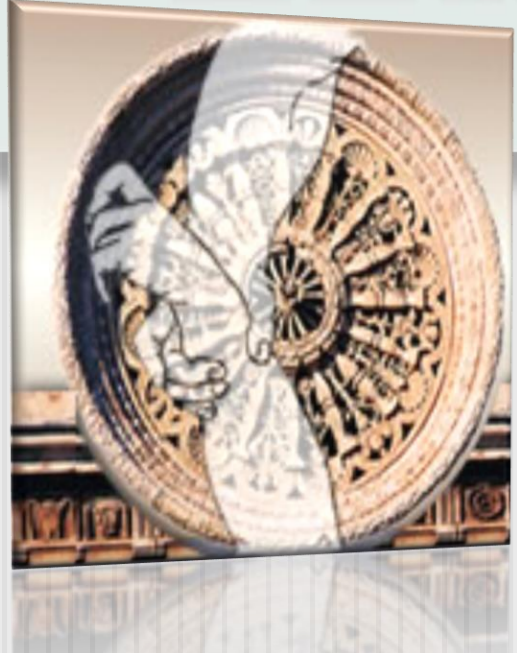


LOW PREVALENCE OF VALVULAR CALCIFICATION IN HEMODIALYSIS PATIENTS UNDERGOING PARATHYROIDECTOMY

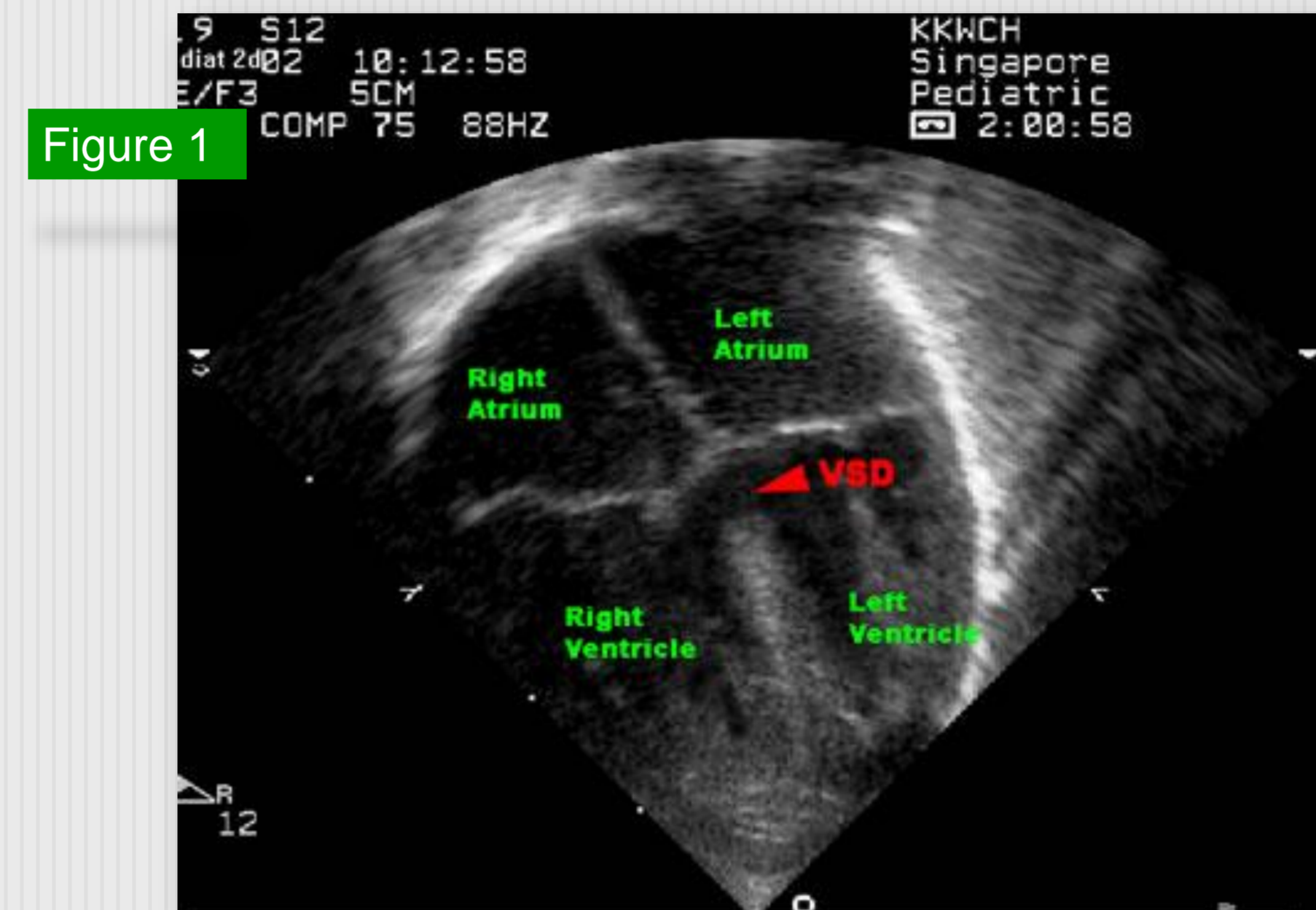


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Introduction

Valvular calcifications (VC) are associated with cardiovascular morbidity and mortality in hemodialysis (HD) patients. VC progression is slowed by interventions on the metabolism of calcium, phosphorus, and parathyroid hormone (PTH). Parathyroidectomy (PTx) in HD patients with secondary hyperparathyroidism (SHPT) improve all these risk factors. However, long term the effects of PTx on the VC are not well established. The aim of the study was to assess the VC prevalence in PTx-treated patients compared to medically-treated patients.



A bidimensional echocardiography



Calcifications of the mitral valve and mitral annulus

Table 1

	PTx group	Control group	p
Age (years)	56.8 (10)	58.5(12)	n.s.
Gender (M/F)	6F/12M	9F/9M	n.s.
HD vintage (months)	249±94	116±73	<0.01
Prevalence of VC	16.6% (3/18)	61% (11/18)	0.0152
tCa (mg/dl)	8.02±0.6	9.2±0.6	<0.01
iCa (mmol/L)	1.08±0.08	1.21±0.05	<0.01
iPTH (pg/ml)	118±99	440±179	<0.01
ALP (U/L)	80±22	105±38	<0.03
P	4.3±0.1	4.0±0.6	n.s.
Mg	2.0±0.3	2.1±0.4	n.s.

Methods

HD patients who underwent to first PTx, with no recurrence of SHPT, long-term control of intact parathyroid hormone (iPTH) serum levels, were included in the study. Patients with SHPT and conventional medical treatment, based on cinacalcet, active vitamin D analogues