) 急変時刻
- 2) 心停止確認時刻
- 3) 応援要請時刻
- 4) ドクターハート要請時刻
- 5) CPR開始時刻
- 6) 医師到着時刻
- 7) モニター装着時刻
- 8) 急変時の心電図調律
- 9) 最初の除細動(AEDを含む)
- 10) 最初のアドレナリン(エピネフリン)投与時刻
- 11) 最初のアトロピン投与時刻
- 12) 気管挿管時刻
- 13) CPR中止時刻
- 14) その他

3. その他

- 1) 定位置は救急カートとする
- 2) 記載者は必ずサインをする
- 3) 心肺蘇生経過記録用紙は心肺蘇生が開始された時刻から中止時まで使用する
- 4) 記録記載後はカルテに保存する(病歴委員会での承認を得る)
- 5) 心肺蘇生経過記録用紙のコピーを一部そえて、院内心肺蘇生事例報告書とともに(医療安全推進室)へ提出
- 6) ICU チャート、CCU チャート、NCU チャート、SCU チャート、一般重症チャート使用患者の場合も、『心肺蘇生経過記録用紙』に記載し、チャートに添付する。チャートの形式上添付が困難な場合は、必須記載事項をチャートに記入することとする。ただし、その場合も必須記載事項を記入した『院内心肺蘇生経過記録用紙』を、院内心肺蘇生事例報告書とともに、医療安全推進室に提出する。