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DETECTION OF NEOPLASIA USING DYE SPRAY CHROMOENDOSCOPY IN PATIENTS WITH A HIGH RISK OF FAMILIAL COLORECTAL CANCER.

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Introduction: Patients at high risk of familial colorectal cancer require surveillance colonoscopy to identify and remove polyps before malignant transformation can occur. Colonoscopy sensitivity rates vary and its effectiveness depends on user ability, adequate bowel preparation and procedure duration. Furthermore, the majority of polyps occur in the right colon and are characteristically flatter than those found in the left colon, rendering identification difficult. As such, recent guidelines have advocated the use of dye spray chromoendoscopy (DSC) to aid detection rates [1]. Our study assesses the use of chromoendoscopy at a district general hospital and whether polyp detection was higher in those undergoing surveillance colonoscopy when dye spray was used.

Method: High risk patients were selected from our local endoscopy database Scorpio®. High risk was defined by a diagnosis of Lynch Syndrome or High Moderate risk as per BSG guidelines (i.e. a lifetime risk of colorectal cancer of >10%) [2]. We retrospectively measured polyp detection rate, procedure duration, adequacy of bowel preparation, withdrawal time, histopathology, and the use of 0.02% indigocarmine dye spray versus white light colonoscopy (WLI). Statistical analysis was performed using chi-square test and 2 tailed T test for binary and continuous variables respectively.

Results: 101 patients were included in this study (62 High Moderate risk and 39 Lynch Syndrome). WLI alone was performed for 77 patients, with DSC performed in 24. Significantly more polyps were detected by the use of dye spray, with an average polyp count of 0.49 for WLI versus 1.79 for DSC (P=0.00332). There was a predominance of right sided lesions in this cohort. A longer withdrawal time may also be a factor in polyp detection rate. Table 1 highlights our main findings.

	Number procedures	Polyps seen	Adenomas/ Cancer	Polyp count (average)	Withdrawal time	Right colon
WLI	77	20	15	0.49	11min	12
DSC	24	17	15	1.79	18 min	12
p value				0.0032	<0.01	<0.01
				T test (2 tailed)	T test (2 tailed)	Chi-square

Table 1: Comparison of lesion detection and endoscope withdrawal time for WLI and DSC.

Conclusion: The use of DSC improves polyp detection in those undergoing surveillance colonoscopy for high risk familial colorectal cancer. Prolonged withdrawal time may account for an increased adenoma detection rate, or may be a function of polypectomy procedures. We recommend a large randomised controlled trial be performed to determine the true efficacy of this chromoendoscopy in high familial risk patients.

References: 1. Kaminski MF. Advanced imaging for detection and differentiation of colorectal neoplasia. ESGE Guideline.
2. Cairns SR. Guidelines for colorectal cancer screening and surveillance in moderate and high risk groups. BSG Guideline. Gut 2010.

Disclosure of Interest: None Declared