

ERCP - sampling of malignant biliary strictures

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Procedures:

ERCP (endoscopic retrograde cholangiopancreatography) performed for biliary obstruction.

A total of 36 procedures were performed on strictures of suspected cancerous origin:

- 26 suspected pancreatic adenocarcinoma
- 8 suspected cholangiocarcinoma
- 2 suspected gallbladder cancer

Most patients had confirmation of a malignant diagnosis by an alternative means of sampling (EUS-FNA, CT-FNA, bile duct biopsy, surgical histology).

Method:

Two passes with the Infinity™ sampling device were performed to gather specimens from the targeted stricture. Two smears were prepared from the first pass, one of which was sprayed with fixative (Figures 1 & 2). The brush was then energetically agitated in the cytology fluid (RPMI) to dislodge material into the fluid (Figure 3). The brush was rinsed with water.

A second pass of brushing was performed (Figure 4). The brush was cut off and placed into the same tube of cytology fluid (Figure 5). Contents from the Infinity™ sampling device catheter were also placed into the cytology fluid via salvage cytology technique (Figures 6&7). The sample was processed as a cell block, and the cell block and smears were reviewed by the cytologist (Figure 8).



Figure 1

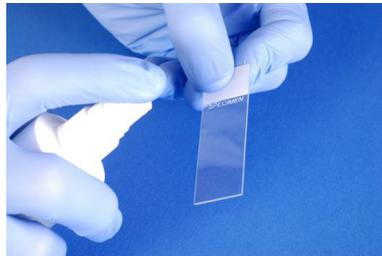


Figure 2



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7

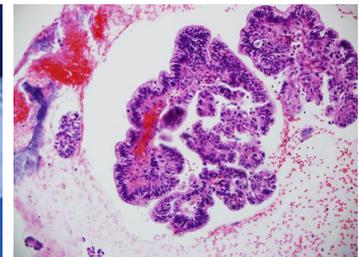


Figure 8

Results:

The Infinity™ sampling device provided a positive diagnosis on 28/36 proven malignant strictures. This equates to a 78% Sensitivity.

Characteristic of lesion	Number = 36	Infinity™ sampling device (pos or suspicious/neg)	Sensitivity
Pancreatic CA	26	20/6	77%
Gallbladder CA	2	1/1	50%
Cholangio CA	8	7/1	88%
Total	36	28/8	78%

Discussion:

Though limited to 36 cases, a 78% positive diagnosis is excellent. In past experiences, using this same methodology, other brushes yield only 30-40%. The cell block frequently showed large samples of tissue. More cell block material was typically found using the Infinity™ device than FNA. The cytologist spontaneously said that the sample was “amazing” and that it resembles a biopsy more so than a cytology smear. There was plenty of material to do a full immunohistochemical workup of the specimen.

“The Infinity™ sampling device is clearly better than existing biliary brushes. The unique design of the brush was the reason I tried the device. The results are why my colleagues and I will continue to rely on it for our pancreatobiliary sampling needs.”

- David L. Diehl, MD, FACP, FASGE