Case Studies

The results presented in these case studies are specific to these individual patients. Patient results will vary, not every response is the same.

- Physicians Note: The following slides may be used as a format for your own case studies if you wish to insert clinical information for your patients who have received cardiac resynchronization therapy.

Case Study: Ischemic Cardiomyopathy

Patient:

- 57 year-old white male
- Ischemic cardiomyopathy
- NYHA Class III heart failure

Cardiovascular History/Diagnostic Evaluation:

- Anterior myocardial infarction, 1995. Cardiac catheterization - single vessel coronary artery disease, S/P failed-PTCA (balloon angioplasty) with emergency coronary artery bypass graft surgery 1995.
- Aortic valve replacement 1995.
- Echo, Nov 1998 – Severe LV dysfunction, EF less than 20%. LV dilatation.
- ECG, Nov 1998 – asymptomatic sinus bradycardia, 55 beats per minute. RBBB. QRS duration 152 msec.
- Right hemispheric CVA, 1998.
- Hyperlipidemia.
- No indication for pacemaker or ICD; No history of atrial arrhythmias

Courtesy of Dr. Eric Burton, Southwest Florida Heart Group, Fort Myers, Fl

Case Study: Ischemic Cardiomyopathy (continued)

Baseline Cardiac Medications:

- ACE inhibitor: lisinopril 20 mg once per day
- Beta blocker: carvedilol 25 mg twice daily
- Diuretic: furosemide 40 mg twice daily
- Digoxin 0.25 mg once per day
- Nitrate: isosorbide mononitrate 30 mg once per day
- Aspirin 81 mg once per day
- Anticoagulant: warfarin sodium (as directed).
- Lipid lowering: atorvastatin calcium 10 mg once per day

Cardiac Resynchronization Therapy:

- The patient received an cardiac resynchronization device Nov 1998 while enrolled in the MIRACLE trial.
- The patient was randomized to the control “OFF” arm and began receiving cardiac resynchronization therapy three months later in Feb 1999*.

*Patient was enrolled in the initial phase in which patients were randomized for three months

Courtesy of Dr. Eric Burton, Southwest Florida Heart Group, Fort Myers, Fl

Case Study: Ischemic Cardiomyopathy (continued)

Cardiac Resynchronization Therapy Results:

	Baseline (Nov 1998)	12-Month Evaluation after Implant (Nov 1999)
Quality of Life Score	65	50
NYHA Class	III	II
Six-Minute Walk	319 meters	391 meters
Peak VO_2	12.2 ml/kg/min	13.9 ml/kg/min
Peak Exercise Time	619 seconds	702 seconds
EF (core lab calc)	23%	28%
QRS Duration	160 ms	120 ms
Symptoms	Unable to walk room-to-room, unable to carry on daily activities; sleeping average of 22 hours a day.	Walks at least one mile a day, remodeling home, sleeps 6-8 hours a night, working part-time, and recently helped build a mission church in Nicaragua.

Courtesy of Dr. Eric Burton, Southwest Florida Heart Group, Fort Myers, Fl

- The data reflected in the third column (12-month evaluation) corresponds to 9-months of cardiac resynchronization therapy for this patient.
- Note: This patient was enrolled in the initial 3-month randomization period of the MIRACLE trial. Cross-over occurred and the patient began receiving therapy 3 months post-implant.

Case Study: Non-Ischemic Cardiomyopathy

Patient:

- 71-year-old white female
- Idiopathic dilated cardiomyopathy
- NYHA Class III heart failure

Cardiovascular History/Diagnostic Evaluation:

- Cardiac catheterization, Jan 2000 - global hypokinesis with EF 25-30%, normal LV filling pressures. Luminal coronary atherosclerosis.
- Echo, Jan 2000 - left atrial size 3.6 cm. Dilated left ventricle with LVEDD 58 mm. EF 30-35%. Anterior wall akinetic, no significant valvular abnormalities.
- ECG, March 2000 - normal sinus rhythm, left axis deviation, LBBB, QRS 160 msec.
- Hyperlipidemia
- No indication for pacemaker or ICD; No history of atrial arrhythmias

Courtesy of Dr. David DeLurgio, Crawford Long Hospital, Atlanta, Ga

Case Study: Non-Ischemic Cardiomyopathy (continued)

Baseline Cardiac Medications:

- ACE inhibitor: enalapril maleate 10 mg once per day
- Beta blocker: carvedilol 6.25 mg once per day
- Diuretic: furosemide 40 mg once per day
- Digoxin 0.125 mg once per day
- Aspirin 81 mg once per day
- Potassium replacement: 20 mEq once per day

Cardiac Resynchronization Therapy:

- The patient received an cardiac resynchronization device March 2000 while enrolled in the MIRACLE trial.
- The patient was randomized to the control “OFF” group and began receiving cardiac resynchronization therapy six months after the implant.

Courtesy of Dr. David DeLurgio, Crawford Long Hospital, Atlanta, Ga

Case Study: Non-Ischemic Cardiomyopathy

Cardiac Resynchronization Therapy Results:

	Baseline (March 2000)	12-Month Evaluation after Implant (March 2001)
Quality of Life Score	82	4
NYHA Class	III	I
Six-Minute Walk	259 meters	335 meters
Peak VO_2	15.7 ml/kg/min	16.39 ml/kg/min
Peak Exercise Time	215 seconds	478 seconds
EF (core lab calc)	34%	39%
QRS Duration	160 ms	160 ms
Symptoms	Exertional dyspnea with chest discomfort, extreme fatigue with any exercise, palpitations, 2-pillow orthopnea, paroxysmal nocturnal dyspnea, inability to do housework.	Able to do daily housework, laundry, cooking, vacuuming without shortness of breath. No limitation in activity and regularly goes dancing.

Courtesy of Dr. David DeLurgio, Crawford Long Hospital, Atlanta, Ga