

令和5年9月22日

# **Pulmonary Circulation Expert Meeting** **～AcutePEからCTEPHまで～**

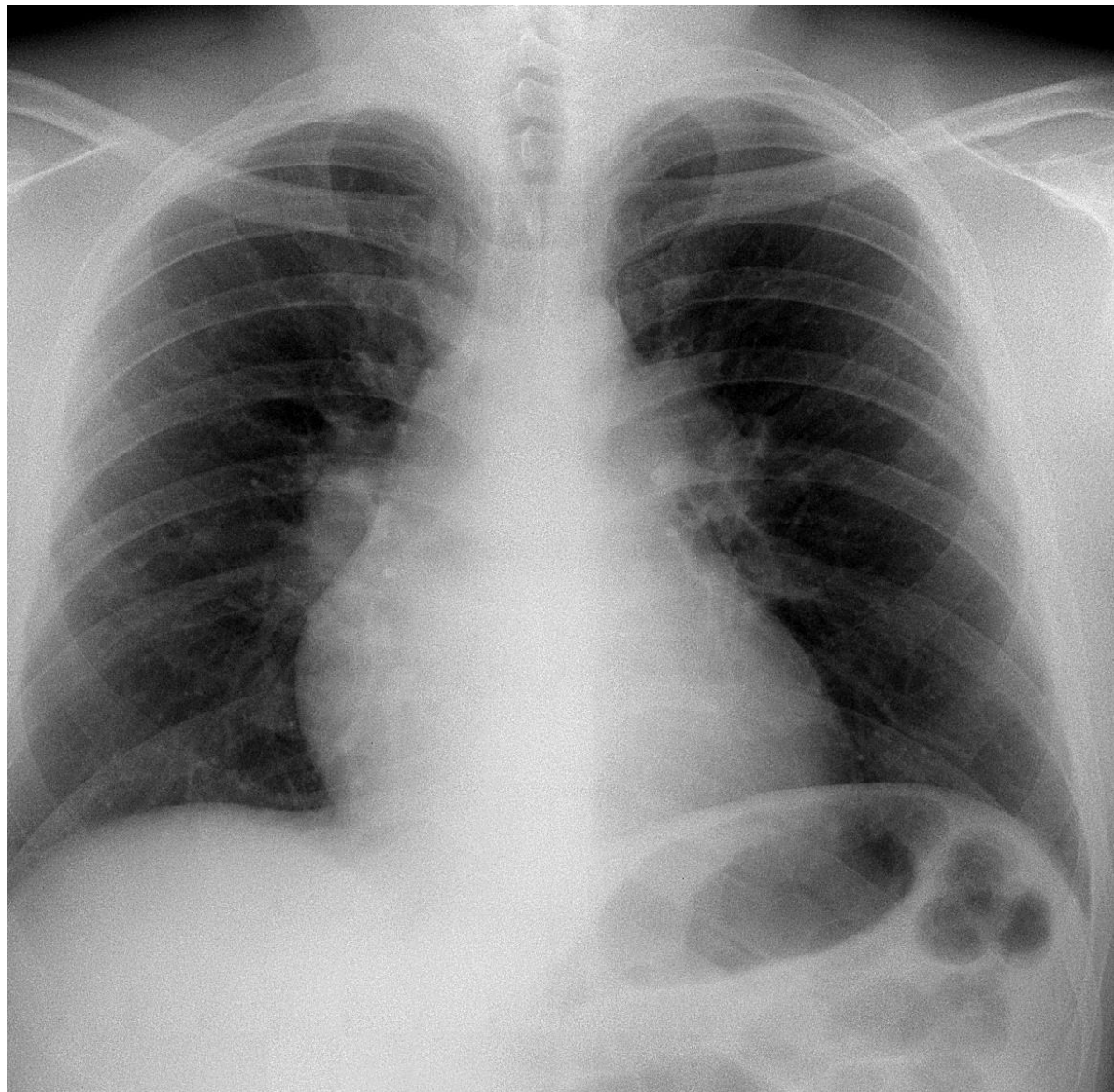
## **Opening Remarks**

中島内科循環器科メンタルクリニック

