

EECP[®] Therapy

Bibliography

Journal Articles

Predictors of Benefit in Angina Patients One Year After Completing Enhanced External Counterpulsation: Initial Responders to Treatment Versus Nonresponders
Lawson WE, Hui JCK, Kennard ED, Barsness G, Kelsey SF.
Cardiology. 2005 Apr 13;103(4):201-206

Treating Heart Failure With Enhanced External Counterpulsation (EECP): Design of the Prospective Evaluation of EECP in Heart Failure (PEECH) Trial
Feldman AM, Silver AM, Francis GS, de Lame P, Parmley WW.
Journal of Cardiac Failure. 2005 Apr;11(3):240-245.

Enhanced External Counterpulsation Improves Systolic Function by Echocardiography in Patients with Coronary Artery Disease
Arora RR, Lopez S, Saric M.
Heart Lung. 2005 Mar-Apr;34(2):122-125.

An Update on Enhanced External Counterpulsation
Shea ML, Conti CR, Arora RR
Clinical Cardiology. 2005 Mar;28(3):115-118.

Enhanced External Counterpulsation: A New Technique to Augment Renal Function in Liver Cirrhosis
Werner D, Trägner P, Wawer A, Porst H, Werner DG, Gross P.
Nephrology Dialysis Transplantation. 2005 Mar 23; [Epub ahead of print].

Angina Patients with Diastolic Versus Systolic Heart Failure Demonstrate Comparable Immediate and One-Year Benefit from Enhanced External Counterpulsation
Lawson WE, Silver MA, Hui JCK, Kennard ED, Kelsey SF.
Journal of Cardiac Failure. 2005 Feb;11(1):61-66.

Frequency and Efficacy of Repeat Enhanced External Counterpulsation for Stable Angina Pectoris (from the International EECP Patient Registry)
Michaels AD, Barsness GW, Soran O, Kelsey SF, Kennard ED, Hui JCK, and Lawson WE for the International EECP Patient Registry Investigators.
American Journal of Cardiology. 2005 Feb;95(3):394-397

Enhanced External Counterpulsation Does Not Compromise Cerebral Autoregulation
Marthol H, Werner D, Brown CM, Hecht M, Daniel WG, Hilz MJ.
Acta Neurologica Scandinavica. 2005 Jan;111(1):34-41.

External Counterpulsation in the Treatment of Patients with Ischemic Heart Disease
Sergienko IV, Ezhov MV, Malakhov VV, Gabrusenko SA, Naumov VG.
Kardiologiia. 2004;44(11):92-96.

Enhanced External Counterpulsation Does Not Alter Arterial Stiffness in Patients with Angina
Dockery F, Rajkumar C, Bulpitt CJ, Hall RJ, Bagger JP.
Clinical Cardiology. 2004 Dec;27:689-692.

Effects of Enhanced External Counterpulsation on Hemodynamics and its Mechanism
Taguchi I, Ogawa K, Kanaya T, Matsuda R, Kuga H, Nakatsugawa M.
Circulation Journal. 2004 Nov;68(11):1030-1034.

Angina Pectoris: A Review of Current and Emerging Therapies
Parker JO.
American Journal of Managed Care. 2004 Oct;10(11 Suppl):S332-338.

Current and Future Treatment Strategies for Refractory Angina
Yang EH, Barsness GW, Gersh BJ, Chandrasekaran K, Lerman A.
Mayo Clinic Proceedings. 2004 Oct;79(10):1284-1292.

Enhanced External Counterpulsation
Brosche TA, Middleton, SK, Boogaard RG.
Dimensions of Critical Care Nursing. 2004 Sep/Oct;23(5):208-213.

Accelerated Reperfusion of Poorly Perfused Retinal Areas in Central Retinal Artery Occlusion and Branch Retinal Artery Occlusion After a Short Treatment with Enhanced External Counterpulsation
Werner D, Michalk F, Harazny J, Hugo C, Daniel WG, Michelson G.
Retina. 2004 Aug;24(4):541-547.

Effectiveness of Enhanced External Counterpulsation in Patients with Left Main Disease and Angina
Lawson WE, Hui JCK, Barsness GW, Kennard ED, Kelsey SF for the IEPR Investigators
Clinical Cardiology. 2004 Aug;27(8):459-463.

Enhanced External Counterpulsation Therapy: Significant Clinical Improvement without Electrophysiologic Remodeling
Henrickson CA, Chandra-Strobos N.
Annals of Noninvasive Electrocardiology. 2004 Jul;9(3):265-269.

Enhanced External Counterpulsation Improves Skin Oxygenation and Perfusion
Hilz MJ, Werner D, Marthol H, Flachskampf FA, Daniel WG.
European Journal of Clinical Investigation. 2004 Jun;34(6):385-91.

Successful Treatment of Symptomatic Coronary Endothelial Dysfunction with Enhanced External Counterpulsation
Bonetti PO, Gadasalli SN, Lerman A, Barsness GW.
Mayo Clinic Proceedings. 2004 May;79(5):690-692.

Enhanced External Counterpulsation in Ischemic Heart Disease and Congestive Heart Failure
Mielniczuk L, da Silva LB, Haddad H.
Canadian Medical Association Journal. 2004 Apr 13;170(8):1223-1224.

Improvement of Oxygen Metabolism in Ischemic Myocardium as a Result of Enhanced External Counterpulsation with Heparin Pretreatment for Patients with Stable
Masuda D, Fujita M, Nohara R, Matsumori A, Sasayama S.
Heart Vessels. 2004 Mar;19(2):59-62.

Effect of Enhanced External Counterpulsation on Dobutamine-induced Left Ventricular Wall Motion Abnormalities in Severe Chronic Angina Pectoris
Bagger JP, Hall RJ, Koutroulis G, Nihoyannopoulos P.
American Journal of Cardiology. 2004 Feb 15;93(4):465-467.

Two-Year Outcomes After Enhanced External Counterpulsation for Stable Angina Pectoris
(from the International Patient Registry [IEPR])

Michaels AD, Linnemeier G, Soran O, Kelsey SF, Kennard ED.
American Journal of Cardiology. 2004 Feb 15;93(4):461-464.

A New Treatment Modality in Heart Failure Enhanced External Counterpulsation (EECP)
Soran O.

Cardiology in Review. 2004 Jan-Feb;12(1):15-20.

Enhanced External Counterpulsation as Initial Revascularization Treatment for Angina
Refractory to Medical Therapy

Fitzgerald CP, Lawson WE, Hui JC, Kennard ED; IEPR Investigators.
Cardiology. 2003 Nov;100(3):129-35

Functional Status Improvement After Enhanced External Counterpulsation (EECP) for Treatment of
Chronic Angina Pectoris

Kennard ED, Linnemeier G, Kelsey SF.

*Proceedings of the 5th International Congress on Coronary Artery Disease –Frontiers in Coronary
Artery Disease*. 2003 Oct 19-21;(Florence, Italy):187-189.

Enhanced External Counterpulsation for the Relief of Angina in Patients with Diabetes: Safety,
Efficacy and 1-Year Clinical Outcomes

Linnemeier G, Rutter MK, Barsness G, Kennard ED, Nesto RW; IEPR Investigators.
American Heart Journal. 2003 Sep;146(3):453-458.

Analysis of Baseline Factors Associated with Reduction in Chest Pain in Patients with Angina Pectoris
Treated by Enhanced External Counterpulsation

Lawson WE, Kennard ED, Hui JCK, Holubkov R, Kelsey SF.
American Journal of Cardiology. 2003 Aug 15;92(4):439-443.

Enhanced External Counterpulsation for Refractory Angina Pectoris

Sinvhal RM, Gowda RM, Khan IA.
Heart. 2003 Aug;89(8):830-833.

Enhanced External Counterpulsation for Ischemic Heart Disease: What's Behind the Curtain?

Bonetti PO, Holmes DR Jr, Lerman A, Barsness GW.

Journal of the American College of Cardiology. 2003 Jun 4;41(11):1918-1925.

Exercise Capability and Myocardial Perfusion in Chronic Angina Patients Treated with
Enhanced External Counterpulsation

Tartaglia J, Stenerson Jr J, Charney R, Ramasamy S, Fleishman BL, Gerardi P, Hui JCK.
Clinical Cardiology. 2003 Jun;(26):287-290.

Changes of Cerebral Blood Flow Velocities During Enhanced External Counterpulsation

Werner D, Marthol H, Brown CM, Daniel WG, Hilz MJ.

