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Vocal Cord Paralysis After Lung Transplantation Does Not Influence Early Outcome

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Background

- Vocal Cord Paralysis **(VCP)** is frequent after cardiothoracic surgery
- Incidence and effect on outcome in lung transplantation **(LTx)** is unknown
- VCP may cause chronic aspiration, which is linked to development of chronic lung allograft dysfunction **(CLAD)**

Aim / Methods

- ***AIM:*** *1 - to assess incidence of VCP after bilateral LTx*
  2 - to assess impact on clinical outcomes
- **VCP** = inability to achieve vocal cord apposition at 2 occasions assessed by flexible bronchoscopy
- Retrospective assessment of bronchoscopy records 01/10-06/15
- Clinical endpoints: graft survival; CLAD onset; hospitalizations; lower respiratory tract infections (LRTI) in VCP vs comparators (using 5:1 propensity matching.

Results

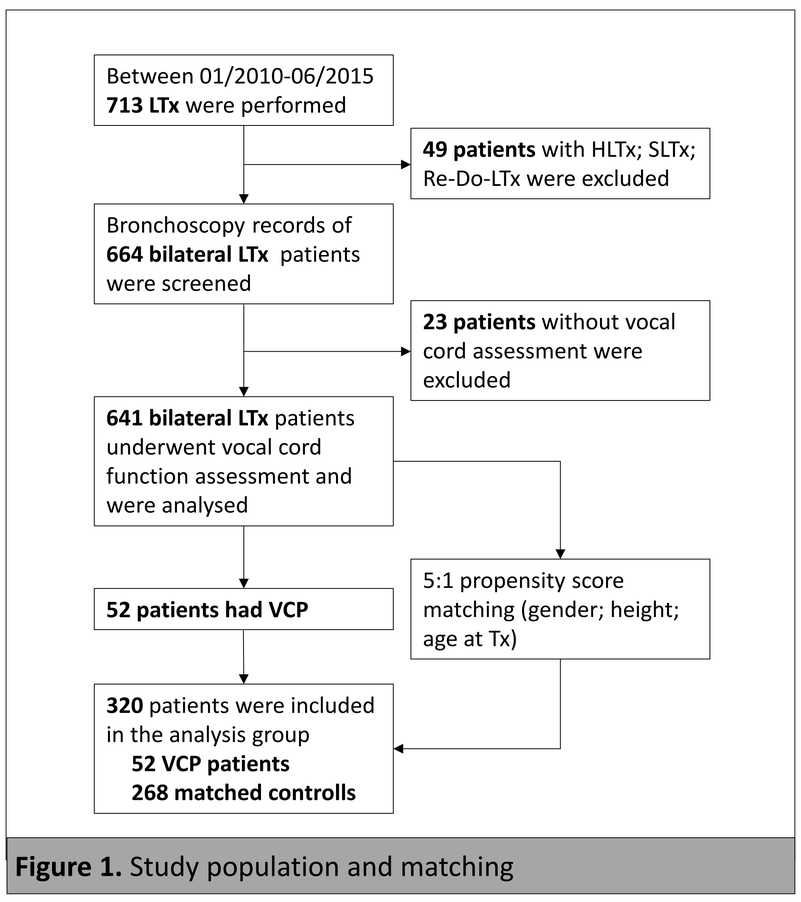

Figure 1. Study population and matching

Table 1. VCP characteristics

Finding, n (%)	All Patients with VCP (n=52)	
Affected side		
Left	40	(77)
Right	9	(17)
Bilateral	3	(6)
Recovery	34	(65)
Time to recovery, months (IQR)	6	(2-12)
Persistent VCP	18	(35)
Symptomatic	15	(29)
Treatment received	15	(29)

Table 2. Secondary clinical endpoints

Endpoint	VCP (n=52)		Control (n=268)		Hazard Ratio (95% CI) *		p
ICU re-intubation	8	(15)	38	(14.2)	1.1	(0.48-2.52)	0.821
Bronchial stenosis	10	(19)	48	(18)	1.06	(0.50-2.27)	0.872
Pulmonary function test, % of predicted (IQR)							
FEV_1	93	(82-104)	92	(75-109)			0.835
FVC	98.5	(85-116)	102	(89-117)			0.353
MEF 25-75%	90.5	(78-118)	89	(63-117)			0.243
Bronchoscopies*	7	(6-9)	8	(6-10)			0.181

