**Purpose:** In young stroke patients, aetiology is often crypto genetic. Our purpose to study cardiac function in young stroke patients by trans-thoracic echocardiography (TTE).

**Methods:** TTE examinations were performed in 50 patients (31 males, 19 women; 34 +/- 10 yrs) and 50 age-sex matched controls. Ejection Fraction (EF), chamber volumes were measured. Diastolic function, left atrial dimension (LAD) was evaluated by four chambers echographic window in order to better define mitral valve plane. Transmitral filling velocities (E and A); pulmonary venous atrial reversal duration; lateral and septal early diastolic mitral annular velocities; E/lateral early diastolic mitral annular velocity; E/septal early diastolic mitral annular velocity were assessed. Subjects presenting mitral valve calcinosis, mitral valve prolapses and hypertensive were excluded by the investigation.

**Results:** In Stroke-Patients as well as in control group, Left Ventricular Ejection Fraction showed normal parameters according with the age of patients. No distinctions between sexes were found. Left atrial enlargement (LAE) and impairment of Diastolic Function (DF) were a frequent result in Patients (18/50: 36 %) but not in control group (7/50: 14 %). Stroke aetiology did not influence DF parameters behaviour. Stroke-Patients showed an Odd Ratio of 2.57 for blunted diastolic function and LAE in comparison to controls.

**Conclusions:** Cardiac ultrasound evaluation is routinely performed in stroke patients. According to the young age of enrolled patients, failure of systolic function was not found. Conversely, involvement of different cardiac haemodynamic mechanisms must be considered to explain undetermined stroke aetiologies. Further studies are necessary to confirm haemodynamic hypothesis.

### POSTER SESSION II

**(P13)** Left atrial enlargement and failure of diastolic function in non–hypertensive young stroke patients

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**Methods:** TTE examinations were performed in 50 patients (31 males, 19 women; 34 +/- 10 yrs) and 50 age-sex matched controls. Ejection Fraction (EF), chamber volumes were measured. Diastolic function, left atrial dimension (LAD) was evaluated by four chambers echographic window in order to better define mitral valve plane. Transmitral filling velocities (E and A); pulmonary venous atrial reversal duration; lateral and septal early diastolic mitral annular velocities; E/lateral early diastolic mitral annular velocity; E/septal early diastolic mitral annular velocity were assessed. Subjects presenting mitral valve calcinosis, mitral valve prolapses and hypertensive were excluded by the investigation.

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**(P15)** Paradoxical Brain embolism from pulmonary fistulae the role of TCD

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**Background:** Paradoxical embolism through right-to-left shunt may be responsible for a number of cryptogenic strokes. Several abnormalities such as Inter-Auricular Communication, Patent Foramen Ovale (PFO) and Pulmonary Fistulae may be identified if clinical suspicion leads to specific examinations.

**Case Description:** We present a case of a 44 year old apparently healthy woman without known risk factors for stroke who experienced a sudden onset of visual field