**Curriculum Vitae**

Name: Toru Kotani, M.D.

Department of Intensive Care Medicine, Showa University, School of Medicine

Clinical Director of Tele-ICU (Showa eConnect), Showa University Hospital

**Educational background**

* 1985 Graduate from Keio University, School of Medicine, Tokyo, JAPAN
* 1985 – 87 Residency in Anesthesiology

Keio University Hospital and National Defense Medical School Hospital

* 1987 – 88 Fellowship in Anesthesiology

Tokyo Metropolitan Kiyose Children Hospital

* 1988 – 90 Fellowship in Anesthesiology, Critical Care Medicine

Keio University Hospital

**Work Experience**

1985-1986 Resident in Anesthesiology, Keio University Hospital, Tokyo, JAPAN

1986-1987 Resident in Anesthesiology, National Defense Medical School, Saitama, JAPAN

1987-1988 Fellowship in Anesthesiology, Tokyo Metropolitan Kiyose Children Hospital, Tokyo, JAPAN

1988-1992 Staff intensivist, General Intensive Care Unit, Keio University Hospital, Tokyo, JAPAN

1992-1993 Clinical Director of Anesthesia, Funabashi Municipal Medical Center, Chiba, JAPAN

1993-1996 Clinical Director of Anesthesia, Keiyu Hospital, Yokohama, JAPAN

1996- 2001 Assistant Professor of Anesthesiology and Teaching Staff of General Intensive Care Unit, Keio University Hospital, Tokyo, JAPAN

2001- 2003 Visiting Scientist, Division of Respiratory Care Services, Duke University Medical Center, Durham, NC USA

2003- 2006 Assistant Professor of Anesthesiology and Director of Intensive Care Unit, Tokyo Women’s Medical University Daini Hospital, Tokyo, JAPAN

2006-2016 Associate professor of Anesthesiology

 Director of Intensive Care Unit, Tokyo Women’s Medical University Hospital

2016-2018 Associate professor of Anesthesiology and Critical Care Medicine, Showa University, School of Medicine

 Director of Intensive Care Unit, Showa University Hospital

2018-2019 Associate professor of Intensive Care Medicine, Showa University School of Medicine

 Director of Intensive Care Unit and Clinical Director of Tele-ICU (Showa eConnect), Showa University Hospital

2019-present Professor and Chair of Intensive Care Medicine, Showa University School of Medicine