Acta Neurologica Scandinavica. 2003 Jun;107(6):405-411.

Enhanced External Counterpulsation Improves Endothelial Function in Patients with Symptomatic
Coronary Artery Disease

Bonetti PO, Barsness GW, Keelan PC, Schnell TI, Pumper GM, Kuvin JT, Schnall RP, Holmes DR,
Higano ST, Lerman A.

Journal of the American College of Cardiology. 2003 May 21;41(10):1761-1768.

Enhanced External Counterpulsation in the Management of Angina in the Elderly

Linnemeier G, Michaels AD, Soran O, Kennard ED; International EECP Registry (IEPR) Investigators.
American Journal of Geriatric Cardiology. 2003 Mar-Apr;12(2):90-96.

Enhanced External Counterpulsation

Lam L, Mahmood S.

Asian Cardiovascular & Thoracic Annals. 2003 Mar;11(1):92-94.

A Historical Overview of Enhanced External Counterpulsation

DeMaria AN.

Clinical Cardiology. 2002 Dec;25(12 Suppl 2):II3-5.

A Review of Enhanced External Counterpulsation Clinical Trials

Beller GA.

Clinical Cardiology. 2002 Dec;25(12 Suppl 2):II6-10.

Enhanced External Counterpulsation: Mechanism of Action

Feldman AM.

Clinical Cardiology. 2002 Dec;25(12 Suppl 2):II11-15.

Current Use of Enhanced External Counterpulsation and Patient Selection

Lawson WE.

Clinical Cardiology. 2002 Dec;25(12 Suppl 2):II16-21.

Treatment Options for Angina Pectoris and the Future Role of Enhanced External Counterpulsation

Holmes DR Jr.

Clinical Cardiology. 2002 Dec;25(12 Suppl 2):II22-25.

Ongoing and Planned Studies of Enhanced External Counterpulsation

Conti CR.

Clinical Cardiology. 2002 Dec;25(12 Suppl 2):II26-28.

Enhanced External Counterpulsation - A Therapeutic Option for Patients with Chronic Cardiovascular Problems

Linnemeier G.

Journal of Cardiovascular Management. 2002 Nov-Dec;13(6):20-25.

Enhanced External Counterpulsation as Treatment for Chronic Angina in Patients with Left Ventricular Dysfunction: A Report from the International EECP Patient Registry (IEPR)

Soran O, Kennard ED, Kelsey SF, Holubkov R, Strobeck J, Feldman AM.

Congestive Heart Failure. 2002 Nov-Dec;8(6):297-302.

Left Ventricular Systolic Unloading and Augmentation of Intracoronary Pressure and Doppler Flow During Enhanced External Counterpulsation

Michaels AD, Accad M, Ports TA, Grossman W.

Circulation. 2002 Sep 3;106(10):1237-1242.

Experience with Enhanced External Counterpulsation (EECP) in Coronary Artery Disease

Crawford LE.

Today's Therapeutic Trends. 2002;20(3):243-252.

Enhanced External Counterpulsation in Patients with Heart Failure: A Multicenter Feasibility Study

Soran O, Fleishman B, Demarco T, Grossman W, Schneider VM, Manzo K, de Lame PA,

Feldman AM.

Congestive Heart Failure. 2002 Jul-Aug;8(4)204-8, 227.

Relation of the Pattern of Diastolic Augmentation During a Course of Enhanced External Counterpulsation (EECP) to Clinical Benefit [from the International EECP Patient Registry (IEPR)]
Lakshmi MV, Kennard ED, Kelsey SF, Holubkov R, Michaels AD.
American Journal of Cardiology. 2002 Jun 1;89(11):1303-1305.

Comparison of Patients Undergoing Enhanced External Counterpulsation and Percutaneous Coronary Intervention for Stable Angina Pectoris
Holubkov R, Kennard ED, Foris JM, Kelsey SF, Soran O, Williams DO, Holmes Jr. DR.
American Journal of Cardiology. 2002 May 15;89:1182-1186.

Effects of Enhanced External Counterpulsation on Stress Radionuclide Coronary Perfusion and Exercise Capacity in Chronic Stable Angina Pectoris
Stys TP, Lawson WE, Hui JCK, Fleishman B, Manzo K, Strobeck JE, Tartaglia J, Ramasamy S, Suwita R, Zheng ZS, Liang H, Werner D.
American Journal of Cardiology. 2002 Apr 1;89(7):822-824.

Effects of Enhanced External Counterpulsation on Health-Related Quality of Life Continue 12 Months After Treatment: A Substudy of the Multicenter Study of Enhanced External Counterpulsation
Arora RR, Chou TM, Jain D, Fleishman B, Crawford L, McKiernan T, Nesto R, Ferrans CE, Keller S.
Journal of Investigative Medicine. 2002 Jan;50(1):25-32.

Acute and Chronic Hemodynamic Effects of Enhanced External Counterpulsation in Patients with Angina Pectoris
Arora RR, Carlucci ML, Malone AM, Baron NV.
Journal of Investigative Medicine. 2001 Nov;49(6):500-504.

Acute Hemodynamic Effects and Angina Improvement with Enhanced External Counterpulsation
Stys T, Lawson WE, Hui JCK, Lang G, Liuzzo J, Cohn PF.
Angiology. 2001 Oct;52(10):653-658.

A Report from the International Enhanced External Counterpulsation Registry (IEPR)
Holubkov R, Kennard E, Kelsey S, Soran O.
Advances in Coronary Artery Diseases-4th International Congress on Coronary Artery Disease. 2001 Oct 21-24;(Prague, Czech Republic):387-391.

Benefit and Safety of Enhanced External Counterpulsation in Treating Coronary Artery Disease Patients with a History of Congestive Heart Failure
Lawson WE, Kennard ED, Holubkov R, Kelsey SF, Strobeck JE, Soran O, Feldman AM.
Cardiology. 2001;96(2):78-84.

Changes in Ocular Blood Flow Velocities During External Counterpulsation in Healthy Volunteers and Patients with Atherosclerosis
Werner D, Michelson G, Harazny J, Michalk F, Voigt JU, Daniel WG.
Graefes' Archive for Clinical and Experimental Ophthalmology. 2001 Aug;239(8):599-602.

Enhanced External Counterpulsation Improved Myocardial Perfusion and Coronary Flow Reserve in Patients with Chronic Stable Angina; Evaluation by ¹³N-Ammonia Positron Emission Tomography
Masuda D, Nohara R, Hirai T, Kataoka K, Chen LG, Hosokawa R, Inubushi M, Tadamura E, Fujita M, Sasayama S.
European Heart Journal. 2001 Aug;22(16):1451-1458.

Safety and Effectiveness of Enhanced External Counterpulsation in Improving Angioplasty Restenosis
Stys TP, Lawson WE, Hui JCK, Tartaglia JJ, Subramanian R, Du ZM, Zhang MQ.
Proceedings of the 2nd International Congress on Heart Disease – New Trends in Research, Diagnosis and Treatment (International Academy of Cardiology). 2001 Jul 21-24;(Washington DC, USA):369-372.

Effects of Enhanced External Counterpulsation on Renin-Angiotensin System on Experimental AMI
Lu L, Zheng ZS, Wu WK, Lawson WE, Hui JCK.

Proceedings of the 2nd International Congress on Heart Disease – New Trends in Research, Diagnosis and Treatment (International Academy of Cardiology). 2001 Jul 21-24;(Washington DC, USA):275-279.

Predictors of Adverse Outcomes in Treating Angina Patients with Enhanced External Counterpulsation
Lawson WE, Fleishman B, Manzo K, Kennard ED, Holubkov R, Kelsey SF.

Proceedings of the 2nd International Congress on Heart Disease – New Trends in Research, Diagnosis and Treatment (International Academy of Cardiology). 2001 Jul 21-24;(Washington DC, USA):231-234.

The International EECF Patient Registry (IEPR): Design, Methods, Baseline Characteristics and Acute Results

Barsness G, Feldman AM, Holmes Jr. DR, Holubkov R, Kelsey SF, Kennard ED.
Clinical Cardiology. 2001 Jun;24(6):435-442.

Does Higher Diastolic Augmentation Predict Clinical Benefit from Enhanced External Counterpulsation?: Data from the International EECF Patient Registry (IEPR)

Michaels AD, Kennard ED, Kelsey SE, Holubkov R, Soran O, Spence S, Chou TM.
Clinical Cardiology. 2001 Jun;24(6):453-458.

