



CASE SERIES OF 5 PATIENTS TREATED WITH “ZERO-CONTRAST” LEFT ATRIAL APPENDAGE CLOSURE

Tadatomo Fukushima,¹ Masato Fukunaga,¹ Akihiro Isotani,¹ Shinichi Shirai,¹ Miho Nakamura,¹ Takashi Morinaga,¹ Kenichi Ishizu,¹ Kenji Ando,¹

¹ Kokura Memorial Hospital

Correspondence: Masato Fukunaga, whscs835@yahoo.co.jp

Background:

Left atrial appendage closure (LAAC) is a procedure usually requiring transesophageal echo (TEE) and fluoroscopy with contrast media. The WATCHMAN FLX has a fully rounded design to safely advance and maneuver within the LAA. Some patients not preferable to contrast media, such as chronic kidney disease (CKD) and a history of allergy to contrast may hesitate to undergo the procedures.

The study aimed to look into the feasibility of “zero-contrast” left atrial appendage closure.

Objective:

We included the patients who planned LAAC with CKD stage 4 or 5 without hemodialysis and allergy to contrast media.

Methods:

LAAC procedures with WATCHMAN FLX were performed under general anesthesia and TEE. The pre-procedural imaging was performed with plain ECG-gated cardiac CT and TEE was performed on the day of the procedure just before LAAC.

Results:

Five patients (72±4.2 years, 4 males, CHA2DS2-VASC 4.0 ± 4.7, and HAS-BLED 3.4 ± 1.2) were planned to zero-contrast LAAC. Four in 5 patients had CKD (eGFR 19.4 ± 21 ml/min) and one had an allergy to contrast. During the LAAC procedures, 27mm devices were implanted in four patients and 35mm device was implanted in one patient. The procedure time was 23 ± 6.8 min. The procedural success rate was 100% without periprocedural complications. As for recapture, no recapture was done in 1 case, 1 partial recapture in 3 cases, and 7 times recaptures in 1 case. The most challenging case, in which 7 times recaptures were done, required to use of 15ml contrast media to know where was the deepest site of LAA. The other case also needs 1 shot of contrast (6ml) to confirm peri-device leak which is not sure with TEE.



Conclusion:

The strategy of zero-contrast LAAC in patients with CKD and allergy to contrast was feasible and safe. Some challenging cases may need a minimal amount of contrast media.

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