CapsoCam vs PillCam SB3 in the diagnosis of iron deficiency anemia: beyond quality measures

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INTRODUCTION

CapsoCam (CapsoVision) provides panoramic 360º imaging of the small bowel. Compared to end-view small bowel capsule endoscopy (SBCE), a higher visualization of the duodenal papilla has been described for CapsoCam (65% vs 24% with PillCam SB3 (Medtronic)). Visualization of papilla has been proposed as a marker for higher diagnostic yield. The **aim** of this study was to compare the diagnostic yield and its correlation with papilla visualization of CapsoCam (CV) Vs. PillCam SB3 (SB3) in patients with iron deficiency anemia, by a single experienced reader.

METHODS

Longitudinal cohort study including 22 consecutive SBCE (11 CV, 11 SB3) from 22 patients with iron deficiency anemia. Small bowel preparation protocol was similar and all SBCE were reported by the same expert (>300 SBCE reviewed).

Qualitative Brotz preparation scale was used to classify the quality of small bowel preparation. **Significant findings** were defined as angioectasia, ulcers/multiple erosions, tumous or varices (Saurin Classification P2).

RESULTS

- Endoscopic findings were reported in 95.5% of the examinations (21/22), and 72.7% (16/22) were relevant.
- **No significant differences** were found between CV and SB3 in small bowel transit time, "good" bowel preparation, global findings or significant findings (table 1).
- There was a **non-significant higher duodenal papilla detection** with CV and no significant correlation between papilla identification and diagnosis of significant finding was found (p 0.137) (table 2).
- No adverse events were observed.
- During **a mean follow-up of three months** after SBCE, no overt bleeding was register and a significant increase in hemoglobin was noted (mean, g/dL 8.6 vs 11.0, p 0.008).
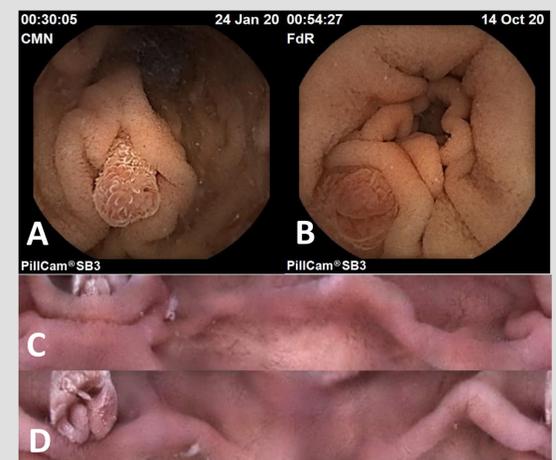

Fig 1 – duodenal papilla detected on SB3 (A,B) and CV (C, D)

Table 1 – diferences between CV and SB3 capsules

	CV	SB3	p-value
SB transit time (min)	253+103	276+104	0,616
"Good" bowel preparation	45,5%	45,5%	1,000
Global findings	100%	90,9%	1,000
Significant findings	63,6%	81,8%	0,635
Duodenal papilla detection	6/11 (54,5%)	2/11 (18,2%)	0,183

Table 2 – papilla detection and diagnosis of significant findings

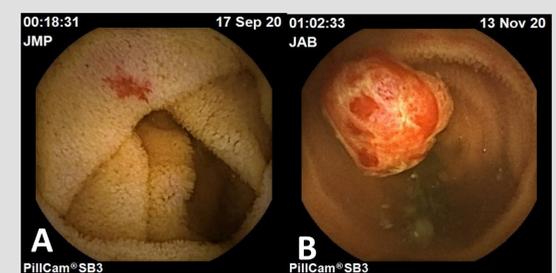|		Significant findings	
		-	+
Papilla identification	+	4	4
	-	2	12

Fig 2 – angieoectasia (A) and tumour (B) on SB3

CONCLUSION

Compared to SB3, CV detected the papilla in a higher but non-significant proportion of patients but no significant impact on diagnostic yield was found.

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