



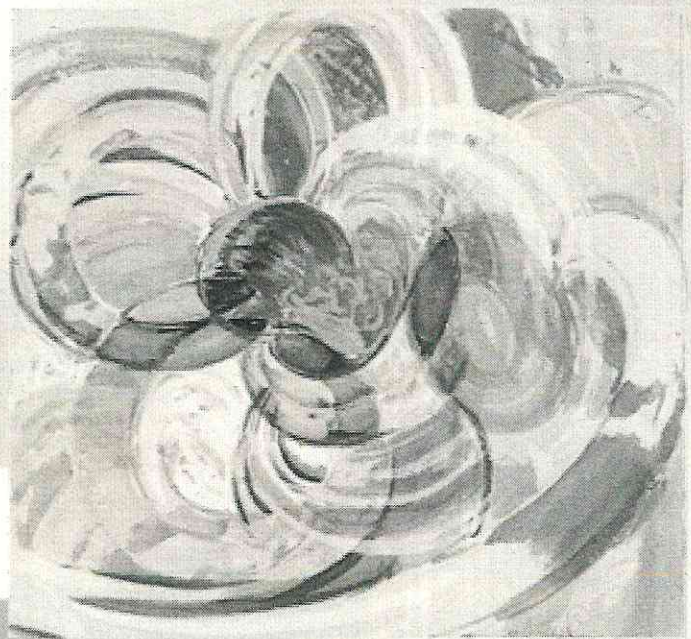
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**ABSTRACTS ON CD-ROM**



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Study for Discs of Newton  
Frantisek Kupka, 1911-1912 gouache, watercolour on paper  
28.5 x 28.5 cm  
From the Museum "Kampa"  
"The Jan and Meda Mladek Foundation"

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**[Sa369] CORRELATION BETWEEN HYPERPHOSPHATEMIA AND CARDIAC ARRHYTHMIAS IN CHRONIC RENAL FAILURE PATIENTS**

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**INTRODUCTION AND AIMS:**

High concentrations of phosphorus, often detected in patients with chronic renal failure, are associated with increased risk of cardiovascular events, increased risk of sudden death and the presence of extensive vascular calcification. The pathogenic mechanisms responsible for this association are not entirely clear, however they do not seem to be related to traditional cardiovascular risk factors.

**METHODS:**

We retrospectively analyzed 60 patients with chronic renal failure undergoing dialysis treatment 3 times a week (mean age 59 years, GFR<30 ml/min, mean dialysis age 9 years, 66% male), divided into 2 groups according to the serum phosphorus level (Group A: phosphorus  $\geq 5$  mg/dl, Group B:  $< 5$  mg/dl). Patients underwent physical examination, electrocardiogram, echocardiogram, 24 h Holter ECG monitoring. We analyzed echocardiographic parameters (diameter and thickness of the left ventricle, left ventricular ejection fraction, presence of valvular disease) and electrocardiographic data (heart rate, atrio-ventricular and intraventricular conduction intervals, QTc interval, ventricular premature contractions-VPCs- and ventricular arrhythmias).

**RESULTS:**

There were no statistically significant differences between the 2 groups regarding demographic characteristics, cardiovascular risk factors and previous cardiovascular events. None of the echocardiographic parameters and electrocardiographic data analyzed resulted to be statistically relevant. Only the number of VPCs per patient resulted to be higher in a significant mode (group A  $7,86 \pm 5,8$  VPCs/pt; group B  $27 \pm 18,9$  VPCs/pt,  $p=0.02$ ).

**CONCLUSIONS:**

The results of our study show no correlation between hyperphosphatemia and cardiovascular events. We did not observe correlation with sustained ventricular arrhythmias or sudden death in this high risk population. Low serum phosphorus level correlates only with a higher frequency of VPCs.

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