Numerical Simulation of Enhanced External Counterpulsation

Ozawa ET, Bottom KE, Xiao X, Kamm RD.
Annals of Biomedical Engineering. 2001 Apr;29(4):284-297.

Psychosocial Effects of Enhanced External Counterpulsation in the Angina Patient: A Second Study

Springer S, Fife A, Lawson W, Hui JCK, Jandorf L, Cohn PF, Fricchione G.
Psychosomatics. 2001 Mar-Apr;42(2):124-132.

Enhanced External Counterpulsation in Unrevascularizable Patients

Barsness GW.
Current Interventional Cardiology Reports. 2001 Feb;3(1):37-43.

Enhanced External Counterpulsation Improves Exercise Tolerance, Reduces Exercise-Induced Myocardial Ischemia and Improves Left Ventricular Diastolic Filling in Patients with Coronary Artery Disease

Urano H, Ikeda H, Ueno T, Matsumoto T, Murohara T, Imaizumi T.
Journal of the American College of Cardiology. 2001 Jan;37(1):93-99.

Enhanced External Counterpulsation for Chronic Myocardial Ischemia

Lawson WE, Hui JCK.
The Journal of Critical Illness. 2000 Nov;15(11):629-636.

Comparison of Hemodynamic Effects of Enhanced External Counterpulsation and Intra-Aortic Balloon Pumping in Patients with Acute Myocardial Infarction

Taguchi I, Ogawa K, Oida A, Abe S, Kaneko N, Sakio H.
American Journal of Cardiology. 2000 Nov 15;86(10):1139-1141.

Treatment Benefit in the Enhanced External Counterpulsation Consortium

Lawson WE, Hui JCK, Lang G.
Cardiology. 2000;94(1):31-35.

Noninvasive Revascularization by Enhanced External Counterpulsation:

A Case Study and Literature Review

Singh M, Holmes Jr. DR, Tajik AJ, Barsness GW.
Mayo Clinic Proceedings. 2000 Sep;75(9):961-965.

Long-Term Prognosis of Patients with Angina Treated with Enhanced External Counterpulsation:

Five-Year Follow-Up Study

Lawson WE, Hui JCK, Cohn PF.
Clinical Cardiology. 2000 Apr;23(4):254-258.

Heparin and Angiogenic Therapy

Fujita M.
European Heart Journal. 2000 Feb;21(4):270-274.

EECP Therapy Continues to Demonstrate Potential as a Treatment for Chronic Angina

Lang M.
Cardiovascular Disease Management. 1999 Nov.

Pneumatic External Counterpulsation: A New Noninvasive Method to Improve Organ Perfusion

Werner D, Schneider M, Weise M, Nonnast-Daniel B, Daniel WG.
American Journal of Cardiology. 1999 Oct 15;84(8):950-952

External Counterpulsation Increases Capillary Density During Experimental Myocardial Infarction

Huang W, Chen YC, Zheng ZS, Zhong WF, Lawson W, Hui J.
Reprinted from the International Proceedings Division of the XXI Congress of the European Society of Cardiology. 1999 Aug 28-Sep 1; Barcelona, Spain:349-353.

Enhanced External Counterpulsation: The Howard County Experience in the First 18 Patients

Gloth S, Oken HA.
Maryland Medical Journal. 1999 Jul-Aug;48(4):155-156.

Enhanced External Counterpulsation

Caldwell CR, St. Pierre M, Talley JD.
Journal of the Arkansas Medical Society. 1999 Jul;96(2):54-56.

Treatment of Stable Angina

Thadani U.
Current Opinion in Cardiology. 1999 Jul;14(4):349-358.

The Multicenter Study of Enhanced External Counterpulsation (MUST-EECP): Effect of EECP on Exercise-Induced Myocardial Ischemia and Anginal Episodes

Arora RR, Chou TM, Jain D, Fleishman B, Crawford L, McKiernan T, Nesto R.
The Journal of the American College of Cardiology. 1999 Jun;33(7):1833-1840.

Improvement of Regional Myocardial and Coronary Blood Flow Reserve in a Patient Treated with Enhanced External Counterpulsation: Evaluation by Nitrogen-13 Ammonia PET

Masuda D, Nohara R, Inada H, Hirai T, Li-Guang C, Kanda H, Inubushi M, Tadamura E, Fujita M, Sasayama S.
Japanese Circulation Journal. 1999 May;63(5):407-411.

Enhanced External Counterpulsation in the Management of Patients with Cardiovascular Disease

Soran O, Crawford LE, Schneider VM, Feldman AM.
Clinical Cardiology. 1999 Mar;22(3):173-178.

Emerging Treatments for Refractory Angina

Cohn PF.

American College of Cardiology - Current Journal Review. 1999;Jan 2;8(1):44-46.

Enhanced External Counterpulsation as a New Treatment Modality for Patients with Erectile Dysfunction

Froschermaier SE, Werner D, Leike S, Schneider M, Waltenberger J, Daniel WG, Wirth MP.

Urologia Internationalis. 1998;61(3):168-171.

Prior Revascularization Increases the Effectiveness of Enhanced External Counterpulsation

Lawson WE, Hui JCK, Guo T, Burger L, Cohn PF.

Clinical Cardiology 1998 Nov;21(11):841-844.

Maximizing the Hemodynamic Benefit of Enhanced External Counterpulsation

Suresh K, Simandl S, Lawson WE, Hui JCK, Lillis O, Burger L, Guo T, Cohn PF.

Clinical Cardiology. 1998 Sep;21(9):649-653.

Enhanced External Counterpulsation

Chou TM.

ACC Educational Highlights. 1998 Summer:6-9.

Historical Review of the Development of Enhanced External Counterpulsation Technology and its Physiologic Rationale

Soroff HS, Hui JCK, Giron F.

Cardiovascular Reviews and Reports. 1997 Nov;18(11):34-36, 39.

Case Studies: Enhanced External Counterpulsation

Tartaglia J, Stenerson JF.

Cardiovascular Reviews and Reports. 1997 Nov;18(11):26, 29-33.

The Emerging Role of Enhanced External Counterpulsation in Cardiovascular Disease Management

Strobeck JE, Baklajian R, Hannon JC.

Cardiovascular Reviews and Reports. 1997 Nov;18(11):20-25.

Psychosocial Aspects of Enhanced External Counterpulsation

Fricchione GL, Hui JCK, Fife A, Jandorf L, Vaccaro B, Burger L, Lawson WE, Cohn P.

Cardiovascular Reviews and Reports. 1997 Oct;18(10):37-41.

Enhanced External Counterpulsation: U.S. Clinical Research

Lawson WE, Cohn PF, Hui JCK, Burger L, Guo T, Soroff H.

Cardiovascular Reviews and Reports. 1997 Oct;18(10):25-29.

Enhanced External Counterpulsation: A New Therapeutic Option for Patients Who Have Failed Coronary Angioplasty and/or Bypass Surgery

Cohn PF, Lawson WE, Burger L, Hui JCK.

Cardiovascular Reviews and Reports. 1997;18(5):10-17.

New Therapy Provides Non-Invasive Revascularization

Burger L.

Cath-Lab Digest. 1997;5(1):1-4.

Enhanced External Counterpulsation as an Adjunct to Revascularization in Unstable Angina

Lawson WE, Hui JCK, Oster ZH, Zheng ZS, Cabahug C, Katz JP, Dervan JP, Burger L, Jiang L, Soroff HS, Cohn PF.

Clinical Cardiology. 1997 Feb;20:178-180.

Improved Exercise Tolerance Following Enhanced External Counterpulsation: Cardiac or Peripheral Effect?

Lawson WE, Hui JCK, Zheng ZS, Burger L, Jiang L, Lillis O, Oster Z, Soroff H, Cohn PF.
Cardiology. 1996 Jul-Aug;87(4):271-275.

Can Angiographic Findings Predict which Coronary Patients will Benefit from Enhanced External Counterpulsation?

Lawson WE, Hui JCK, Zheng ZS, Burger L, Jiang L, Lillis O, Soroff HS, Cohn PF.
American Journal of Cardiology. 1996 May 15;77(12):1107-1109.

Psychosocial Effects of Enhanced External Counterpulsation in the Angina Patient

Fricchione GL, Jaghab K, Lawson W, Hui JCK, Jandorf L, Zheng ZS, Cohn PF, Soroff H.
Psychosomatics. 1995 Sep-Oct;36(5):494-497.