and phosphate binders, were selected as a control group. A bidimensional echocardiography was performed for qualitative assessment of VC, defined as the presence of bright echoes on 1 or more cusps of the aortic valve, mitral valve, or mitral annulus. Serum iPTH, total calcium (tCa), phosphate (P), magnesium (Mg), alkaline phosphatase (ALP) and ionized Ca (iCa) were evaluate. Data are expressed as mean±standard deviation (SD); the unpaired Student's t-test and Fisher's exact test were used for statistical analysis.

Results

The mean (SD) age of the 36 included patients was 56.8 (10) years, 58.3% (21/36) were man; dialysis vintage was 173 (85) months. The prevalence of VC was 38.8% (14/36). VC was found in 16.6% (3/18) of PTx group and in 61% (11/18) of controls (p=0.0152). The PTx group has a higher dialysis vintage (249±94 vs 116±73 months; p < 0.01) and lower tCa (8.02±0.6 vs 9.2±0.6 mg/dl; p<0.01), iCa (1.08±0.08 vs 1.21±0.05 mmol/L; p<0.01); iPTH (118±99 vs 440±179 pg/ml p<0.01) and ALP serum levels (80±22 vs 105±38 U/L; p<0.03). Time since PTx were 8.7 (3.4) years. There was no differences as regard of age, gender distribution, P and Mg serum levels. 33.3% (6/18) in the control group were treated with vitamin D analogues, and 44.4% (8/18) with cinacalcet. 38.8 (7/18) were treated with calcidiol in the PTx group. There were no differences in use of phosphate binders .

Conclusions

In HD patients with long-term PTx, the persistent low levels of iPTH, ALP and iCa are associated with a low prevalence of VC.

