

EUROECHO 9 –

SELECTED SESSIONS ON CONGENITAL HEART DISEASE

WEDNESDAY 7 DECEMBER 2005

COURSE ON MORPHOLOGY AND ECHOCARDIOGRAPHY OF CONGENITAL HEART DISEASES - JOINT SESSION WITH EAPC

09:00 - 10:30 *DONATELLO*

The segmental approach to logical diagnosis. Simple shunt lesions - diagnosis and imaging of interventions

Chairpersons: W.A. Helbing (Rotterdam, NL); E. Oechslin (Zurich, CH)

09:00	Introduction to the segmental approach: a pathologist point of view. S.Y. Ho (London, GB)	8
09:11	Segmental approach by echocardiography. E. Oechslin (Zurich, CH)	9
09:22	Anatomical aspects - simple shunt lesions / Atrial septal defect. S.Y. Ho (London, GB)	10
09:33	Echocardiography aspects of atrial septal defects. Typical cases. J.W. Roos-Hesselink (Rotterdam, NL)	11
09:44	Device closure of atrial septal defect and patent foramen ovale: what echo needs to provide. H. Baumgartner (Vienna, AT)	12
09:55	Ventricular septal defects: anatomy. G. Thiene (Padua, IT)	13
10:06	Echocardiographic diagnosis of ventricular septal defects: typical cases. J. Marek (London, GB)	14
10:17	Ventricular septal defects: the role of the echocardiographer during device closure. M. Carminati (San Donato, IT)	15

11:00 - 12:30 *DONATELLO*

Cyanotic heart disease and its treatment

Chairpersons: W.A. Helbing (Rotterdam, NL); E. Oechslin (Zurich, CH)

11:00	Anatomy of unrepaired Tetralogy of Fallot. S.Y. Ho (London, GB)	46
11:11	Imaging Tetralogy of Fallot: what to know before surgery? L. Mertens (Leuven, BE)	47

11:22	The changing surgical approach during the last 50 years. V. Hraska (Hamburg, DE)	48
11:33	Postoperative evaluation during follow-up: which imaging modality - echo or MRI? W.A. Helbing (Rotterdam, NL)	49
11:44	Anatomical aspects of transposition. G. Thiene (Padua, IT)	50
11:55	Longterm outcome and complications. A. Bozio (Lyon, FR)	51
12:06	Postoperative evaluation after atrial switch procedure. H. Baumgartner (Vienna, AT)	52
12:17	Postoperative evaluation after the arterial switch procedure. M.O. Vogt (Munich, DE)	53

14:00 - 15:30 **DONATELLO**

Complex congenital heart disease

Chairpersons: W.A. Helbing (Rotterdam, NL); E. Oechslin (Zurich, CH)

14:00	Univentricular hearts: the anatomical basis. S.Y. Ho (London, GB)	77
14:22	Imaging univentricular heart: some examples. K. Hakim (Halle/Saale, DE)	78
14:44	Imaging the Fontan patient: what do we need to know? H.P. Gildein (Munich, DE)	79
15:06	Surgery in adult congenital heart disease - pitfalls and challenges. R. Pretre (Zurich, CH)	80

THURSDAY 8 DECEMBER 2005

08:30 - 10:00 **BRUNELLESCHI**

Hands-on specimen demonstration: the pathology of genotyped hearts excised at transplantation

Chairpersons: E. Arbustini (Pavia, IT); M. Pasotti (Pavia, IT)

- Cypher/ZASP gene defect.
- Desmin storage and defect cardiomyopathy.
- LMNA gene defect.
- MYH7 gene defect.
- MYBPC3 gene defect.
- TTR amyloidosis.
- ApoA1 amyloidosis.
- Haemosiderosis.
- Lambda-light chain amyloidosis.
- Dystrophin gene defect.

- Sarcoidosis.
- Giant Cell myocarditis.
- Mitochondrial DNA defect.

Attendance at this session will be limited to 20 participants; please register in advance if possible.

11:00 - 12:30 **BRUNELLESCHI**

Hands-on specimen demonstration: the pathology of genotyped hearts excised at transplantation

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- Dystrophin gene defect.
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- Giant Cell myocarditis.
- Mitochondrial DNA defect.

Attendance at this session will be limited to 20 participants; please register in advance if possible.