Three-Year Sustained Benefit from Enhanced External Counterpulsation in Chronic Angina Pectoris

Lawson WE, Hui JCK, Zheng ZS, Oster Z, Katz JP, Diggs P, Burger L, Cohn CD, Soroff HS, Cohn PF.
American Journal of Cardiology. 1995 Apr 15;75:840-841.

Enhanced External Counterpulsation in the Treatment and Rehabilitation of Coronary Patients in Indonesia

Sjukri K, Aulia S, Karo-Karo S, Manoefris K, Adnil B, Gunadhi I, Japaries W, Suwita R.
Asian Cardiovascular & Thoracic Annals. 1995;3(1):26-28.

Role of Enhanced External Counterpulsation in Angina Treatment

Cohn PF, Lawson WE.
The Journal of Myocardial Ischemia. 1994 Nov-Dec;6(10):25-27.

Efficacy of Enhanced External Counterpulsation in the Treatment of Angina Pectoris

Lawson WE, Hui JCK, Soroff HS, Zheng ZS, Kayden DS, Sasvary D, Atkins H, Cohn PF.
American Journal of Cardiology. 1992 Oct 1;70(9):859-862.

New Sequential External Counterpulsation for the Treatment of Acute Myocardial Infarction

Zheng ZS, Yu LQ, Cai SR, Kambic H, Li TM, Ma H, Chen PZ, Huang BJ, Nose Y.
Transactions of the American Society of Artificial Internal Organs. 1984 Nov;8(4):470-477.

Abstracts

Does Enhanced External Counterpulsation Treatment Reduce Emergency Room Visits and Hospitalizations in Refractory Angina Patients with Left Ventricular Dysfunction? – A Six Month Follow Up Study

Soran O, Kennard ED, Kelsey SF.

Catheterization and Cardiovascular Interventions. 2005 May;65(1):133(C-28).

The Impact of Diastolic Augmentation Ratio on Treatment Outcomes After Enhanced External Counterpulsation Therapy for Angina Management

Soran O, Kennard ED, Kelsey SF.

Catheterization and Cardiovascular Interventions. 2005 May;65(1):132(C-26).

Enhanced External Counterpulsation Improves Microvascular Angina in Coronary Artery Disease Patients

Kronhaus KD, Lawson WE.

Journal of Investigative Medicine. 2005 Mar;53(2):S399(71).

Enhanced External Counterpulsation as a Systemic Treatment of Diabetics with Angina and Heart Failure

Lawson WE, Kennard ED, Hui JCK, Kelsey SF.

Journal of Investigative Medicine. 2005 Mar;53(2):S399(72).

Can Smoking Improve the Benefits of Enhanced External Counterpulsation by Stimulating Angiogenesis in Areas of Ischemia?

Tartaglia J, Stenerson J, Kennard E.

Journal of Investigative Medicine. 2005 Mar;53(2):S401(86).

Safety and Efficacy of Enhanced External Counterpulsation in Patients with Permanent Pacemakers in the Treatment of Chronic Heart Angina

Tartaglia J, Stenerson Jr. J, Ramasamy S, Braverman D, Hui J.

Journal of Investigative Medicine. 2005 Mar;53(2):S402(87).

Enhanced External Counterpulsation Improves Angina Status Independent of Candidacy for Invasive Revascularization

Lawson WE, Barsness GW, Kennard ED, Hui JCK, Kelsey SF.

Journal of Investigative Medicine. 2005 Mar;53(2):S402(93).

The Role of Enhanced External Counterpulsation in Coronary Artery Disease and Heart Failure Management

Soran O.

Presented at the 5th Biennial International Conference- *1st Heart Summit of Emergent Countries*. Mar 28, 2003.

Sustained One Year Benefit of Enhanced External Counterpulsation in Relieving Mild Angina in Patients with End Stage Coronary Artery Disease

Lawson WE, Kennard ED, Hui JCK, Kelsey SF.

Journal of the American College of Cardiology. 2005 Feb;45(3 Suppl A):236A(1121-223).

The First Domestic Experience of Applying the Method of External Counterpulsation in the Treatment of Patients with Chronic Coronary Heart Disease

Bockeria IA, Ermolenko ML, Shinbaeva NA, Bairamukova MX.

Russian National Congress of Cardiologists, Paper of the Congress. 2004 Oct:66.

Enhanced External Counterpulsation in Treatment of Patients with Chronic Ischemic Heart Disease
(The First Experience of Application in Russia)

Gabusenko SA, Malakhov VV, Sergienko IV, Naumov VG, Belenkov YN.

Russian National Congress of Cardiologists, Paper of the Congress. 2004 Oct;97.

Does Prior Angioplasty Affect the Benefit of Enhanced External Counterpulsation in Patients
with Diabetes?

Lawson WE.

American Journal of Cardiology. 2004 Sep;94(Suppl 6A)101E(TCT-221).

Comparison of Clinical Outcomes, Event Free Survival and Repeat Enhanced External
Counterpulsation (EECP) Therapy Rates for Turkish and US Coronary Artery Disease Patients
Treated with EECP for Angina Management

Soran O, Ikizler C, Yavuz F, Sengul A, Kennard ED.

The Heart Surgery Forum 2004; 7(Suppl 2): B16.

Safety and Efficacy of Enhanced External Counterpulsation with Symptomatic Ischemic Heart Disease
and Cardiac Pacemakers: A Case Series.

Braverman D, Wechsler B, Farooqi A.

Archives of Physical Medicine and Rehabilitation. 2004 Sep 85:E18(40).

Comparison of Abbreviated Versus Full Course of Enhanced External Counterpulsation in Heart
Failure Patients with One-year Follow-up

Lawson WE.

Journal of Cardiac Failure. 2004 Aug;10(4 Suppl):pS87.

The Impact of Diastolic Augmentation Ratio on Treatment Outcomes in Patients with Left Ventricular
Dysfunction Treated with Enhanced External Counterpulsation for Angina Management

Soran O, Kennard ED, Kelsey SF.

Journal of Cardiac Failure. 2004 Aug;10(4 Suppl):pS67.

Diabetic Patients Have a Good Response to Enhanced External Counterpulsation Despite Lower
Diastolic Augmentation Than Non-Diabetics

Brown AS, Kennard ED, Linnemeier G, Soran O, Kelsey SF.

Presented at the *European Society of Cardiology Congress.* Aug 28-Sep 1, 2004:(Poster 2998).

Comparison of Clinical Outcomes, Rates of Event Free Survival, and Repeat Enhanced External
Counterpulsation in Women and Men Undergoing EECP for Angina Management

Soran O, Kennard ED, Linnemeier G, Kelsey SF.

Presented at the *European Society of Cardiology Congress.* Aug 28-Sep 1, 2004:(Poster 2443).

Comparison of Clinical Outcomes, Event Free Survival Rates in Patients With Severe Left Ventricular
Dysfunction Undergoing Enhanced External Counterpulsation and Percutaneous Coronary
Intervention for Angina Pectoris.

Soran O, Kennard ED, Selzer F, Kelsey SF, Cohen H.

Catheterization and Cardiovascular Interventions. 2004 Jun;62(1):103.

Treatment Hours and Angina Improvement with Enhanced External Counterpulsation

Lawson WE, Hui JC, Kennard ED.

Journal of the American College of Cardiology. 2004 Mar 3;43(5 suppl A):11A(1059-4).

Enhanced External Counterpulsation Decreases Wave Reflection Amplitude and Reduces Left
Ventricular Afterload and Systolic Stress in Patients with Refractory Angina

Nichols WW, Braith RW, Aggarwal R, Conti CR.

Journal of the American College of Cardiology. 2004 Mar 3;43(5 suppl A):307A(891-1).

External Counterpulsation Therapy: Significant Clinical Improvement without Electrophysiologic Remodeling
Henrickson CA, Chandra-Strobos.
Journal of the American College of Cardiology. 2004 Mar 3;43(5 suppl A):307A-308A(891-2).

Enhanced External Counterpulsation Improves Functional Capacity and Quality of Life in Women with Chronic Angina
Linnemeier GC, Kennard ED, Soran O, Kelsey SF.
Journal of the American College of Cardiology. 2004 Mar 3;43(5 suppl A):308A(891-3).

The Effects of Enhanced External Counterpulsation on Myocardial Perfusion in Patients with Stable Angina: A Single Blind Multicenter Pilot Study
Michaels AD, Raisinghani A, Soran O, de Lame P, Lemaire ML, Kligfield P, Watson DD, Beller G.
Journal of the American College of Cardiology. 2004 Mar 3;43(5 suppl A):308A(891-4).

