

## DKクラッシュおよびキュロットステント施術が比較された (Abstract # 13-LB-10264)

DKCRUSH-III: 治療困難な分岐部病変において"ダブルキッシング"クラッシュステントを用いた際の有害事象は少ない

DKCRUSH-III: Fewer adverse events with "double kissing" crush stent in challenging bifurcation lesions

冠動脈分岐部病変を有する患者に対する治療は"ダブルキッシング"クラッシュとして知られるステント技術を用いた方がキュロットステント治療よりも有意に優れていたとのDKCRUSH-IIIトライアルの結果が第62回American College of Cardiology学会で発表された。キュロット技術は主幹動脈および分枝にオーバーラップするステントを留置する。DKクラッシュ技術は分枝ステントの薄片を主幹動脈の方へ延長させる。この方法は、バルーンを動脈内で拡張させることと"ダブルキス"させることの2点を取り入れている。今回の多施設スタディでは、非保護左主幹動脈末梢分岐病変の患者をDKクラッシュ(210人)またはキュロット(209人)ステントを施行する群に無作為に割り付けた。8か月後の追跡冠動脈造影の結果、ステント内再狭窄をDKクラッシュ群で12例に、キュロット群で22例に認めた(6.8%対12.6%)。1年後に主要な有害心臓事象を来したのはDKクラッシュ群患者の方がキュロット群より少なかった(6.2%対16.3%)。標的病変および標的血管の再血行再建術施行率はキュロット法の方が明らかに高かった: 標的病変においては6.7%対2.4%であり、標的血管においては10.5%対4.3%であった。この結果は*Journal of American College of Cardiology*のオンライン版に公表されており、印刷版4月9日号に掲載予定である。

### Full Text

Patients with coronary bifurcation lesions that are linked with poor prognosis, fared significantly better with the stent technique known as double kissing crush than with culotte stenting, according to data from the DKCRUSH-III trial presented at the American College of Cardiology's 62nd Annual Scientific Session.

DKCRUSH-III is the first head-to-head comparison of double kissing (DK) crush and culotte stent techniques in coronary artery disease. The study focused on bifurcation lesions.

DK crush and culotte are two-stent procedures named for their configurations. The culotte technique places stents in the main artery and the side branch, overlapping them in the main vessel before the branch forks, akin to pants legs that meet at the seat. The DK crush technique extends a small piece of the branch stent into the main artery, where it is squeezed against the main artery's wall. This approach introduces two points where the balloons used in stenting inflate in the artery and connect for a "double kiss."

Bifurcation lesions are Y-shaped trouble spots, which account for about 15 percent of lesions treated with coronary stents. Bifurcation lesions present technical problems associated with higher rates of restenosis and lower rates of long-term favorable outcome. High morbidity and mortality are connected with unprotected left main coronary artery (ULMCA) disease. Approximately two-thirds of significant ULMCA disease involves the distal bifurcations. Such lesions magnify the challenge for the interventional cardiologist. The best treatment for this lesion type has been a matter of debate.

"Angiographic follow-up at eight months found 12 cases of in-stent restenosis in the side branch with DK crush and 22 with culotte [6.8 percent vs. 12.6 percent]," said Jun-Jie Zhang, M.D., an interventional cardiologist in the cardiovascular department of Nanjing First Hospital, Nanjing Medical University, in Nanjing, China. "Thus, we have to say that DK crush is superior to culotte stenting."

The multicenter study randomly assigned patients with ULMCA distal bifurcation lesions to treatment with DK crush (210 patients) or culotte (209 patients) stenting. At one year, major adverse cardiac events occurred in 6.2 percent of the DK crush patients and 16.3 percent of the culotte patients. The culotte approach had markedly higher rates of repeat intervention at the target lesion and the target vessel: 6.7 percent target lesion vs. 2.4 percent, and 10.5 percent target vessel vs. 4.3 percent. Clotting at the stent site was low in both groups.

"Although this trial did not include a bypass surgery group to contrast with the stenting techniques, the promising results achieved by DK crush were comparable with those after coronary artery bypass," Dr. Zhang said.

The study will extend clinical follow-up for participating patients to five years, and further research through the DKCRUSH-V study is ongoing.

The study was simultaneously published online in the *Journal of American College of Cardiology* and will appear in the April 9 print edition.

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