11:00 - 12:30 **BOTTICELLI**

Pearls in Congenital Heart Disease - DICE session organised by the WG GUCH & AEPC

Chairpersons: H. Baumgartner (Vienna, AT); P. Hoffman (Warsaw, PL)

11:00	Unroofed coronary sinus with left persistent vena cava superior- an unusual cause of right heart failure in an adult. M.O. Vogt (Munich, DE)	332
11:11	Acquired AV-Block as first sign of mechanical aortic valve endocarditis - serial TTE and TEE studies. A. Kuhn (Cologne, DE)	333
11:22	Mass in right atrium after ASD closure. J. Ganame (Leuven, BE)	334
11:33	Late correction of DORV without pulmonary obstruction. A. Amaducci (Brescia, IT)	335

11:44	What does this strange color flow mean? Surprising diagnosis in a 60 year old patient. P. Caso (Naples, IT)	336
11:55	What would you recommend: pregnancy, re-operation, or none of the above? N. Jander (Bad Krozingen, DE)	337
12:06	Close? Yes, but by which approach? T. Lusawa (Warsaw, PL)	338
12:18	Why is this patient with atrial septal defect cyanotic? O.H. Balint (Budapest, HU)	339

14:00 - 15:30 DONATELLO

The right heart - Teaching course 3

Chairpersons: P. Pruszczyk (Warsaw, PL); H. Baumgartner (Vienna, AT)

14:22	Right ventricular anatomy and imaging planes. C. Basso (Padua, IT)	388
14:22	Right ventricular and tricuspid valve function. N. Masani (Cardiff, GB)	389
14:44	Right ventricular pressure and volume overload. P. Nihoyannopoulos (London, GB)	390
15:06	The systemic right ventricle. A. Chikermane (Birmingham, GB)	391

14:00 - 15:30 RAFFAELLO

Fetal echocardiography - Joint session with the Association for European Paediatric Cardiology

Chairpersons: L. Mertens (Leuven, BE); J. Dangel (Warsaw, PL)

14:00	Fetal heart function by blood pool and tissue Doppler. R.M. Oberhoffer (Munich, DE)	397
14:18	Diagnosis of fetal arrhythmias. G. Sharland (London, GB)	398
14:36	Intrauterine 3D echocardiography of complex congenital disease. J. Simpson (London, GB)	399
14:54	Monitoring fetal interventions. T. Kohl (Munster, DE)	400
15:12	Impact on outcome of pregnancy. D. Bonnet (Paris, FR)	401

16:30 - 18:00 **GIOTTO**

Recent research in the diagnosis of congenital heart disease - Abstract Session

Chairpersons: E. Oechslin (Zurich, CH); J. Marek (London, GB)

- 16:30 Echocardiographic follow-up of cardiac resynchronization therapy in congenital heart disease. 586
J. Janousek, V. Tomek, R A. Gebauer, V. Chaloupecky, J. Marek (Leipzig, DE; London, GB; Prague, CZ)
- 16:45 Cardiac function in children exposed to chemotherapy during intra-uterine life. 587
J. Ganame, P. Claus, K. Van Calsteren, J. D'hooge, F. Amant, L. Mertens (Leuven, BE)
- 17:00 Colour M-mode a novel non invasive method for assessment of pulmonary vascular resistance. 588
M. Elsayed, W. Elmallah, H. Attia, A. Mounir, A. Elfiky, H.M. Fereig Hamed (Cairo, EG)
- 17:15 Assessment of LV mass in congenital heart disease with real-time three-dimensional echocardiography. 589
A. Van Den Bosch, D. Robbers-Visser, B. Krenning, J.S. McGhie, W.A. Helbing, F.J. Meijboom, J.W. Roos-Hesselink (Rotterdam, NL)
- 17:30 Right ventricular radial and longitudinal function in patients with pulmonary regurgitation after surgically repaired tetralogy of fallot. 590
G. Pacileo, G. Di Salvo, A. Rea, M. Verrengia, G. Limongelli, T. Miele, M.G. Russo, R. Calabro (Naples, IT)
- 17:45 Live 3D echocardiography in infants and children: visualization of ventricular septal defects (VSD) in complex congenital heart disease. 591
U. Roemer, M.G. Hoch, R. Kozlik-Feldmann, S. Daebritz, H. Netz (Munich, DE)

