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<back ground>In our institution, we use less invasive 3 Fr catheters for diagnostic coronary angiograms (CAGs). We usually use high density contrast medium(HD) for coronary angiograms, but HD easily raises the pressure to the 3 Fr catheter because of its small lumen size. In addition, LD is more economical than HD. In this point, low density contrast medium(LD) may be suitable for 3 Fr catheter. On the other hand, LD may have the possibility of poor image quality. In this study, we compared LD with HD for image quality of CAGs using 3Fr catheters. <methods>191 patients performed CAG using 3Fr catheter separated into two groups;HD group (n=183) included CAGs for which high density contrast medium(370mg/ml) was used and LD group(n=8) included CAGs for which low density contrast medium (300mg/ml) was used. We compared these 2 groups about the image quality. An experienced angiographer performed angiographic grading for the images of each RCA, LAD and LCX. Quality score was graded from 0 to 3. <results> For LAD, the quality score of HD was  $2.97 \pm 0.16$  and that of LD was 3.0(N.S). For LCX, the quality score of HD was  $2.99 \pm 0.11$  and that of LD was 3.0(N.S). For RCA, the quality score of both HD and LD was all 3.0. <conclusion>The image quality of CAG for which LD was used was equal to that for which HD was used. LD is more economical and makes smaller pressure to the 3 Fr catheter than HD, therefore we should use LD instead of HD when CAG is performed with 3 Fr catheter.