*within first 24 months following LTx after initial hospital discharge

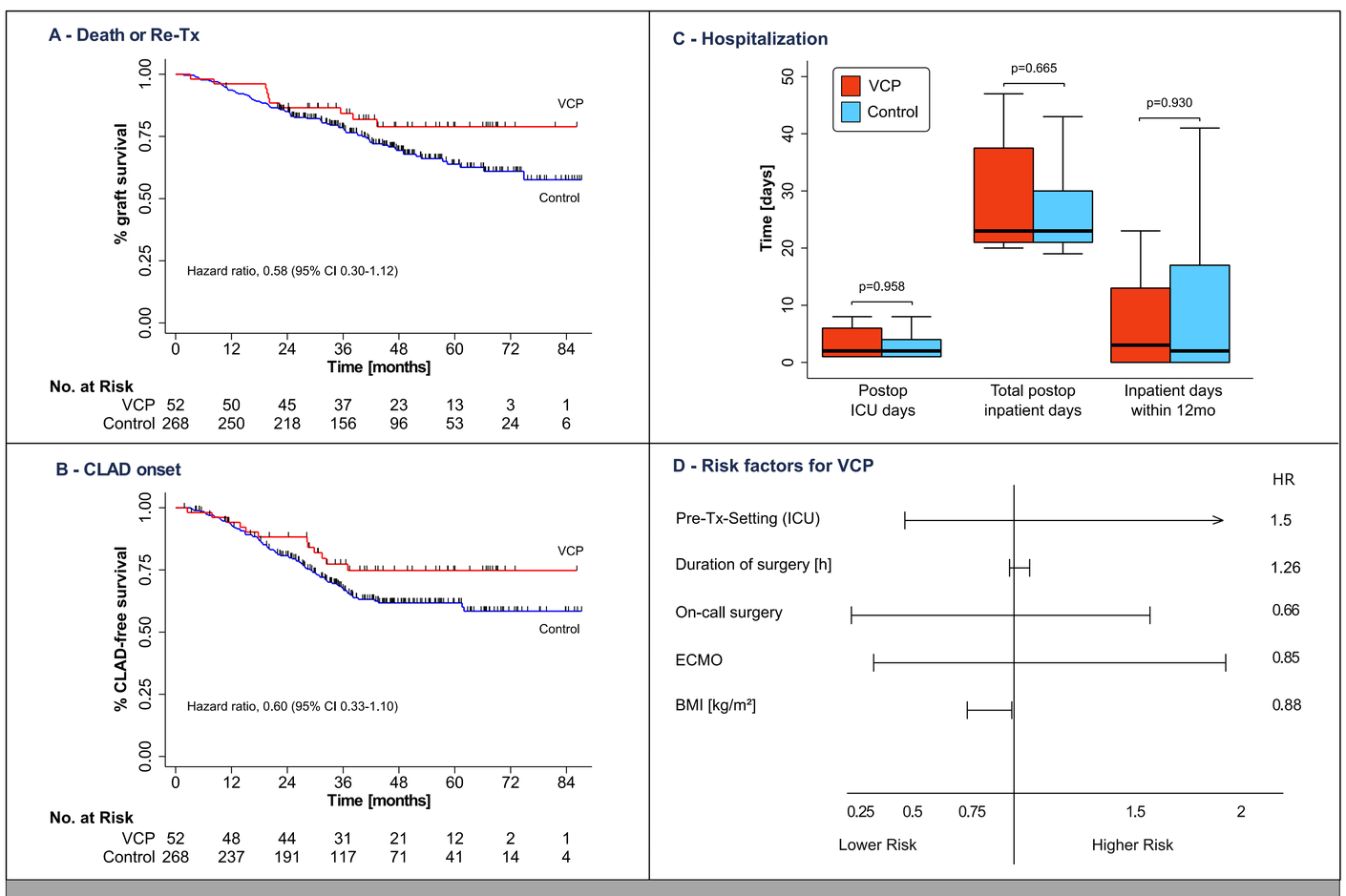

Figure 2. A) Graft survival (Death or Re-Tx) in VCP vs controls. B) Chronic allograft dysfunction (CLAD) in VCP vs controls. C) Median post-op ICU stay, median post-op hospital stay in day and subsequent inpatient days within first year after Tx. D) Hazard ratios for potential risk factors for occurence of VPC following Tx (with 95% CI).

Conclusions

- VCP was present in 52/641 bilateral LTx recipients (8.1%) **(Figure 1)**.
- VCP was transient in most patients with full recovery in 65% **(Table 1)**.
- Using 5:1 propensity matching, VCP was <u>not</u> associated with increased graft –loss or CLAD-onset **(Figure 2A+B)**.
- Duration of hospitalization including ICU-stay was not increased in the VCP-group **(Figure 2C).**
- Lower BMI is a potential risk factor for VCP **(Figure 2D).**
- There was <u>no</u> increased rate of re-intubation or development of bronchial stenosis in the VCP group **(Table 2).**
- ***Overall, VCP did not adversely impact clinical outcome in LTx-recipients.***