08:30 - 12:30 POSTERS DISPLAY 1 - POSTER HALL

The right heart

- Value of NT-pro-BNP in the follow-up of patients with pulmonary hypertension. P210
A.T. Timoteo, A.M. Agapito, L. Sousa, M. Branco Sousa, A. Leal, F. Miranda, J.M. Quininha (Lisbon, PT)
- Increased ratio of right to left ventricular end-diastolic dimension is associated with the in-hospital development of ventricular arrhythmia in patients with right ventricular myocardial infarction. P211
E.-J. Cho, C.J. Kim, H.-J. Youn, H. Jung, H.K. Jeon, T. Rho, J.H. Kim, S.J. Hong (Seoul, KR)
- Non-invasive assessment of mean and systolic pulmonary pressure in athletes: a stress-echo study. P212
V. Di Tante, L. Toncelli, L. Stefani, G. Grippo, M.C. Vono, P. Manetti, B. Cappelli, G. Galanti (Florence, IT)

- Non-invasive estimation of central venous pressure in intensive care unit patients by using tissue Doppler imaging. P213
L.E. Sade, O. Gulmez, V. Simsek, S. Eroglu, M.B. Ozin, A. Yildirim, H.M. Muderrisoglu(Ankara, TR)
- Searching for optimal indices of right ventricular overload in prognosis prediction in patients with acute pulmonary embolism. P214
M. Szulc, G. Styczynski, M. Kostrubiec, A. Bochowicz, H. Gurba, A. Kuch-Wocial, A. Kaczynska, P. Pruszczyk (Warsaw, PL)
- The value of echocardiographic test with nitric oxide (NO) in assessment of vasodilator responsiveness in patients with idiopathic pulmonary arterial hypertension (IPAH). P215
A. Fijalkowska, J. Burakowski, M. Kurzyrna, G. Szewczyk, J. Kober, A. Torbicki (Warsaw, PL)
- Right-sided endocarditis in non-addicts: analysis of 38 cases. P216
Z. Wladika, M. Lengyel (Budapest, HU)
- Right atrial volume is a marker of right ventricular diastolic dysfunction: an ADEPT trial substudy. P217
J.A. Sallach, W.H.W. Tang, T. Porter, A.G. Borowski, M. Martin, R.W. Troughton, S. Bhavnani, A. Klein (Christchurch, NZ; Cleveland, St Louis, US)
- Impact of reperfusion time on right ventricular systolic and diastolic function in patients with first myocardial infarction and proximal occlusion of right coronary artery - tissue Doppler study. P218
M. Kidawa, J.D. Kasprzak, J.Z. Peruga, T. Wierzchowski, M. Krzeminska-Pakula (Lodz, PL)

14:00 - 18:00 POSTERS DISPLAY 2 - POSTER HALL

Congenital and pediatric heart disease.

- The role of two-dimensional transthoracic Doppler echocardiography to establish the site of drainage of coronary artery fistulas. Study of 29 patients. P427
C. Gingham, M. Rugina, M. Cozma, B.A. Popescu, I.M. Coman, D.E. Deleanu, E. Apetrei (Bucharest, RO)
- Orally administered endothelin-1 antagonist bosentan for pulmonary hypertension secondary to congenital heart disease (Eisenmenger syndrome). P428
M. D'Alto, B. Sarubbi, C.D. Vizza, E. Romeo, G. Santoro, A. Annunziata, M.G. Russo, R. Calabro (Naples, Rome, IT)
- Echocardiographic detection and complex therapeutic management of arrhythmias in fetal age. P429
M. D'Alto, M.G. Russo, B. Sarubbi, E. Romeo, D. Paladini, M. Felicetti, C. Ricci, R. Calabro (Naples, IT)
- Objectively measured daily physical activity has a relation with left ventricular size in young children. P430
M. Dencker, O. Thorsson, M.K. Karlsson, C. Linden, J. Svensson, L.B. Andersen, P. Wollmer (Copenhagen, DK; Malmo, SE; Oslo, NO)
- Quantification of regional left and right ventricular deformation indices in normal neonates by using strain rate and strain imaging. P431
J.L. Pena, M.G. Silva, C. Faria, V.M.C. Salemi, C. Mady, G.R. Sutherland (Belo Horizonte, Sao Paulo, BR; London, GB)

