Suspecting Meckel's diverticulum in obscure-overt gastrointestinal bleeding: the role of capsule endoscopy and Technetium-99m scintigraphy

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Introduction: Meckel's diverticulum (MD) is the most common congenital malformation in adults. When symptomatic this entity presents as an obscure-overt gastrointestinal bleeding (OOGIB), in a majority of cases. The traditional method for MD diagnosis is the Technetium-99m scintigraphy (Tc-99mS), with a sensitivity of 63% and specificity of 9%. However, the advent of capsule endoscopy (CE) has dramatically changed the diagnostic approach of OOGIB.

Aim: To compare the diagnostic field of Tc-99mS and CE in the etiologic study of OOGIB, in adults with clinical suspicion of MD.

Methods: A retrospective study of a total of patients with clinical suspicion of MD evaluated by Tc-99mS and CE for the diagnostic workup of OOGIB, between 2004 and 2019, in a tertiary hospital, with at least 12 months of follow-up was conducted.

Results: 38 patients were included, 29% female, with an average age of 39±17 years.

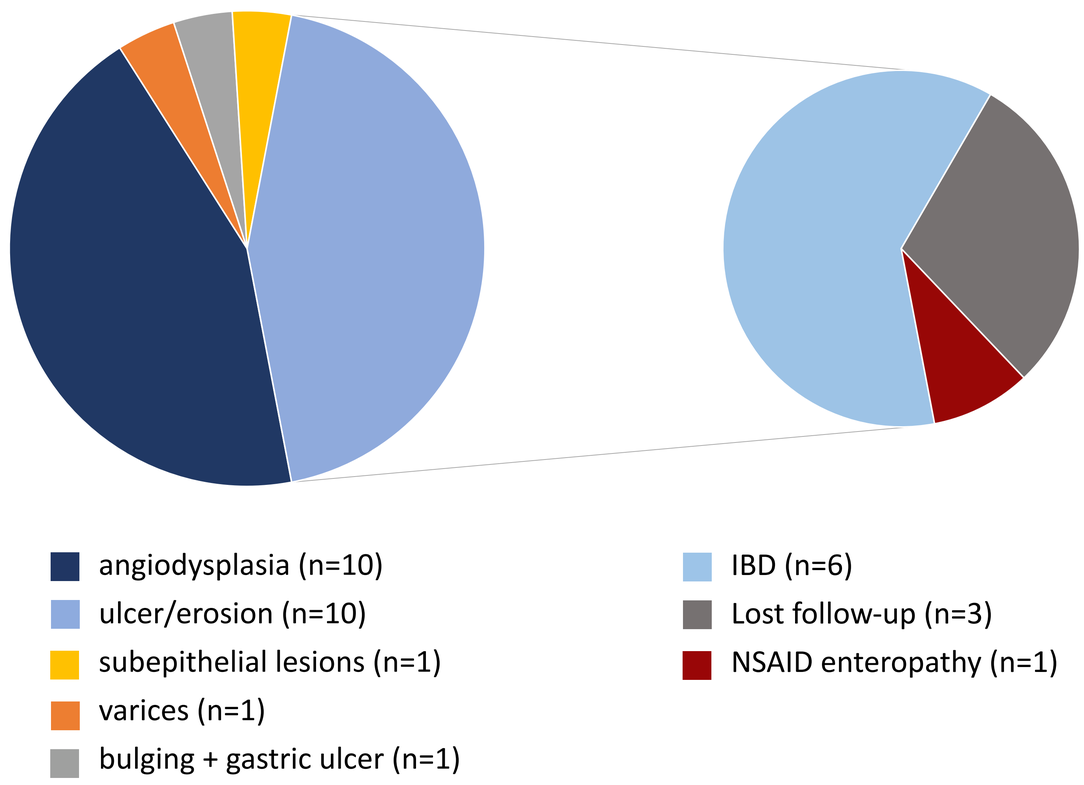
Patients with Meckel's diverticulum confirmed by surgery:

		Tc-99mS	
		Positive for MD	Negative for MD
CE	Positive for MD	**1**	**3**
	Negative for MD	**3:** - 1 CE without alterations but incomplete enteroscopy - 1 small-bowel flebectasias in CE -1 small bowel angiodysplasias, but not performed at our center	**1:** - CE without alterations but incomplete enteroscopy

Table 1: Characterization of 8 patients with MD confirmed by surgery.

Patients without Meckel's diverticulum:

In the remaining 30 patients, one was positive for MD in Tc-99mS but CE showed suggestive findings of Crohn's disease, confirmed by pathology after double-balloon enteroscopy. In the other 29 patients all of them negative for MD in Tc-99mS, 23 (80%) presented another results in CE (graphic 1).



Graphic 1: Characterization of patients without MD, who presented changes in CE and characterization of patients with ulcer/erosion.

The subepithelial lesion was a gastrointestinal stromal tumor diagnosed after a double-balloon enteroscopy. The bulging of the small bowel with gastric ulcer had a final diagnosis of gastric cancer.

The ulcers/erosions in CE were a manifestation of IBD in 60% of the patients according to the Graphic 1.

In the remaining 6 patients, whose both examinations were negative, the follow-up didn't show bleeding recurrence.

Conclusion: Although the availability of advanced endoscopic technics for the small bowel, MD diagnosis remains a challenge. Our data suggest that both Tc-99mS and CE have a role in MD diagnosis with complementary diagnostic field. CE has an additional advantage of excluding other OOGIB etiologies, even in a clinical context of MD suspicion.

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