

COMPARISON OF DAP VALUES FOR LOW-PULSED vs. NORMAL-PULSED CORONARY ANGIOGRAPHY

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PURPOSE

To compare the DAP-readings for coronary angiography (CA) using both low-pulsed and normal-pulsed techniques

MATERIALS AND METHODS

40 patients underwent CA were divided into 2 groups. In 1st group patients CA was performed using low-pulsed technique (10 frames per second (f/s)). The patients of 2nd group underwent normal-pulsed CA technique (15 f/s). Such parameters as: body weight, body surface area, total amount of cine runs, relatively same both fluoro and acquisition time – were taken into account due to the statistical reasons.

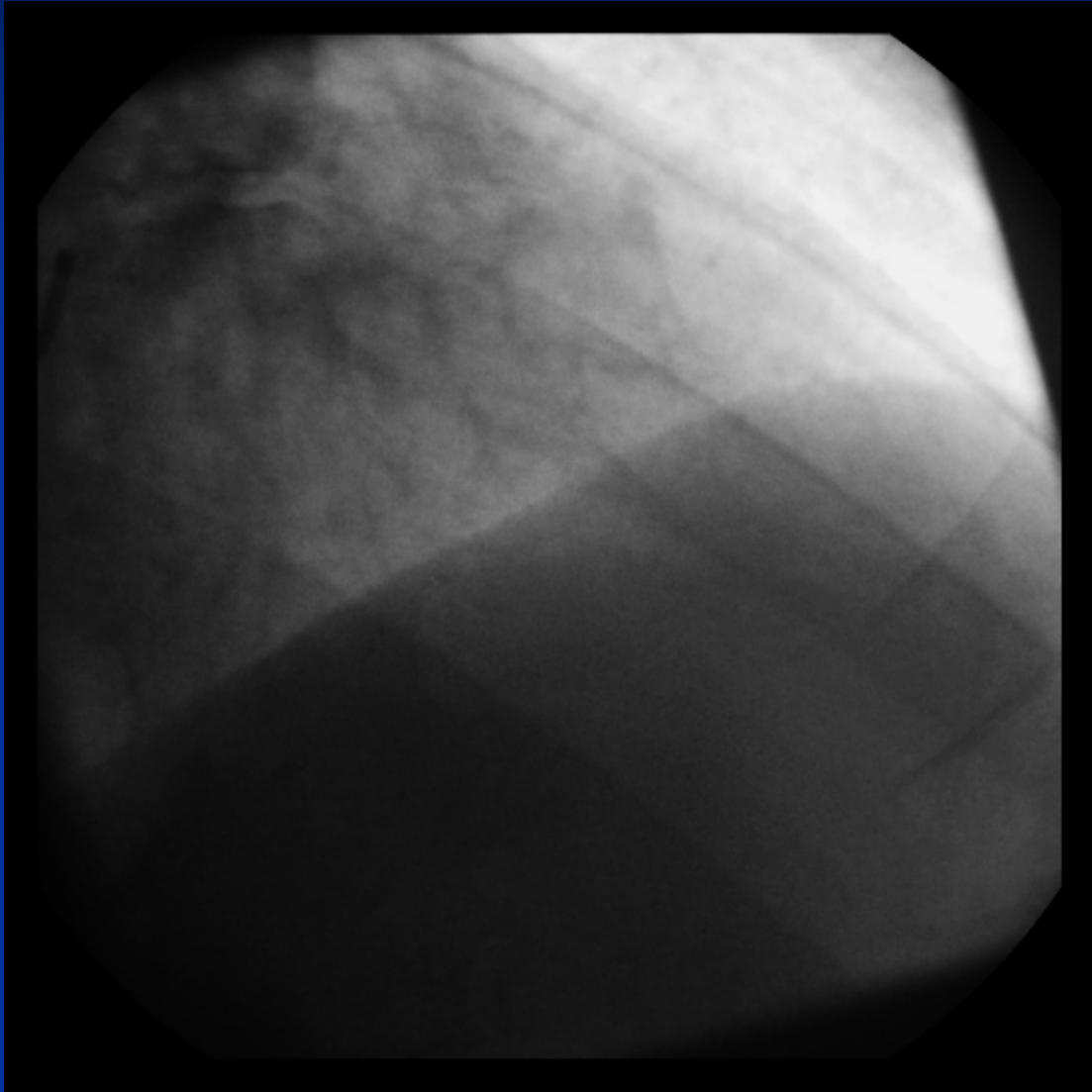
The indication for use of low-pulsed CA was normo- or bradycardia with heart rate 40-70 per minute.

DAP evaluations were obtained using Diamentor (PTW, Germany) provided by IAEA.