- Myocardial deformation properties in patients with aortic coarctation after successful repair are influenced by the age at surgical repair. P432
G. Di Salvo, G. Pacileo, M. Verrengia, G. Limongelli, A. Rea, A. Imperatore, P. Caso, R. Calabro (Naples, IT)
- A reduced myocardial acceleration during isovolumic contraction and systolic deformation are seen in children late after low dose anthracycline treatment. P433
J. Ganame, P. Claus, A. Uyttebroeck, M. Renard, J. D'hooge, B. Bijmens, M.H.M.L. Gewillig, L. Mertens (Leuven, BE)
- Assessment of ventricular desynchronization in patients with repaired tetralogy of Fallot by strain Doppler echocardiography. P434
A. Vitarelli, P. Franciosa, Y. Conde, E. Cimino, B.L. Nguyen, I. D'Angeli, S. D'Orazio, S. Rosanio (Galveston, US;Rome, IT)
- The left ventricular early diastolic blood-to-tissue time interval is longer in normal children - than in normal elderly adults - and instead resembles that of elderly ischemic heart disease patients. P435
C. Wallentin Guron, M. Mellander, A.-M. Edvardsson, B. Soderberg, I. Ostman-Smith (Gothenburg, SE)
- Ventricular remodeling and function in univentricular heart: new findings from new echocardiographic techniques. P436
G. Di Salvo, G. Pacileo, A. Rea, M. Verrengia, G. Limongelli, T. Miele, P. Caso, R. Calabro (Naples, IT)
- The prominence of the right A-V annulus as a new echocardiographic sign of Ebstein malformation: anatomical and 2d-echocardiographic correlates. P437
P. Marcos-Alberca Moreno, J.A. Cabrera, M. Rey, J. Higuera Nafria, A. Pinero, R. Rabago, J. Farre (Madrid, ES)
- Value of NT-pro BNP and Tei index for the evaluation of right ventricle after repair of Tetralogy of Fallot. P438
S.M.R. Amorim, M.C. Cruz, F. Macedo, P. Bastos, F. Rocha Goncalves (Porto, PT)
- The heart remodelling in children and youth with congenital aortic stenosis. P439
A.M. Siwinska, A. Nowak, W. Bobkowski, O. Trojnarska, B. Mrozinski, M. Wojtalik (Poznan, PL)
- Sequential changes in longitudinal and radial myocardial deformation in the normal neonate heart. P440
J.L. Pena, M.G. Silva, C. Faria, V.M.C. Salemi, C. Mady, G.R. Sutherland (Belo Horizonte, Sao Paulo, BR; London, GB)
- Adult patients with patent atrial septal defect: BNP and cardiopulmonary exercise test in the evaluation of exercise capacity in patients over 30 years of age. P441
O. Trojnarska, A. Szyszka, E. Straburzynska-Migaj, A. Gwizdala, Z. Oko-Sarnowska, A. Cieslinski (Poznan, PL)
- Atrial septal defect or interatrial communication? P442
J.M. Oliver Ruiz, P. Gallego Garcia De Vinuesa, A. Gonzalez, A. Sanchez Recalde, A. Aroca (Madrid, Sevilla, ES)
- Reduced right ventricular deformation in children with severe pulmonary regurgitation after tetralogy of fallot correction is associated with reduced exercise capacity. P443
B. Eyskens, J. Ganame, A. Taylor, P. Claus, J. D'hooge, J. Bogaert, B.W. Eidem, L. Mertens (Houston, US; Leuven, Stombeek-Beuer, BE; London, GB)
- A shift from circumferential to longitudinal contraction in the left ventricle supporting the pulmonary circulation. P444