Frequency and Results of Repeat Enhanced External Counterpulsation for Refractory Angina
Lawson WE, Barsness G, Soran O, Kennard ED, Hui JC.
Journal of the American College of Cardiology. 2004 Mar 3;43(5 suppl A):308A(891-5).

Long-Term Improvement in Microvascular Angina Patients Treated with Enhanced External Counterpulsation
Kronhaus KD, Lawson WE.
Journal of the American College of Cardiology. 2004 Mar 3;43(5 suppl A):308A(891-6).

Marked Underutilization and Geographic Variation in Secondary Prevention Pharmacologic Therapy in Patients with Chronic Angina Undergoing Treatment with Enhanced External Counterpulsation
Michaels AD, Kelsey S, Soran O, Kennard EE.
Journal of the American College of Cardiology. 2004 Mar 3;43(5 suppl A):407A(1077-74).

Enhanced External Counterpulsation (EECP) Treated Angina Patients from Turkey and the United States Have Similar Good Outcomes Despite Different Baseline Profiles: A report from the International EECP Patient Registry (IEPR)
Soran O, Sengul A, Ikizler C, Yener T, Kennard E.D, Kelsey S.
Cardiovascular Surgery. 2003;11(suppl II): 135(CP5.14).

Enhanced External Counterpulsation and Functional Improvement in Octogenarians with Symptomatic Ischemic Heart Disease
Braverman DL, Wechsler B.
Archives of Physical Medicine and Rehabilitation. 2003 Sep;84(9):E10(23).

Functional Status Improvement After Enhanced External Counterpulsation (EECP) for Treatment of Chronic Angina Pectoris
Kennard ED, Linnemeier G, Kelsey SF.
Proceedings of the 5th International Congress on Coronary Artery Disease –Frontiers in Coronary Artery Disease. 2003 Oct 19-21;(Florence, Italy):(1205.00)

Comparison of 6 Months Clinical Outcomes, Event Free Survival Rates of Patients Undergoing Enhanced External Counterpulsation (EECP) for Coronary Artery Disease with Left Ventricular Dysfunction (LVD) in the United States and Europe
Soran O, Kennard ED, Kelsey SF.
Proceedings of the 5th International Congress on Coronary Artery Disease –Frontiers in Coronary Artery Disease. 2003 Oct 19-21;(Florence, Italy):(1288.00)

Geographic Variation in Secondary Prevention Pharmacologic Therapy in Patients with Chronic Angina Undergoing Treatment with Enhanced External Counterpulsation
Michaels, AD, Kelsey SF, Soran O, Kennard ED.
Proceedings of the 5th International Congress on Coronary Artery Disease –Frontiers in Coronary Artery Disease. 2003 Oct 19-21;(Florence, Italy):(1237)

Can Enhanced External Counterpulsation Provide a Supportive Approach to Refractory Angina Patients with Left Ventricular Dysfunction in the Compulsory Absence of Recommended Optimal Treatment Strategies?
Soran O, Kennard EE, Kelsey SF, on behalf of the IEPR Working Group
Journal of Cardiac Failure. 2003 Oct;9(5):S50(181).

Angina Patients with Diastolic or Systolic Heart Failure Demonstrate Comparable Immediate and One Year Benefit from Enhanced External Counterpulsation
Lawson WE, Silver MA, Kennard L, Hui JCK, Kelsey SF.
Journal of Cardiac Failure. 2003 Oct;9(5):S107(401).

Enhanced External Counterpulsation Improves Functional Capacity in Patients with Left Ventricular Dysfunction as Assessed by the Duke Activity Status Index-A Questionnaire Correlated with Peak Oxygen Uptake
Linnemeier GC, Kennard ED, Soran O, Kelsey SF.
Journal of Cardiac Failure. 2003 Oct;9(5):S107(402).

Effectiveness of External Counterpulsation in patients with Left Main Disease and Angina
Lawson WE, Barsness G, Kennard E, Hui JCK, Kelsey S.
American Journal of Cardiology. 2003 Sep;92(Suppl 6A):77L (TCT-170).

The Incidence and Independent Predictors of Repeat Enhanced External Counterpulsation in Patients with Left Ventricular Dysfunction
Soran O, Kennard ED, Kelsey S.
Circulation. 2003 May 20;107(19):57(P61).

Predictors of Failure to Achieve Angina Reduction in Patients Who Are Not Candidates for Invasive Revascularization Treated with Enhanced External Counterpulsation
Soran O, Kennard ED, Kelsey SF.
Catheterization and Cardiovascular Interventions. 2003 May;59(1):141-142 (D-24).

Factors Predicting One Year Outcomes in Patients Treated with Enhanced External Counterpulsation
Holubkov R, Kelsey SF.
Journal of Investigative Medicine. 2003 Mar;51(Suppl 2):S360 (26).

Is Enhanced External Counterpulsation the Treatment of Choice for Microvascular Angina?
Kronhaus KD, Lawson WE.
Journal of Investigative Medicine. 2003 Mar;51(Suppl 2):S386 (170).

Is Enhanced External Counterpulsation the Preferred Treatment for Chronic Stable Angina in Select Patients 75 Years and Older?
Linnemeier G, Kennard ED, Kelsey SF, Soran O.
Journal of the American College of Cardiology. 2003 Mar 19;41(6 Suppl A):(1162-86).

Two-Year Outcomes After Enhanced External Counterpulsation:
Data From the International EECF Patient Registry
Michaels AD, Linnemeier G, Soran O, Kennard ED.
Journal of the American College of Cardiology. 2003 Mar 19;41(6 Suppl A):(1148-116).

Enhanced External Counterpulsation for the Relief of Angina in Patients With Diabetes:
A One-Year Clinical Outcome Study
Linnemeier GC, Kennard ED, Soran O, Kelsey SF.
Journal of the American College of Cardiology. 2003 Mar 19;41(6 Suppl A):(1148-115).

Atrial Fibrillation Does Not Degrade the Clinical Benefits From Enhanced External Counterpulsation
Therapy in Patients With Chronic Angina: Results From the International EECPP Patient Registry
Ochoa AB, O'Neill WW, Almany S.
Journal of the American College of Cardiology. 2003 Mar 19;41(6 Suppl A):(1148-114).

Is Enhanced External Counterpulsation Effective for Angina Relief in Diabetic Patients Who Are Not
Candidates for Transcatheter Intervention?
Linnemeier GC, Kennard ED, Soran O, Kelsey SF.
Journal of the American College of Cardiology. 2003 Mar 19;41(6 Suppl A):(1003-89).

Preserved Benefit of Enhanced External Counterpulsation in End Stage Ischemic Heart Disease
William E. Lawson, Gregory W. Barsness, Elizabeth D. Kennard, IEPR Investigators.
Journal of the American College of Cardiology. 2003 Mar 19;41(6 Suppl A):(829-4).

Enhanced External Counterpulsation Improves Endothelial Function in Patients With Coronary Artery Disease
Bonetti PO, Barsness GW, Keelan PC, Schnell TI, Pumper GM, Holmes, Jr. DR, Higano ST, Lerman A.
Journal of the American College of Cardiology. 2003 Mar 19;41(6 Suppl A):(829-3).

Integration of Enhanced External Counterpulsation (EECP) Treatment into a Cardiac Rehabilitation
Service: Early Experience
Clair C, Pesek-Bird C, Lounsbury P.
Journal of Cardiopulmonary Rehabilitation. 2002;22(5):358-360.

Diastolic Augmentation is an Independent Predictor of Improved Outcome in 3536 Patients Following
Enhanced External Counterpulsation (EECP)
Brown A, Dodd D, Bagger P, Louis AA, Kennard ED, Kelsey SF, Horgan JH.
European Heart Journal. 2002 Aug;4(Abstr Suppl)567(2932).

Functional Status of Patients with Chronic Angina Treated with Enhanced External Counterpulsation
Kennard ED, Kelsey SF, Linnemeier G.
European Heart Journal. 2002 Aug;4(Abstr Suppl):619(3281).

Microvessel Angiogenesis Induced by Enhanced External Counterpulsation in the Chronic Experiment
Infarct Model
Wu G, Zheng ZS, Du Z, Hu C, Zheng J, Fang D, Ma H, Lawson WE, Hui JCK.
Journal of Cardiac Failure. 2002 Aug;8(4 Suppl 1):S26 (095).