中島 滋夫

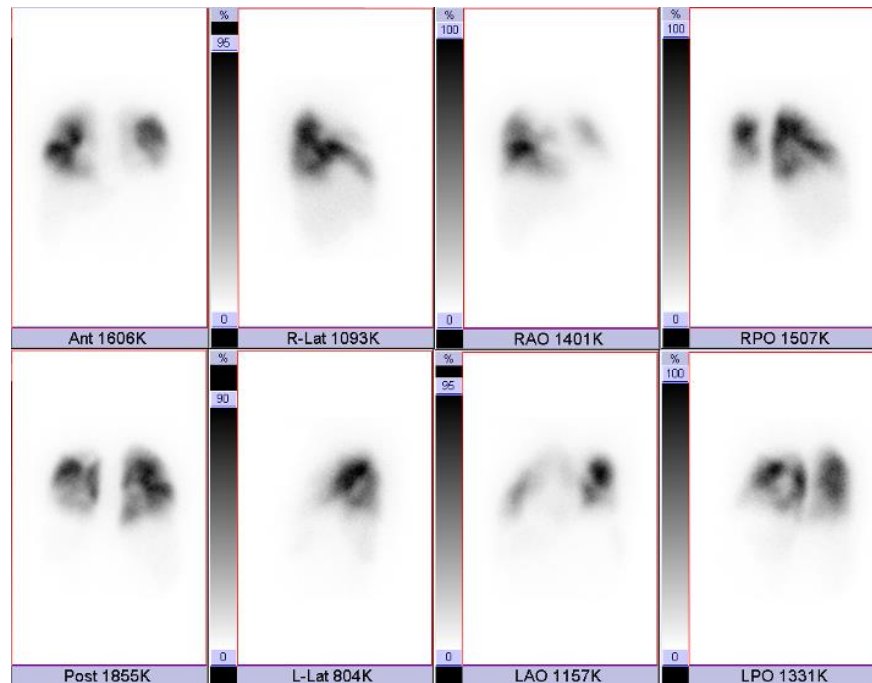
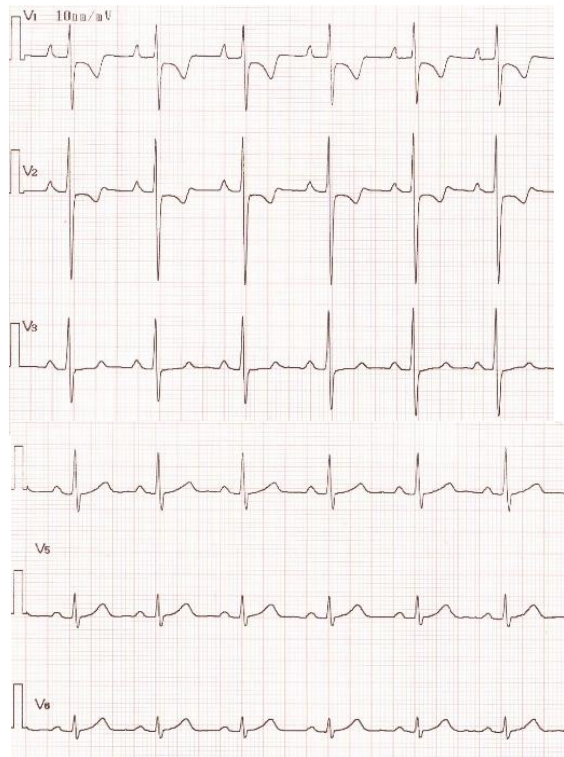
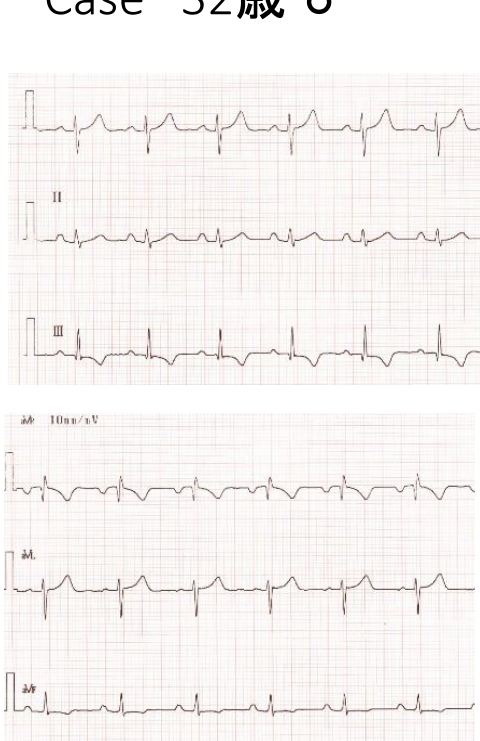
# Case 32歳 ♂