- E. Pettersen, H.J. Smith, B. Smevik, H. Lindberg, O.A. Smiseth, K. Andersen (Oslo, NO)
 Comparison of the left ventricular function in children successfully operated for aortic coarctation in neonatal period and at older age using strain rate and strain imaging. P445
- T. Florianczyk, B. Werner (Warsaw, PL)
 Is echocardiography a good exam to predict the fate of the patent ductus arteriosus in preterm infants? P446
- S. Morhy, Z.S. Ribeiro, T. Wilberg, G.M. Tavares, A. Lianza, A. Yoshiko, R. Zaneta, A. Deutsch (Sao Paulo, BR)
 The value of right atrial and right ventricle function in predicting cardiopulmonary capacity in patients with atrial septal defect. P447
- E. Suchon, P. Podolec, W. Tracz, L. Tomkiewicz Pajak (Krakow, PL)
 Vascular anomalies associated with aortic coarctation. P448
- I.A. Ghiorghiu, O. Rica, P. Platon, I. Arsenescu, M. Serban, I. Lupescu, B.A. Popescu, C. Ginghina (Bucharest, RO)
 Age-dependency of cardiac and neuromuscular findings in left ventricular noncompaction. P449
- C. Stoellberger, M. Winkler, G. Blazek, J. Finsterer (Vienna, AT)
 Adult patients with Ebstein anomaly-cardiopulmonary exercise test and natriuretic hormone type B. P450
- O. Trojnarska, A. Szyszka, A. Gwizdala, Z. Oko-Sarnowska (Poznan, PL)
 Evaluation of right ventricular function in patients with post-operative pulmonary regurgitation by transesophageal echocardiography. P451
- A. Vitarelli, Y. Conde, E. Cimino, S. Stellato, V. Padella, D. Battaglia, F. Caranci, M. Cortes Morichetti (Paris, FR; Rome, IT)
 Left ventricular false tendons and innocent heart murmurs of childhood. P452
- I. Germanakis, R. Perakaki, F. Parthenakis, A. Patrianakos, P.E. Vardas, M. Kalmanti (Heraklion, GR)
 Adults with total correction of tetralogy of Fallot- cardiopulmonary exercise testing and plasma BNP levels. P453
- O. Trojnarska, A. Gwizdala, A. Szyszka, Z. Oko-Sarnowska (Poznan, PL)
 Atrial strain rate and arrhythmias in patients after ASD closure. P454
- G. Di Salvo, G. Pacileo, M. Verrengia, G. Limongelli, A. Rea, T. Miele, P. Caso, R. Calabro (Naples, IT)
 Infective endocarditis in adolescents and adults with congenital heart disease: clinical and echocardiographic data. P455
- J. Gomes Feliciano, A.M. Agapito, L.M.M. Branco, L. Sousa, N. Pelicano, A. Fiarresga, J. Oliveira, J.M. Quininha (Lisbon, PT)

FRIDAY 9 DECEMBER 2005

08:30 - 10:00 **LEONARDO**

Cardiomyopathies and Heart Failure 1. The heart in skeletal myopathies

Chairpersons: E. Arbustini (Pavia, IT); D.V. Cokkinos (Athens, GR)

08:30	Insights from animal models of inherited cardiomyopathies.	612
	G.A. Derumeaux (Lyon, FR)	
08:48	Myotonic dystrophy.	613
	D. Vinereanu (Bucharest, RO)	
09:06	Friedreich's ataxia.	614
	D.P. Dutka (Cambridge, GB)	
09:24	Emery-Dreifuss muscular dystrophy.	615
	N. Giatrakos (London, GB)	
09:42	Duchenne and Becker muscular dystrophies.	616
	C. Meune (Paris, FR)	

11:00 - 12:30 **RAFFAELLO**

**Can we really measure contractility? New isovolumetric tissue Doppler indices
Joint session with the International Cardiac Doppler Society and AEPC**

Chairpersons: A. Pearlman (Seattle, US); L. Mertens (Leuven, BE)

11:00	Experimental validation and clinical applications: it works!	789
	M.F. Vogel (Munich, DE)	
11:18	Clinical applications: be careful!	790
	E. Lyseggen (Oslo, NO)	
11:36	IVA in children with heart disease.	791
	L.B. Pauliks (Boston, US)	
11:54	Strain rate acceleration.	792
	R. Rusk (Cambridge, GB)	
12:12	Contractile function assessed by CMR.	793
	S. Prasad (London, GB)	

16:30 - 18:00 **RAFFAELLO**

The right ventricle and pulmonary hypertension

Chairpersons: N. Galie (Bologna, IT); G. Van Camp (Brussels, BE)

16:30	Genetics and differential diagnosis of PHT.	1026
	M. Kurzyna (Warsaw, PL)	
16:52	Selection of responders to disease modifying treatment.	1027
	O. Sitbon (Clamart, FR)	

17:14	Follow-up and how best to assess PHT. J. Gibbs (London, GB)	1028
17:36	Complementary contribution of CMR and Echo. A.C. Van Rossum (Amsterdam, NL)	1029

10:00 - 11:00 MODERATED POSTERS 2

The posters will be discussed in a dedicated area of the poster zone and chaired by two chairpersons from 10:00 to 11:00.