Benefit of Enhanced External Counterpulsation in Coronary Patients with Left Ventricular Dysfunction:
Cardiac or Peripheral Effect?
Lawson W, Pandey K, Hui J, Krishnamurthy S, D'Ambrosia D, Vilkas D, Maliszewski M.
Journal of Cardiac Failure. 2002 Aug;8(4 Suppl 1):S41 (146).

Diabetic Patients with Angina Undergoing Enhanced External Counterpulsation Therapy – The Effect
of Low Ejection Fraction
Linnemeier G, Kennard E, Kelsey S.
Journal of Cardiac Failure. 2002 Aug;8(4 Suppl 1):S78 (325).

Do Women with Left Ventricular Dysfunction and Refractory Angina Respond as Well as Men to Enhanced External Counterpulsation?

Soran O, Kennard E, Feldman A.

Journal of Cardiac Failure. 2002 Aug;8(4 Suppl 1):S79 (291).

Does Enhanced External Counterpulsation (EECP) Reduce the Refractory Angina Burden in Patients with Left Ventricular Dysfunction: - A 2 Year Follow-Up Study

Soran O, Kennard E, Feldman A.

Presented at the 8th World Congress on Heart Failure - Mechanisms and Management - International Academy of Cardiology. 2002 Jul 13-16;(Washington DC, USA).

Does a History of Congestive Heart Failure Influence the Effectiveness of Enhanced External Counterpulsation for the Treatment of Angina in Patients with Diabetes? A One Year Clinical Outcome Study from the International EECP Patient Registry

Linnemeier GC, Kennard ED, Rutter MK, Nesto RW.

Diabetes. 2002;51(Suppl 2)A170.

Enhanced External Counterpulsation Provides Relief from Severe Angina in Diabetic Patients – A Six-Month Clinical Outcome Study from the International EECP Patient Registry

Linnemeier GC, Kennard ED, Lawson WE.

Presented at the *British Cardiac Society*. May 2002.

Does EECP Improve Cardiac Function in Ischemic Cardiomyopathy?

Suresh VD, Lawson W, Hui JCK, D'Ambrosia D.

Presented at the *American Federation for Medical Research – Clinical Research*. April 12, 2002;(Baltimore, MD, USA).

Safety and Efficacy of Enhanced External Counterpulsation in Hypertensive Patients with Refractory Angina Pectoris: Short-and Long-Term Follow-Up

Arora R, Orlando J, Malone A, Bejjanki R, Carlucci M, Kennard L.

Journal of the American College of Cardiology. 2002 Mar 6;39(5 Suppl A):255A(1154-80).

Enhanced External Counterpulsation Reduces Angina and Improves Quality of Life in Elderly Unrevascularizable Patients

Linnemeier G, Kennard E, Lawson WE.

Journal of the American College of Cardiology. 2002 Mar 6;39(5 Suppl A):175A(847-4).

Do Women with Refractory Angina Respond as Well as Men to Treatment with Enhanced External Counterpulsation?

Lawson WE, Kennard E, Linnemeier G, Holubkov R, Mehra M.

Journal of the American College of Cardiology. 2002 Mar 6;39(5 Suppl A):154A(808-2).

Enhanced External Counterpulsation Promotes Angiogenesis Factors in Patients with Chronic Stable Angina

Masuda D, Nohara R, Kataoka K, Hosokawa R, Kanbara N, Fujita M.

Circulation. 2001 Oct 23;104(17 Suppl II):444(2109).

Efficacy of Enhanced External Counterpulsation (EECP) for Patients who are not Candidates for Coronary Revascularization: Immediate and One-Year Clinical Outcomes from the International EECP Patient Registry

Michaels AD, Kelsey SF, Holubkov R, Kennard ED.

American Journal of Cardiology. 2001;88(5 Suppl 1):103G-104G.

Effect of Enhanced External Counterpulsation on Circulating and Tissue Angiotensin II in Experimental Myocardial Infarction

Lu L, Zheng ZS, Wu WK, Lawson WE, Hui JCK.

Journal of Cardiac Failure. 2001;7(3 Suppl 2):35(123).

Is Diastolic Augmentation an Important Predictor of Treatment Completion for Patients with Left Ventricular Dysfunction Undergoing Enhanced External Counterpulsation for Angina?

Soran O, Michaels AD, Kennard ED, Kelsey SF, Holubkov R, Feldman AM.

Journal of Cardiac Failure. 2001;7(3 Suppl 2):99(371).

What Factors Predict Congestive Heart Failure During Treatment of Angina Patients with Enhanced External Counterpulsation

Lawson WE, Kennard ED, Holubkov R, Roberts JC, Feldman AM, Strobeck J.

Journal of Cardiac Failure. 2001;7(3 Suppl 2):48(174).

Enhanced External Counterpulsation for the Treatment of Angina in the Elderly: Safety, Response, and Durability of Benefit

Linnemeier G, Lawson W, Kennard ED, Holubkov R.

European Heart Journal. 2001 Sep;22:642(P3514).

Beneficial Effects of EECP on the Renin-Angiotensin System in Patients with Coronary Artery Disease

Lawson WE, Hui JCK, Lu L, Zheng ZS, Zhang MQ.

European Heart Journal. 2001 Sep;22:538(P2903).

Improvement in Exercise Tolerance Post Enhanced External Counterpulsation is Related to the Peak Diastolic Augmentation Obtained

Brown AS, Ho, E, Heavey D, Dodd D, Horgan JH.

European Heart Journal. 2001 Sep;22:173(P1034).

Safety and Effectiveness of Enhanced External Counterpulsation in Improving Angioplasty Restenosis

Stys TP, Lawson WE, Hui JCK, Tartaglia JJ, Subramanian R, Du ZM, Zhang MQ.

The Journal of Heart Disease. 2001 Jul;2(1):131(524).

Effects of Enhanced External Counterpulsation on Renin-Angiotensin System in Experimental AMI

Lawson WE, Lu L, Zheng ZS, Wu WK, Hui JCK.

The Journal of Heart Disease. 2001 Jul;2(1):97(388).

Predictors of Adverse Outcomes in Treating Angina Patients with Enhanced External Counterpulsation

Lawson WE, Fleishman B, Manzo K, Kennard ED, Holubkov R, Kelsey S.

The Journal of Heart Disease. 2001 Jul;2(1):92(366).

EECP Produces Angina Relief in Diabetic Patients Comparable to Non-Diabetic Patients – A Six-Month Follow-Up Study

Linnemeier G, Kennard E, Lawson, Holubkov R.

Diabetes. 2001;50(Suppl II):A159(642-P).

Efficacy of Enhanced External Counterpulsation in Experimental Myocardial Infarction: Histochemistry and Ultrastructure

Huang W, Chen Y, Zheng ZS, Zhong WF, Lawson WE, Hui JCK.

Heart. 2001;85(Suppl I):P39(114).

The Improvements in Exercise Tolerance Post Enhanced External Counterpulsation in Patients with Chronic Refractory Angina are Related to Diastolic Augmentation

Brown AS, Ho E, Heavey D, Dodd D, Horgan JHH.

Heart. 2001;85(Suppl I):P41(125).

Primary Utilization to Improve Myocardial Perfusion with Enhanced External Counterpulsation Revascularization (pumper)

Fitzgerald CP, Kennard ED, Lawson WE, Holubkov R.

Heart. 2001;85(Suppl I):P41(124).

Patients with Non-Cardiac Vascular Disease and Chronic Angina Benefit from Enhanced External Counterpulsation

Bazaz S, Kennard ED, Holubkov R, Dwyer N, Crawford L.

Journal of the American College of Cardiology. 2001 Feb;37(2 Suppl A):255A(1159-162).

Are the Initial Benefits of Enhanced External Counterpulsation Sustained at One Year?

Lawson WE, Hui JCK, Kennard ED, Holubkov R, Kelsey SF.

Journal of the American College of Cardiology. 2001 Feb;37(2 Suppl A):328A(1117-75).

Intervention for Stable Angina: A Multicenter Comparison of Consecutive Patients Undergoing Enhanced External Counterpulsation (EECP) and PCI

Holubkov R, Kennard ED, Kelsey SF, Soran O, Holmes DR.

Journal of the American College of Cardiology. 2001 Feb;37(2 Suppl A):328A(1117-76).

Enhanced External Counterpulsation for Chronic Angina is Associated with Improved Outcome at 6 Months

Barsness GW, Schnell T, Holmes DR.