- 2ヶ月前よりごろより突然の呼吸困難出現し、最近、階段昇降困難となり2011年2月4日当院受診。
- 身長170cm、体重94.4kg
- 血圧120/70mmHg、脈拍97/分

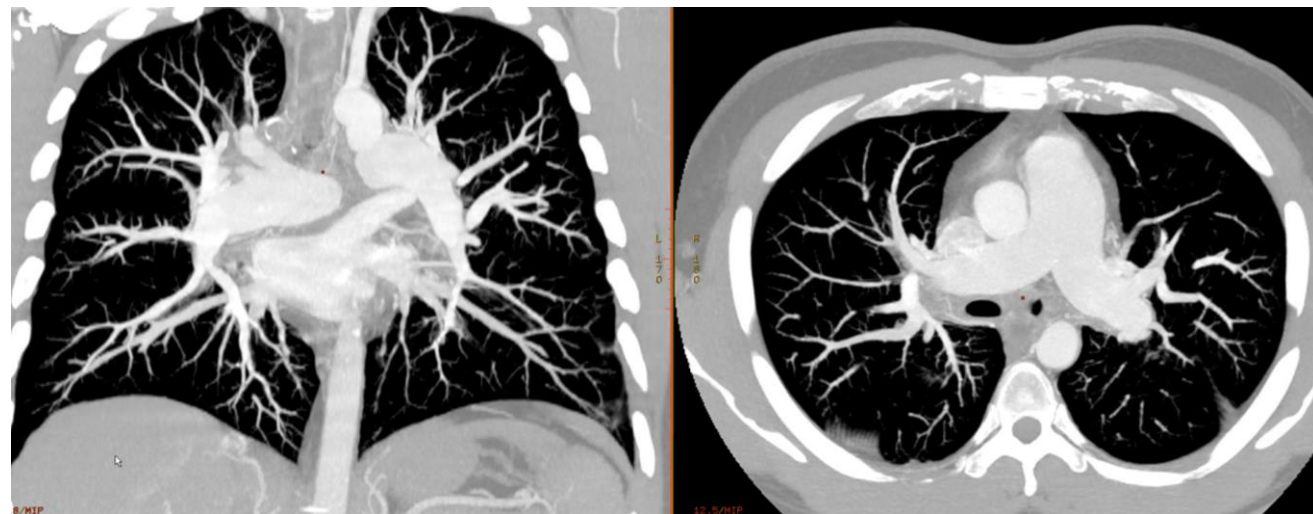
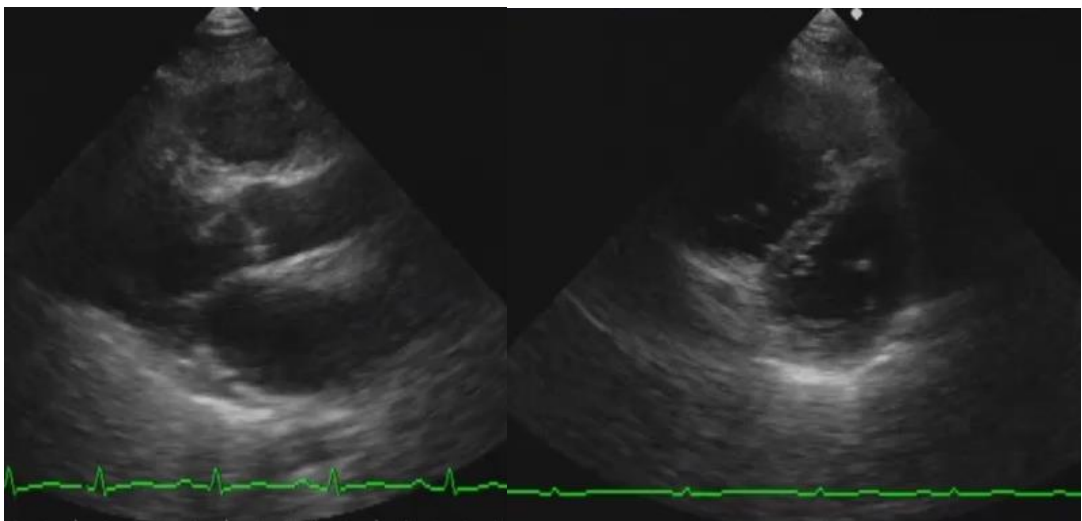