New aspects of congenital heart diseases.

Chairpersons: H. Baumgartner (Vienna, AT); W.A. Helbing (Rotterdam, NL)

Isolated cleft of the posterior mitral leaflet, an unrecognised cause of mitral regurgitation. C.A. Wyss, E. Oechslin, M. Abay, R. Jenni (Kuesnacht, Zurich, CH)	P766
Evaluation of left ventricular mass and its relationship with QT dispersion (QTd) and corrected QT dispersion (QTcd) in children with congenital aortic valve stenosis. A. Piorecka-Makula, B. Werner, T. Florianczyk, B. Kucinska (Warsaw, PL)	P767
Natural history of pulmonary hypertension in atrial septal defect in adults and its effect on interventional outcome. R. Rosenhek, H. Gabriel, M. Heger, F. Rader, T. Binder, G. Maurer, P. Probst, H. Baumgartner (Vienna, AT)	P768
Rapid decrease and follow-up of right atrial size after secundum atrial septal defect closure with Amplatzer septal occluder in children. B. Kucinska, B. Werner, M. Wroblewska-Kaluzewska, B. Werner (Warsaw, PL)	P769
Delayed systolic strain and ventricular dysfunction in young adults with Fontan circulation. M.H. Sander, L. Kapusta, F.W.A. Verheugt, A.P.J. van Dijk (Nijmegen, NL)	P770
Coronary sinus atrial septal defect: clinical profile, diagnosis and management in 29 patients. C.H. Attenhofer Jost, H. Connolly, G.K. Danielson, C.A. Warnes, J.A. Dearani, F.J. Puga, A.J. Tajik (Rochester, US; Zurich, CH)	P771
C-terminal brain natriuretic peptide changes in adults within 6 months after ASD II closure with Amplatzer septal occluder. T. Lusawa, M. Konka, J. Janas, M. Demkow, P. Hoffman (Warsaw, PL)	P772
Echocardiographic assessment of mechanical asynchrony in adult patients after repair of tetralogy of Fallot. A. Uebing, S.V. Babu-Narayan, G.P. Diller, O. Goktekin, M.Y. Henein, D.G. Gibson, M.A. Gatzoulis, W. Li (London, GB)	P773
Surgical validation of real-time 3-D echocardiographic assessment of atrioventricular septal defects. A. Van Den Bosch, A. Ten Harkel, J.S. McGhie, J.W. Roos-Hesselink, M.L. Simoons, A.J.J.C. Bogers, F.J. Meijboom (Rotterdam, NL)	P774

SATURDAY 10 DECEMBER 2005

08:30 - 10:00 RAFFAELLO

Fabry Disease

Supported by TKT Europe in the form of an Unrestricted Educational Grant

Chairpersons: J.L. Zamorano Gomez (Madrid, ES); M. Zuber (Othmarsingen, CH)

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|-------|---|------|
| 08:30 | Pathophysiology and diagnosis by conventional echo.
P.M. Elliott (London, GB) | 1057 |
| 08:52 | Tissue Doppler and strain rate imaging.
F. Weidemann (Wurzburg, DE) | 1058 |
| 09:14 | Female carriers and risk of myocardial abnormalities.
M. Pieroni (Milan, IT) | 1059 |
| 09:36 | Results of enzyme replacement on cardiac manifestations.
A. Linhart (Prague, CZ) | 1060 |

11:00 - 12:30 DONATELLO

Cardiomyopathies - Teaching course 10

Chairpersons: M.J. Andrade (Lisbon, PT); G. Gullace (Malgrate, IT)

- | | | |
|-------|---|------|
| 11:00 | Classification and echocardiographic evaluation.
H. Rakowski (Toronto, CA) | 1180 |
| 11:30 | Hypertrophic cardiomyopathy - correlations between phenotype
and genotype.
D. Pellerin (London, GB) | 1181 |
| 12:00 | Restrictive cardiomyopathy or pericardial constriction?
L.D. Gillam (Hartford, US) | 1182 |