**Publications**

1. Shono A, Kotani T, Freirichs I. Personalization of therapies in COVID-19 associated acute respiratory distress syndrome, using electrical impedance tomography. J Crit Care Med. 2021;7(1): 62-66. DOI: 10.2478/jccm-2020-0045
2. Kotani T, Shono A. Roles of electrical impedance tomography in determining lung protective strategy for acute respiratory distress syndrome in the era of coronavirus disease 2019. JMA journal. In Press.
3. Fukuda Y, Tanaka A, Homma T, Kaneko K, Uno T, Fujiwara A, Uchida Y, Suzuki S, Kotani T, Sagara H. Utility of SpO2/FiO2 ratio for acute hypoxemic respiratory failure with bilateral opacities in the ICU. PLoS One. 2021 Jan 25;16(1): e0245927. doi: 10.1371/journal.pone. 0245927.
4. Shono A, Kotani T. Clinical implication of monitoring regional ventilation using electrical impedance tomography. J Intensive Care. 2019 Jan 18;7:4. doi: 10.1186/s40560-019- 0358-4.
5. Watanabe S, Kotani T, Taito S, Ota K, Ishii K, Ono M, Katsukawa H, Kozu R, Morita Y, Arakawa R, Suzuki S. Determinants of gait independence after mechanical ventilation in the intensive care unit: Japanese multicenter retrospective exploratory cohort study. Journal of Intensive Care 2019. In printing
6. Kotani T, Hanaoka M, Hirahara S, Yamanaka H, Teschner E, Shono A. Regional over- distension during prone positioning in a patient with acute respiratory failure who was ventilated with a low tidal volume: a case report. Journal of Intensive Care. 2018 Mar 14;6:18. doi: 10.1186/s40560-018-0290-z.
7. Hasan D, Satalin J, van der Zee P, Kollisch-Singule M, Blankman P, Shono A, Somhorst P, den Uil C, Meeder H, Kotani T, Nieman GF. Excessive extracellular ATP Desensitizes P2Y2 and P2X4 ATP Receptors Provoking Surfactant Impairment Ending in Ventilation-Induced Lung Injury. Int J Mol Sci. 2018 Apr 13; 19(4). pii: E1185. doi: 10.3390/ijms19041185.
8. Takagaki M, Yamaguchi H, Ikeda N, Takeda K, Kasai F, Yahagi K, Kanzaki S, Mitsuyama S, Kadowaki T, Kotani T. Post-cardiotomy venovenous extractoreal membrane oxygenation without heparinization. Gen Thorac Cardiovasc Surg. 2018 Aug 17. doi: 10.1007/s11748-018-0990-2.
9. Kotani T, Katayama S, Miyazaki Y, Fukuda S, Sato Y, Ohsugi K. Risk factors for the mortality of *Pneumocystis jirovecii* pneumonia in non-HIV patients who required mechanical ventilation: A retrospective case series study. Biomed Res Int. 2017; 2017:7452604. doi: 10.1155/2017/7452604.
10. Hayakawa M, Kushimoto S, Watanabe E, Goto K, Suzuki Y, Kotani T, Kiguchi T, Yatabe T, Tagawa J, Komatsu F, Gando S. Pharmacokinetics of recombinant human soluble thrombomodulin in disseminated intravascular coagulation patients with acute renal dysfunction. Thromb Haemost. 2017 May 3;117(5):851-859. doi: 10.1160/TH16-07-0547.
11. Kotani T, Tanabe H, Yusa H, Saito S, Yamazaki K, Ozaki M. Electrical impedance tomography-guided prone positioning in a patient with acute cor pulmonale associated with severe acute respiratory distress syndrome. J Anesth 2016; 30: 161-165.
12. Kotani T, Katayama S, Fukuda S, Miyazaki Y, Sato Y. Pressure-controlled inverse ratio ventilation as a rescue therapy for severe acute respiratory distress syndrome. SpringerPlus. 2016;5: 716-721.
13. Goto Y, Katayama S, Shono A, Mori Y, Miyazaki Y, Sato Y, Ozaki M, Kotani T. Roles of neurally adjusted ventilatory assist in improving gas exchange in a severe acute respiratory distress syndrome patient after weaning from extracorporeal membrane oxygenation: a case report. J Intensive Care. 2016; 4: 26
14. Sato Y, Saeki N, Asakura T, Aoshiba K, Kotani T. Effects of extrathoracic mechanical ventilation on pulmonary hypertension secondary to lung disease. J Anesth. 2016; 30: 663-70
15. Ohsugi K, Kotani T, Fukuda S, Sato Y, Toyama S, Ozaki M. Does vasopressin improve the mortality of septic shock patients with high-dose noradrenaline? Indian J Crit Care Med. 2016; 20: 137-140.
16. Matsumoto T, Sato Y, Fukuda S, Katayama S, Miyazaki Y, Ozaki M, Kotani T. Safety and efficacy of bronchoalveolar lavage using a laryngeal mask airway in cases of acute hypoxaemic respiratory failure with diffuse lung infiltrates. Internal medicine. 2015;54:731-5.
