

# Screening programme for central venous pressure in patients without signs, symptoms, history of heart failure, using a novel noninvasive device suitable for home monitoring

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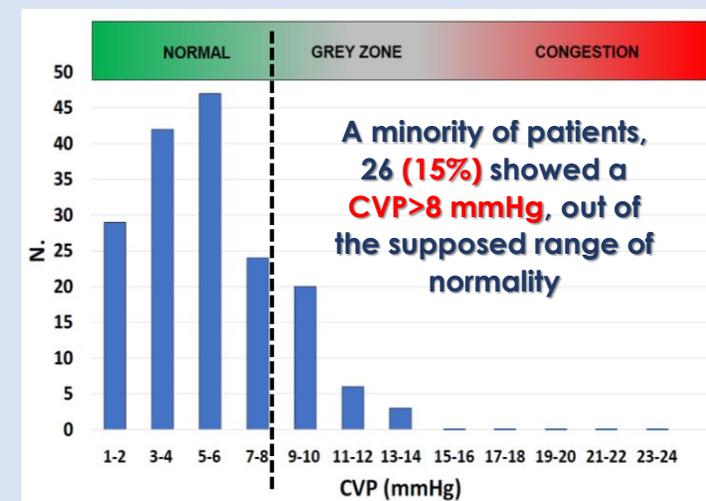
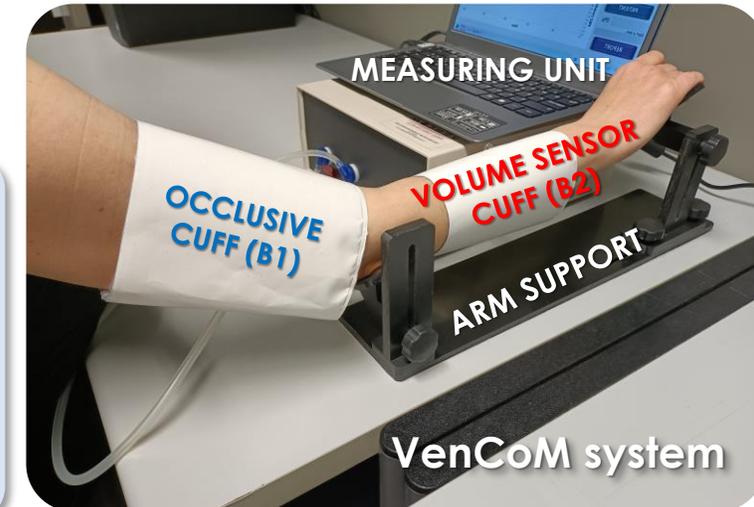
**INTRODUCTION.** Data on Central Venous Pressure (CVP) are lacking in normal or pseudo-normal people due to the absence of noninvasive and simple tools for CVP monitoring in office and at home. Recently, a novel device for **noninvasive monitoring of CVP** has been developed, **VenCoM (Venous Congestion Meter)** system. VenCoM is similar to a standard sphygmomanometer for blood pressure measurement, but with 2 pneumatic cuffs: one (B1) positioned on the upper arm for occluding venous flow; one (B2) positioned on the forearm for detecting volume changes that occur when the applied occluding pressure overcomes the existing venous pressure.

**PURPOSE.** To present preliminary data collected in a **screening programme** for CVP assessment in patients without signs, symptoms, history of heart failure, using the **novel noninvasive VenCoM** device

**METHODS.** 169 patients (84 females, 85 males) without any history of heart failure and without renal impairment, were enrolled in a CVP screening programme, with the aim of carrying out the general picture of CVP distribution.

We defined the **normality range 0-8 mmHg**.

**RESULTS.** All patients were in sinus rhythm, except 1 in permanent atrial fibrillation, and 1 with frequent premature contractions, but CVP measurement could be performed anyway. Age (years)  $52 \pm 20$ , BMI  $25 \pm 4$ , Systolic BP (mmHg)  $132 \pm 21$ , Diastolic BP (mmHg)  $80 \pm 11$ , Heart Rate (bpm)  $72 \pm 14$ . Patients with CVP > 8 mmHg will enter a more specific follow-up to assess their risk of developing heart failure and/or kidney disease.



**CONCLUSIONS.** The novel VenCoM system is an easy-to-use tool for **home and remote monitoring of CVP**. It works **independently of the heart rhythm** and it might help in identifying those individuals at risk of developing heart failure or kidney diseases due to elevated CVP.