Journal of the American College of Cardiology. 2001 Feb;37(2 Suppl A):328A(1117-101).

Intermittent Shear Stimuli by Enhanced External Counterpulsation (EECP) Restores Endothelial Function in Patients with Coronary Artery Disease

Urano H, Lida S, Fukami K, Sugano R, Satoh A, Kanaya S.

Circulation. 2000 Oct;102(18 Suppl 2):II-57(266).

The Safety and Efficacy of Enhanced External Counterpulsation as Therapy for Unstable Angina

Arora, RR, Timoney MF, Kennard ED, Peart B.

Circulation. 2000 Oct;102(18 Suppl 2):II-615(2982).

Predictors of Successful Response to Enhanced External Counterpulsation as Treatment of Angina Pectoris

Lawson WE, Kennard ED, Hui JCK, Holubkov R, Kelsey S.

Circulation. 2000 Oct;102(18 Suppl 2):II-689(3332).

Enhanced External Counterpulsation with Heparin Pretreatment Improves Exercise Capacity of Anginal Patients

Fujita M, Masuda D, Nohara R, Sasayama S.

3rd International Congress on Coronary Artery Disease - Prevention to Intervention. 2000 Oct 2-5; (Lyon, France):469.

Effect of Enhanced External Counterpulsation on Cranial and Abdominal Blood Flow

Karim S, Setiadji R, Santosa F, Suwita R..

3rd International Congress on Coronary Artery Disease -Prevention to Intervention. 2000;Oct 2-5; (Lyon, France):472.

Benefit and Safety of Enhanced External Counterpulsation in the Treatment of Ischemic Heart Disease with History of Congestive Heart Failure

Lawson WE, Hui, JC, Kennard ED, Holubkov R, Kelsey SF, Strobeck JE, Feldman AM.

Journal of Cardiac Failure. 2000 Sep;6(3):84(316).

Six Month Outcome of Patients with Left Ventricular Dysfunction Treated with Enhanced External Counterpulsation (EECP)

Soran OZ, Kennard ED, Holubkov R, Strobeck JE, Feldman AM.

Journal of Cardiac Failure. 2000;6(3):75(282).

Enhanced External Counterpulsation in Heart Failure Patients: Results of a Pilot Study

Soran OZ, DeMarco T, Crawford LE, Schneider V, de Lame PA, Fleishman B, Grossman W,

Feldman AM.

Journal of Cardiac Failure. 2000;6(3):48(180).

Six-Month Outcome of Patients with Left Ventricular Dysfunction Treated with Enhanced External Counterpulsation for Chronic Angina

Soran OZ, Kennard ED, Holubkov R, Strobeck J, Feldman AM.
European Heart Journal. 2000;21:598(3261).

Does Optimal Diastolic Augmentation Predict Clinical Benefit from Enhanced External Counterpulsation (EECP)? Data from the International Enhanced External Counterpulsation Patient Registry

Michaels AD, Kennard ED, Kelsey S, Holubkov R, Spence S, Chou TM.
European Heart Journal. 2000;21:173(P1043).

Improved Stress Radionuclide Coronary Perfusion and Exercise Capacity After Enhanced External Counterpulsation

Stys TP, Lawson WE, Hui JCK, Fleishman B, Strobeck JE, Hartman RB, Tartaglia J, Suwita R, Liang H.
European Heart Journal. 2000;21:173(P1042).

Enhanced External Counterpulsation (EECP) is Not Associated with Vascular Endothelial Cell Proliferation and Function

Arora RR, Baron NV, Timoney MF, Chen HJ, Rabbani L.
Federation of American Societies for Experimental Biology: 2000;14(4):A15(126.1).

Acute and Chronic Hemodynamic Effects of Enhanced External Counterpulsation in Patients with Angina Pectoris

Arora RR, Baron NV, Timoney MF.
Federation of American Societies for Experimental Biology. 2000;14(4):A155(126.5).

Improvement in Left Ventricular Performance by Enhanced External Counterpulsation in Patients with Heart Failure

Gorscan III J, Crawford L, Soran O, Wang H, Severyn D, de Lame PA, Schneider V, Feldman AM.
Journal of the American College of Cardiology. 2000 Feb;35(2 Suppl A):230A(901-5).

The New Therapeutic Approach with Chronic Stable Angina: Evaluation of Myocardial Flow and Flow Reserve by N-13-Ammonia PET

Masuda D, Nohara R, Hirai T, Chen LG, Inubushi M, Tadamura E.
Circulation. 1999;100(18):I-732(3865).

Safety of Enhanced External Counterpulsation in Heart Failure Patients

Soran OZ, DeMarco T, Crawford LE, Schneider V, Levy F, de Lame PA, Gorscan III J, Benedict CR, Grossman W, Feldman AM.
Circulation. 1999;100(18):I-300(1567).

A Neurohormonal Mechanism for the Effectiveness of Enhanced External Counterpulsation

Wu GF, Qiang SZ, Zheng ZS, Zhang MQ, Lawson WE, Hui JCK.
Circulation. 1999;100(18):I-832(4390).

Enhanced External Counterpulsation is a Safe and Effective Treatment for Angina in Patients with Severe Left Ventricular Dysfunction

Strobeck JE, Reade R, Kennard ED, Kelsey SF, Soran O, Feldman AM.
Journal of Cardiac Failure. 1999 Sep;5(3 Suppl 1):72(268).

Efficacy and Safety of Enhanced External Counterpulsation in Mild to Moderate Heart Failure: A Preliminary Report

Soran OZ, DeMarco T, Crawford LE, Schneider V, de Lame PA, Grossman W, Feldman AM.
Journal of Cardiac Failure. 1999 Sep;5(3 Suppl 1):53(195).

External Counterpulsation Increases Capillary Density During Experimental Myocardial Infarction
Huang W, Chen Y, Zheng Z, Ahong WF.
European Heart Journal. 1999 Aug-Sep;20(Abstr Suppl):168(P1016).

Comparison of Prognostic Surveys Used in the Multicentre Study of Enhanced External Counterpulsation (MUST-EECP)
Cohn P, Arora RR, Chou TM, Jain P, Nesto W, Fleishman B, Crawford L, McKiernan I, Lawson W.
European Heart Journal. 1999 Aug-Sep;20(Abstr Suppl):479(2518).

Blood Flow Volume Increases in Cranial and Abdominal Arteries During EECP
Steiadji R, Kltá H, Barat J.
European Heart Journal. 1999 Aug-Sep;20(Abstr Suppl):551(2890).

Enhanced External Counterpulsation Protects Coronary Artery Disease Patients from Future Cardiac Events
Karim S, Kasim M, Suwita R, Andaningsih I, Setiadji R.
The Journal of Heart Disease. 1999 May;1(1):223(889).

Hemodynamic Effects of Enhanced External Counterpulsation in Patients with Acute Myocardial Infarction
Taguchi I, Ogawa K, Oida A, Kuga H, Suzuki H, Nagao I, Kaneko N, Sakio H.
The Journal of Heart Disease. 1999 May;1(1):222(887).

Effect of Enhanced External Counterpulsation on Nitric Oxide Production in Coronary Disease
Qian X, Wu W, Zheng ZS, Zhan CY, Yu BY, Lawson WE, Hui JCK.
The Journal of Heart Disease. 1999 May;1(1):193(769).

Effect of Enhanced External Counterpulsation on Lipid Peroxidation in Coronary Disease
Qian X, Wu W, Zheng ZS, Yu BY, Lou HC, Lawson WE, Hui JCK.
The Journal of Heart Disease. 1999 May;1(1):116(462).

Results of the Multicenter Enhanced External Counterpulsation (MUST-EECP) Outcomes Study: Quality of Life Benefits Sustained Twelve Months After Treatment
Arora RR, Chou TM, Jain D, Nesto RW, Fleishman B, Crawford L, McKiernan T.
Journal of the American College of Cardiology. 1999 Feb;33(2 Suppl A):339A(1065-162).

Beneficial Effects of Enhanced External Counterpulsation (EECP) are Independent of the Severity of Angina Pectoris: Results of the MUST-EECP Trial
Arora RR, Chou TM, Jain D, Nesto RW, Fleishman B, Crawford L, McKiernan T.
Journal of the American College of Cardiology. 1999 Feb;33(2 Suppl A):349A(1097-140).