17. Ando K, Kato H, Kotani T, Ozaki M, Arimura Y, Yagi J. Plasma leukocyte cell-derived chemotaxin 2 is associated with the severity of systemic inflammation in patients with sepsis. Microbiol Immunol 2012; 56: 708-718.
18. Takeda S, Kotani T, Nakagawa S, Ichiba S, Aokage T, Ochiai R, Taenaka N, Kawamae K, Nishimura , Ujike Y, Tajimi K. Extracorporeal membrane oxygenation for 2009 influenza A(H1N1) severe respiratory failure in Japan. J Anesth 2012; 26:650-7.
19. Ichikado K. Muranaka H. Gushima Y. Kotani,T. Habashi N. Fujimoto M, Johkoh K, Iwamoto T, Kawamura N, Nagano J, Fukuda K, Hirata N, Yoshinaga T, Ichiyasu H, Tsumura S, Kohrogi H, Kawaguchi A, Yoshioka M, Sakuma T, Suga M. Fibroproliferative changes on high-resolution CT in the acute respiratory distress syndrome predict mortality and ventilator dependency: a prospective observational cohort study. BMJ Open 2012 Mar 1;2(2):e000545. doi: 10.1136/bmjopen-2011-000545. Print 2012.
20. Katayama M, Ishizaka A, Sakamoto M, Fujishima S, Sekiguchi K, Asano K, Betsuyaku T, Kotani T, Ware LB, Matthay MA, Hashimoto S. Laminin gamma2 fragments are increased in the circulation of patients with early phase acute lung injury. Intensive care medicine. 2010;36(3):479-86.
21. Dang MH, Kato H, Ueshiba H, Omori-Miyake M, Yamagoe S, Ando K, Imanishi K, Arimura Y, Haruta I, Kotani T, Ozaki M, Suzuki K, Uchiyama T, Yagi J. Possible role of LECT2 as an intrinsic regulatory factor in SEA-induced toxicity in d-galactosamine-sensitized mice. Clinical immunology. 2010;137(3):311-21.
22. Kuruma Y, Hirasaki Y, Taniguchi Y, Ozaki K, Kotani T, Nomura M, Ozaki M. Airway pressure release ventilation for respiratory management in a pediatric case after adult-size kidney transplantation. Paediatric anaesthesia. 2009;18(12):1271-2.
23. Koh H, Tasaka S, Hasegawa N, Asano K, Kotani T, Morisaki H, Takeda J, Fujishima S, Matsuda T, Hashimoto S, Ishizaka A. Vascular endothelial growth factor in epithelial lining fluid of patients with acute respiratory distress syndrome. Respirology. 2008;13(2):281-4.
24. Kotani T, Kotake Y, Morisaki H, Takeda J, Shimizu H, Ueda T, Ishizaka A. Activation of a neutrophil-derived inflammatory response in the airways during cardiopulmonary bypass. Anesth analg. 2006;103(6):1394-9.
25. Ogawa EN, Ishizaka A, Tasaka S, Koh H, Ueno H, Amaya F, Ebina M, Yamada S, Funakoshi Y, Soejima J, Moriyama K, Kotani T, Hashimoto S, Morisaki H, Abraham E, Takeda J. Contribution of high-mobility group box-1 to the development of ventilator-induced lung injury. American journal of respiratory and critical care medicine. 2006;174(4):400-7.
26. M. Kotani, T. Kotani\*, Z. Li, R. Silbajoris, C. A. Piantadosi, YC. T. Huang. (\*: Co-first author) Reduced inspiratory flow attenuates IL-8 release and MAPK activation of lung overstretch. Eur Respir J. 2004 Aug;24(2):238-46.
27. Ishizaka A, Matsuda T, Albertine KH, Koh H, Tasaka S, Hasegawa N, Kohno N, Kotani T, Morisaki H, Takeda J, Nakamura M, Fang X, Martin TR, Matthay MA, Hashimoto S. Elevation of KL-6, a lung epithelial cell marker, in plasma and epithelial lining fluid in acute respiratory distress syndrome. Am J Physiol Lung Cell Mol Physiol. 2004 Jun;286(6):L1088-94.
28. Moriyama K, Ishizaka A, Nakamura M, Kubo H, Kotani T, Yamamoto S, Ogawa EN, Kajikawa O, Frevert CW, Kotake Y, Morisaki H, Koh H, Tasaka S, Martin TR, Takeda J. Enhancement of the endotoxin recognition pathway by ventilation with a large tidal volume in rabbits. Am J Physiol Lung Cell Mol Physiol. 2004 Jun;286(6):L1114-21.
29. Kotani M, Kotani T, Ishizaka A, Fujishima S, Koh H, Tasaka S, Sawafuji M, Ikeda E, Moriyama K, Kotake Y, Morisaki H, Aikawa N, Ohashi A, Matsushima K, Huang YC, Takeda J. Neutrophil depletion attenuates interleukin-8 production in mild- overstretch ventilated normal rabbit lung. Crit Care Med. 2004 Feb;32(2):514-9.
30. Ishizaka A, Watanabe M, Yamashita T, Ogawa Y, Koh H, Hasegawa N, et al. New bronchoscopic microsample probe to measure the biochemical constituents in epithelial lining fluid of patients with acute respiratory distress syndrome. Crit Care Med. 2001;29(4):896-8.
31. Kotani T, Ochiai R, Takeda J, Sekiguchi H, Fukushima K. Improved PCO2 monitoring during high frequency jet ventilation. J anesth. 1992;6(1):75-9.