Radionuclide ventriculography was evaluated sequentially in 71 patients(pts) with AMI(42 anterior, 26 inferior, 3 lateral). The mean ejection fraction(EF) of a first AMI was lower in pts with anterior(EF0.43) than in those with inferior(EF0.51)(p<0.02). In respect to precordial ST depression in pts with inferior AMI, there was no difference in mean EF between the two subgroups. During the hospital course, one or more complications(congestive heart failure, cardiac rupture, ventricular fibrillation) developed in 14 pts. The left ventricular EF was significantly lower in pts with complication than in pts without (0.47 vs 0.36). The initial EF was not lower in nonsurvivors than in survivor. Sequential TI-201 scan revealed initial defect in 24/25 pts with AMI of 87 segments with initial defect in early stage, 65 remained unchanged 4 weeks later. The segment which showed redistribution, reverse redistribution or persistent defect in early stage developed to various pattern in late stage. In relation with improvement of EF, there was no difference in number of coronary vessels involved or pts with & without redistribution. The amplitude image & phase image contribute to diagnosis of extent and location, especially right ventricular involvement of AMI.