RESULTS

Parameters	1 st group (n=20)	2 nd group (n=20)
Fluoro time, min (average)	2-4 (3.05)	2-4 (3.13)
Number of cine runs	8	8
Acquisition time, sec (mean)	23.35-41.78 (29.76)	21.14-44.52 (30.06)
DAP, Gy·cm ² (mean)	17.31-32.18 (24.81)	23.49-45.75 (32.73)

Normal-pulsed coronary angiography



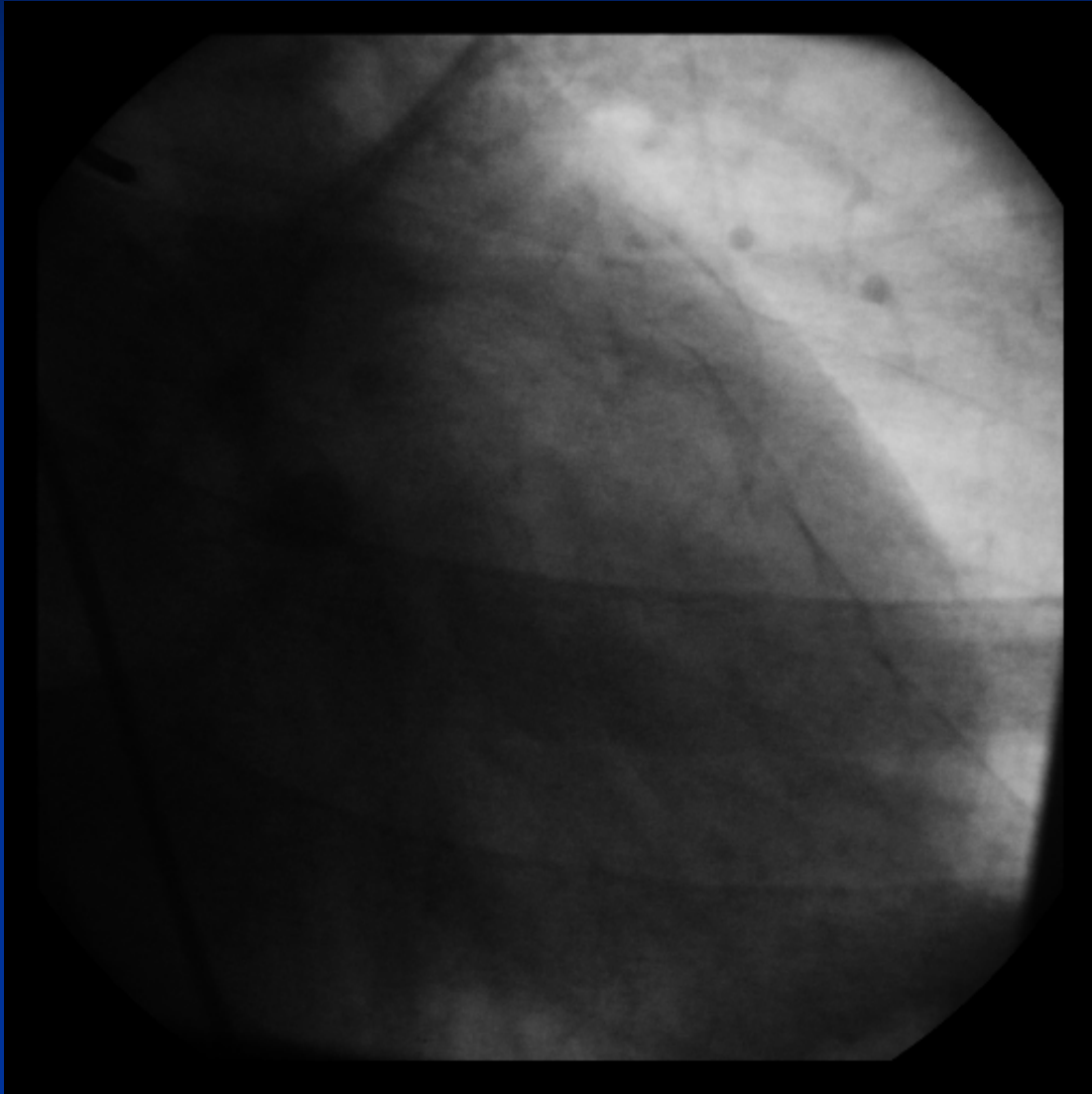
pulse rate – 15 f/s

number of frames – 60

cine time – 4 seconds

DAP – 5.31 Gy·cm²

Low-pulsed coronary angiography



pulse rate – 10 f/s

number of frames – 40

cine time – 4 seconds

DAP – 3.84 Gy·cm²

Comparison of DAP values

pulse rate – 15 f/s

number of frames – 60

cine time – 4 seconds

pulse rate – 10 f/s

number of frames – 40

cine time – 4 seconds

DAP

5.31 Gy·cm²

3.84 Gy·cm²

CONCLUSION

Low-pulsed CA seemed to be a good approach for patient dose reduction, especially in cases of normo- or bradycardia