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## Ottava Giornata della Ricerca della Svizzera Italiana

Venerdì 9 marzo 2018

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### Modulo per la sottomissione abstract di ricerca CLINICA

**Titolo** (massimo **15 parole**)

Ultrasound Strain Elastography in differential diagnosis between Acute and Chronic Deep Vein Thrombosis

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**Testo** (massimo **250 parole**, preferibilmente in italiano (accettato anche in inglese), suddiviso in Introduzione, **Metodi**, **Risultati**, **Conclusioni** e **Finanziamento**)

Introduction:

Ultrasound Elastography (UE) imaging is a novel sonographic technique commonly employed for relative quantification of tissue elasticity. Its applicability has not been fully established in determining the age of deep venous thrombosis (DVT). Thus, the aim of this study was to assess the role of Ultrasound Strain Elastography (USE) in distinguishing acute from chronic DVT.

Methods:

Patients with unprovoked acute and chronic (= 3 months old) DVT were analyzed using USE during continuous freehand compressions of the anatomic site achieved with a linear probe. The spatial distribution of tissue elasticity properties was estimated with the mean Elasticity-Index (E-Index). The accuracy of E-Index in distinguishing acute rather than chronic DVT was assessed.

Results:

149 patients (mean age 63.9 years, SD 13.6; 73 males) with acute and chronic DVT were included; 94 acute and 121 chronic femoral and popliteal DVT were analyzed. Mean E-Index of acute femoral DVT was significantly higher than chronic femoral DVT (5.09 vs 2.46  $p < 0.001$ ) and mean E-Index of acute popliteal DVT was higher than chronic popliteal DVT (4.96 vs 2.48  $p < 0.001$ ). Age, sex and thrombus location did not significantly affect the E-Index. An E-Index value  $> 4$  resulted in a sensitivity of 98.9% (95%- CI: 93.3 to, 99.9), a specificity of 99.1% (95%- CI: 94.8 to, 99.9), a positive predictive value of 91.1% (95%- CI: 77.9 to, 97.1), a negative predictive value of 98.6% (95%- CI: 91.3 to, 99.9) for acute DVT.

Conclusions: USE appeared a promising technique to distinguish between acute and chronic DVT. Other larger prospective studies are warranted so as to confirm our preliminary findings.

None to declare conflict of interest

**Visto superiore** (prego indicare Nome e Cognome del superiore)

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**Criteria per sottomissione Abstract:**  
NO Case report  
NO Abstract senza nessun risultato  
VISTO da un superiore



**Invio Abstract**