

# The success of Kaffes stent insertions for post liver transplant anastomotic strictures

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This presenter has the following declarations of relationship with industry:  
• NONE

## Background

Anastomotic strictures (AS) are isolated, short-length strictures, affecting 4-9% of patients post liver transplantation, which if untreated, ultimately lead to graft failure. Endoscopic stenting has historically been with plastic stents (PS). However, AS frequently recur, and patients require multiple procedures. Kaffes stents (KS, Taewoong Medical) are a new type of covered metal stent that have an anti-migration waist, short stent length and long retrieval wires deployed within the duodenum (Figure 1). Previous randomised trials have highlighted their success with resolving AS compared to PS.<sup>1</sup>

## Methods

To examine outcomes in patients with AS, we compared a recent cohort of patients treated using KS with a historical cohort of patients who received PS. KS were inserted in patients with duct-to-duct anastomoses and reassessed 10-12 weeks after, to determine stricture resolution. Sphincterotomies and dilatations were performed at the endoscopist's discretion. Independent variables were analysed for significance using the Independent samples t-test on SPSS.

	Kaffes stent	Plastic stent
No. inserted	22	69
No. removed	16	69
Stricture resolution (%)	14 (88%)	26 (38%)
Complications (%)	0	6 (8.4%)
Need for biliary reconstruction	0%	32%
Mean age (Years)	55	51
Females (%)	12 (55%)	20 (29%)
DBD (%)	11 (50%)	47 (68%)
DCD (%)	11 (50%)	22 (32%)
CIT (Hours) (±SD)	9.6 (±3.3)	8.9 (±3.1)

Table 1: Shows the analysis of both KS and PS groups, along with complication and stricture resolution rates

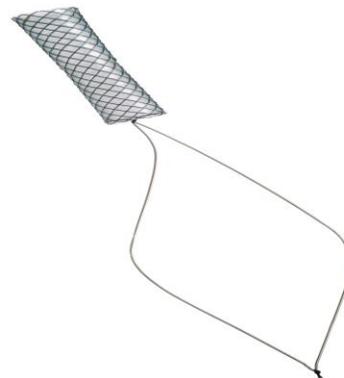


Figure 1 : Shows the Kaffes stent with its long retrieval wires

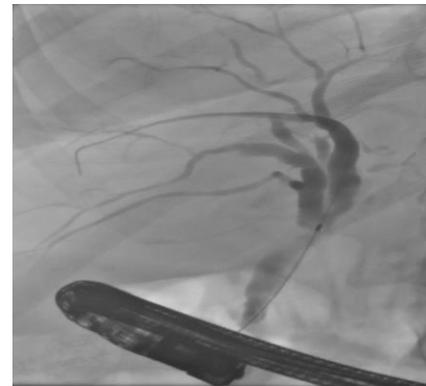


Figure 3: Cholangiogram shows an anastomotic stricture persisting despite previous plastic stenting

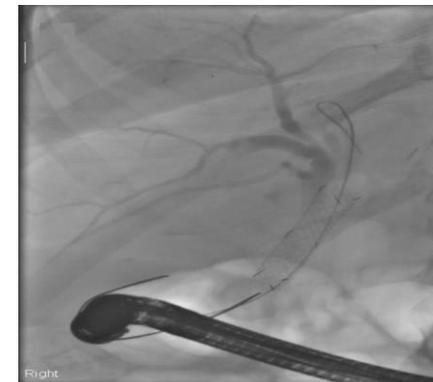


Figure 4: Cholangiogram of the same patient at Kaffes stent insertion

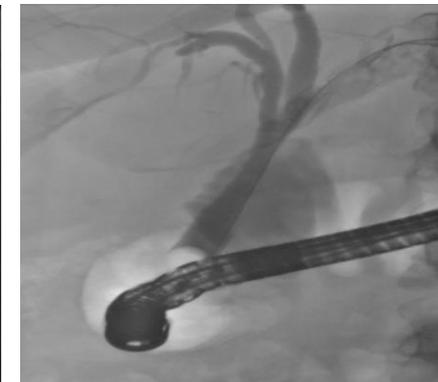


Figure 5: Balloon cholangiogram 4 months later after Kaffes stent removal, showing complete stricture resolution

## Results

Analysis of both groups are shown in Table 1. AS resolved after one deployment of KS in 14 out of 16 patients (88%) compared to 26 out of 69 patients (38%) after their first PS (Relative Risk of persistent stricture (KS vs PS) =0.2, 95% CI 0.05-0.74; P=0.016; NNT by KS =2, 95% CI 1.3-4.0).

There were no complications, including stent migration, after KS compared to 6 (8.4%) in the PS group (3 cholangitis, 2 pancreatitis, and 1 bleeding). Following initial ERCP, PS patients required more ERCPs (mean 2.71 vs 1.13 more; p<0.01) and 32% required biliary reconstruction.

## Conclusions

Our data indicate that the KS is a promising method for managing post transplant AS because the majority of strictures are treated by deployment of a single stent at first ERCP.

## References:

1.Kaffes A, Griffin S, Vaughan R, James M, Chua T, Tee H, Dinesen L, Corte C, Gill R. A randomized trial of a fully covered self-expandable metallic stent versus plastic stents in anastomotic biliary strictures after liver transplantation. Therap Adv Gastroenterol. 2014 Mar;7(2):64-71