胸部XP CTR54%

# Case 32歳 ♂



血流シンチ  
左右下葉の大半に  
血流低下。  
正常の取り込みは  
右上葉の一部と左  
舌区のみ。



臨床症例の一部を紹介するもので、全ての症例が同様な結果を示すわけではありません。

# Case 32歳 ♂

6分間歩行 500m SatO<sub>2</sub>Max93%、Min 90%

FEV<sub>1</sub>0%49%、%FVC 91.6%

PaO<sub>2</sub> 71.3Torr、PaCO<sub>2</sub> 32.8Torr、PH 7.41、HCO<sub>3</sub> 20.3、BE -3.4mmol/L AaDo<sub>2</sub> 63.1Torr

WBC5900、RBC 506、Hb15.5、PLT 28.8、NTproBNP770ng/L

Dダイマー0.46μg/ml、プロテインS89%(74-132)、C93%(64-135)

ANA(-)、L-アンチコアグラント0.9(<1.3)、抗カルジオリピン抗体<8.0、抗セントロメア抗体(-)、抗SCL70抗体(-)、抗RNP抗体(-)

右心カテ PAP 70/36(47)、PCWP7mmHg、RAP11mmHg、CO2.98l/分、肺血抵抗管2960dyn・sec・cm<sup>-5</sup>、混合静脈血酸素分圧37.9mmHg

ボセンタン(トラクリア)125mg、シルデナフィル(レバチオ)20mg 1T、ベラプロストナトリウム(ドルナー)120μg、ワルファリンカリウム8mg



ORIGINAL ARTICLE

## Refined Balloon Pulmonary Angioplasty for Inoperable Patients with Chronic Thromboembolic Pulmonary Hypertension

Editorial see p 744

Hiroki Mizoguchi, MD, Aiko Ogawa, MD, PhD, Mitsuru Munemasa, MD, PhD, Hiroshi Mikouchi, MD, PhD, Hiroshi Ito, MD, PhD, and Hiromi Matsubara, MD, PhD

**BACKGROUND**— Although balloon pulmonary angioplasty (BPA) for inoperable patients with chronic thromboembolic pulmonary hypertension was first reported over a decade ago, its clinical application has been restricted because of limited efficacy and complications. We have refined the procedure of BPA to maximize its clinical efficacy.

**METHODS AND RESULTS**— Sixty-eight consecutive patients with inoperable chronic thromboembolic pulmonary hypertension underwent BPA. We evaluated pulmonary artery diameters and determined the appropriate balloon size by using intravascular ultrasound. We performed BPA in a staged fashion over multiple, separate procedures to maximize efficacy and reduce the risk of reperfusion pulmonary injury. A total of 4 (2–8) sessions were performed in each patient, and the number of vessels dilated per session was 3 (1–14). The World Health Organization functional class improved from 3 to 2 ( $P<0.01$ ), and mean pulmonary arterial pressure was decreased from  $45.4\pm 9.6$  to  $24.0\pm 6.4$  mm Hg ( $P<0.01$ ). One patient died because of right heart failure 28 days after BPA. During follow-up for  $2.2\pm 1.4$  years after the final BPA, another patient died of pneumonia, and the remaining 66 patients are alive. In 57 patients who underwent right heart catheterization at follow-up, improvement of mean pulmonary arterial pressure was maintained ( $24.0\pm 5.8$  mm Hg at  $1.0\pm 0.9$  years). Forty-one patients (60%) developed reperfusion pulmonary injury after BPA, but mechanical ventilation was required in only 4 patients.

**CONCLUSIONS**— Our refined BPA procedure improves clinical status and hemodynamics of inoperable patients with chronic thromboembolic pulmonary hypertension, with a low mortality. A refined BPA procedure could be considered as a therapeutic approach for patients with inoperable chronic thromboembolic pulmonary hypertension.

**Key Words:** peripheral vascular disease ■ pulmonary hypertension ■ reperfusion ■ revascularization