Are Biopsies Sufficient for Diagnosis? Comparison of ESD and Forceps Biopsy Findings for Colon and Rectal Lesions

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INTRODUCTION

- Endoscopic submucosal dissection (ESD) is a minimally invasive technique used for removal of superficial dysplastic or early cancerous colon and rectal lesions.
- Large lesions not amenable to endoscopic mucosal resection often have superficial forceps biopsies taken prior to referral for ESD.

STUDY AIM

We evaluated the diagnostic accuracy of superficial forceps biopsies compared with ESD pathology for colon and rectal lesions.

METHODS

- This was a retrospective medical record review of consecutive patients who underwent ESD for colon and rectal lesions at a tertiary care center between 10/2018 and 11/2021.
- Pathology results from in-hospital and outside hospital pre-ESD superficial forceps biopsies were compared to ESD pathology results.
- The primary outcome of this study was the number of patients found to have higher disease severity on pathology reports from ESD compared with pre-ESD superficial forceps biopsy.

RESULTS

		TOTAL (N=84)
FORCEPS BIOPSY TAKEN PRIOR TO ESD		
	TOTAL	72
	IN-HOSPITAL	36
	OUTSIDE HOSPITAL	48
AVG TIME FROM IN-HOSPITAL FORCEPS BIOPSY TO ESD		75 days
AVG TIME FROM OUTSIDE HOSPITAL FORCEPS BIOPSY TO ESD		91 days
ESD PATHOLOGY VS PRIOR FORCEPS BIOPSY		
	SAME PATHOLOGY RESULT	41 (57%)
	DOWNGRADED PATHOLOGY ON ESD	10 (14%)
	UPGRADED PATHOLOGY ON ESD	21 (29%)
	UPGRADED TO CANCER ON ESD	6 (8%)

- Of the 84 patients undergoing ESD of colon or rectal lesions, 72 had prior superficial forceps biopsies which were taken in-hospital (n=36) or at an outside institution (n=48).
- Due to the COVID-19 pandemic, some patients likely experienced delays in care prolonging time between pre-ESD forceps biopsy and ESD.
- Pathology findings after ESD differed from pre-ESD biopsies in 31 patients (43%) with 21 patients having their diagnosis upgraded.
- 6 patients were newly diagnosed with cancer on ESD pathology compared to their initial biopsy results.
- Patients who received a new cancer diagnosis on ESD pathology had a longer average time between in-hospital pre-ESD biopsy and ESD (86 days) compared with the whole cohort (75 days).

CONCLUSIONS

- Superficial biopsies of colon and rectal lesions taken prior to ESD were concordant with ESD pathology in most patients, but 29% of patients had their diagnosis upgraded on pathology after ESD.
- These results highlight the role of en bloc ESD not only for therapeutic benefit (as 75% of cases resulted in R0 resection), but also for accurate staging of colon and rectal lesions.