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## **Limited utility of physical counterpressure manoeuvres in preventing syncopal recurrence in patients older than 40 years with recurrent neurally – mediated syncope. An analysis from the third international study on syncope of uncertain etiology (Issue-3)**

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### **Aims.**

Physical counter-pressure maneuvers are effective in young patients with vasovagal syncope and recognizable prodromal symptoms. Aim of this study was to investigate their effectiveness in patients  $\geq 40$  years with severe neurally mediated syncope (NMS) enrolled in the Third International Study on Syncope of Uncertain Etiology (ISSUE-3).

### **Methods and results.**

In the ISSUE-3 study, 63 out of 162 patients had a diagnosis of hypotensive NMS (type 2,3 and 4A) documented by implantable loop recorder (ILR); of these, 40 were instructed to perform isometric leg and arm physical counter-pressure maneuver (PCM) therapy. Their mean age was  $62 \pm 13$  years; 71% of patients had a history of some episodes without prodrome. A group of 45 untreated patients acted as controls. During follow-up, syncope recurred in 15 PC patients (39%) and in 24 control patients (53%). At 21 months, the estimated product-limit syncope recurrence rates were 42% (95%CI 29-62) and 64% (95%CI 48-80) respectively ( $p=0.30$ ), (Figure).

### **Conclusions.**

The benefit of PC maneuvers was limited in ISSUE-3 patients affected by hypotensive NMS. The likely factors that hampered effectiveness of PC therapy were older age and absence of sufficiently long recognizable prodromal symptoms in the ISSUE-3 population