Results of the Multicenter Enhanced External Counterpulsation (MUST-EECP) Outcomes Study: Quality of Life Benefits Sustained Six Months After Treatment
Arora RR, Chou TM, Jain D, Nesto RW, Fleishman B, Crawford L, McKiernan T.
Circulation. 1998 Nov;98(17 Suppl):I-350(1838).

Importance of the Number of Patent Vessels in the Benefit Seen with Enhanced External Counterpulsation in Chronic Angina: Results of the MUST-EECP Trial
Chou TM, Arora RR, Jain D, Nesto R, Fleishman B, Crawford L, McKiernan T.
Circulation. 1998 Nov;98(17 Suppl):I-350(1837).

Pneumatic External Counterpulsation: A New Treatment for Selected Patients with Symptomatic Coronary Artery Disease
Werner D, Freidel C, Kropp J, Weise M, Waltenberger J, Kranz A, Daniel WG.
Circulation. 1998 Nov;98(17 Suppl):I-350(1839).

Quality of Life Benefits in the Enhanced External Counterpulsation Clinical Consortium
Lawson WE, Hui JCK, Lang G.
European Heart Journal. 1998 Aug;19(Abstr Suppl)57(P505).

The Treatment of Angina Pectoris Refractory to Revascularization Procedures Using
Enhanced External Counterpulsation in a Multicentre Study (MUST-EECP)
Cohn PF, Arora RR, Chou T, Jain D, Nesto R, Fleishman B, Crawford L, McKiernan T, Burger L,
Lawson WE.
European Heart Journal 1998 Aug;19(Abstr Suppl)57(P506).

Pneumatic External Counterpulsation: A New Treatment for Selected Patients with
Symptomatic Coronary Artery Disease
Werner D, Freidel C, Kropp J, Weise M, Waltenberger J, Kranz A, Daniel WG.
European Heart Journal. 1998 Aug;19(Abstr Suppl)58(P509).

Blood Pressure Changes During External Counterpulsation
Werner D, Wonka F, Klinghammer L, Krinke HE, Daniel WG.
European Heart Journal. 1998 Aug;19(Abstr Suppl) 655(P3659).

Improvement of Renal Perfusion and Function by Pneumatic External Counterpulsation
Werner D, John A, Tragner T, Zhang H, Schneider M, Nonnast-Daniel B, Gross P, Daniel WG.
European Heart Journal 1998;19(Abstr Suppl)655(P3660).

Beneficial Effects of Enhanced External Counterpulsation (EECP) May Not be Mediated
by Changes in Myocardial Perfusion
Arora RR, Akinboboye O, Blitzer M, Lin JW, Cannon PJ, Bergmann S.
Journal of the American College of Cardiology. 1998 Feb;31(2 Suppl A):138A(1059-1131).

Results of the Multicenter Study of Enhanced External Counterpulsation (MUST-EECP):
Clinical Benefits are Sustained at a Mean Follow-Up Time of One Year
Arora RR, Chou T, Jain D, Nesto R, Fleishman B, Crawford L, McKiernan T.
Journal of the American College of Cardiology. 1998 Feb;31(2 Suppl A):214A(859-2).

Effects of Enhanced External Counterpulsation on Internal Mammary Artery Flow:
Comparison with Intraaortic Balloon Counterpulsation
Katz WE, Gulati V, Feldman AM, Crawford L, Peron M, Soran O, Gorscan III J.
Journal of the American College of Cardiology. 1998 Feb;31(2 Suppl A):85A(825-1).

Complementary Roles of Enhanced External Counterpulsation (EECP) and Bypass Surgery (CABG) in
the Treatment of Coronary Artery Disease (CAD)
Lawson WE, Hui JCK, Guo T, Berger L, Cohn P.
Cath-Lab Digest. 1998;6(1):18.

Enhanced External Counterpulsation Improves Exercise Capability in Patients with Chronic Stable Angina
Tartaglia J, Stenerson JF, Fleishman BL, Chamey R.
Journal of the American College of Cardiology. 1998 Feb;31(2 Suppl A):491A(1214-109).

Effects of Enhanced External Counterpulsation in Stable Angina Pectoris on Left Ventricular Mass,
Volume and Ejection Fraction Measured by 3D Echo
Arora RR, Zheng ZS, Akinboboye O, Blitzer M, Lee S, Maguire B, King DL.
Journal of Investigative Medicine. 1997;45(3):211A.

Results of the Multicenter Study of Enhanced External Counterpulsation (MUST-EECP):
EECP Reduces Anginal Episodes and Exercise-Induced Myocardial Ischemia
Arora RR, Chou TM, Jain D, Nesto RW, Fleishman B, Crawford L, McKiernan T.
Circulation. 1997 Oct 21;96(8 Suppl):I-466.

Five Year Follow-Up of Morbidity and Mortality in 33 Angina Patients Treated with Enhanced External Counterpulsation

Lawson WE, Hui JCK, Burger L, Cohn P.
Journal of Investigative Medicine. 1997;45(3):212A.

Does Prior Myocardial Revascularization Predict which Patients will Benefit Most from Enhanced External Counterpulsation?

Lawson WE, Hui JCK, Zheng ZS, Burger L, Guo T, Soroff H, Cohn P.
Journal of Investigative Medicine. 1997;45(3):214A.

Triple Vessel Disease Patients Benefit from Enhanced External Counterpulsation Despite Stenotic Grafts

Lawson WE, Hui JCK, Burger L, Guo T, Oster Z, Katz J, Cohn PF.
Journal of Investigative Medicine. 1997;45(3):214A.

Maximizing the Hemodynamic Benefits of Enhanced External Counterpulsation

Suresh K, Simandl S, Lawson WE, Hui JCK, Lillis O, Burger L, Guo T, Cohn PF.
Journal of Investigative Medicine. 1997;45(3):213A.

Duplexsonographic Findings During Pneumatic External Counterpulsation

Schneider M, Werner D, Nonnast-Daniel B, Garlichs C, Schwarz T, Schellong S, Daniel WG.
Circulation. 1996 Oct 15;94(8 Suppl 1):I-608(3564).

Acute Hemodynamic Benefits of Enhanced External Counterpulsation

Suresh K, Simandl S, Lawson WE, Hui JCK, Guo T, Burger L, Soroff H, Cohn PF.
The Journal of the American College of Cardiology. 1996;27(2):22A.

Can Clinical Findings Predict which Patients will Benefit Most from Enhanced External Counterpulsation?

Lawson WE, Hui JCK, Zheng ZS, Burger L, Jiang L, Lillis O, Soroff H, Cohn PF.
Journal of Investigative Medicine. 1995;43(5):392A.

Benefits are Sustained at 3-Year Follow-Up in Patients who have been Treated with Enhanced External Counterpulsation

Lawson WE, Hui JCK, Zheng ZS, Zvi O, Katz J, Diggs P, Burger L, Cohn C, Soroff H, Cohn P.
The Journal of the American College of Cardiology. 1994 Feb;389A(794-4).

Journal Editorials

Refractory Chronic Stable Angina – Now What?

Conti CR.

Clinical Cardiology. 2004 Jul;27(7):375-376.

Enhanced External Counterpulsation Therapy: A Noninvasive Approach to Treating Heart Disease

Ochoa AB, Franklin BA,

The American Journal of Medicine & Sports. 2003 May/Jun;V(III):194-198.

Enhanced External Counterpulsation in Congestive Heart Failure: Possibly the Most Potent Inodilator to Date

Strobeck JE.

Congestive Heart Failure. 2002 Jul/Aug;8(4):201-203.

Potential Intervention for Depression Associated with Increased Mortality Risk in Patients After Myocardial Infarction

Fricchione GL, Springer S, Lawson W, Hui JCK.

American Journal of Cardiology. 2002 Jan;89(1):112-113.

EECP – New Data on Possible Mechanisms of Action

Cohn PF.

European Heart Journal. 2001;22:1363-1364.

Alternative Therapies for Patients with Persistent Chronic Stable Angina

Conti CR.

Clinical Cardiology. 1999 Dec;22(12):773-774.

EECP-Enhanced External Counterpulsation

Conti CR.

The Journal of the American College of Cardiology. 1999 Jun;33(7):1841-1842.

Medical Device Therapy for Chronic Stable Angina

Conti CR.

Clinical Cardiology 1998;21(2):71.

Enhanced External Counterpulsation: Chronicle of a New Approach to the Therapy of Angina Pectoris

Amsterdam EA.

Cardiovascular Reviews and Reports 1997 Nov;18(11):15-16, 19.