Comparison of the Effects of Different Administration Times of Magnesium on Infarct Size.

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The effect of high magnesium (Mg) on infarct size was examined in isolated rat hearts submitted to 40 min global ischemia (Is) and 2 hs reperfusion (R). Mg (15 mM) was administered 15 min before Is (MgI) or at the beginning of R (MgR). In five hearts more calcium (5 mM) was added (Mg+Ca). Infarct size (IS) measured by TTC staining, diminished with Mg treatment (4.5±1.5% and 18±4% in MgI and MgR, respectively, vs 44±5% in untreated hearts). Mg+Ca treated hearts showed lesser infarct than untreated hearts (19±3%). Mg also improved postischemic recovery. These results demonstrate that Mg treatment either before ischemia or early in reperfusion has an infarct size limiting effect.

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