

# Dysplasia Associated Lesion or Mass (DALM) in a Hepatitis C Patient: a case report.

A Alleemudder, R Kumar

## Citation

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## Abstract

Dysplasia Associated Lesion or Mass (DALM) are rare but pre-malignant lesions found in Ulcerative Colitis. Their macroscopic appearance maybe mistaken for colorectal cancer. There are several well known malignant associations with Hepatitis C infection but not colorectal cancer. We report an unusual case of finding DALM's in association with Hepatitis C, highlighting the possibility of a yet unidentified causal relationship.

## INTRODUCTION

Dysplasia Associated Lesion or Mass (DALM) are pre-malignant lesions more commonly described in association with Ulcerative Colitis.<sup>1</sup> In this unusual case, DALM's were found in the absence of inflammatory bowel disease in a patient with Hepatitis C.

## CASE PRESENTATION

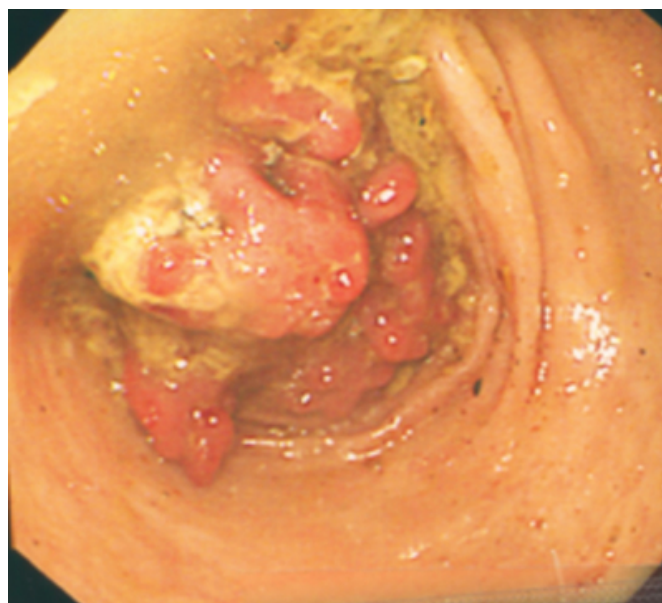
We present the case of a 57 year old war pensioner with a 3 month history of passing loose stools containing bright painless blood and mucous once per day. This was associated with lower abdominal discomfort and reduced appetite but no weight loss.

He was Hepatitis C positive from being an IV drug user some 20 years ago. There was no other past medical history or history of bowel cancer or inflammatory bowel disease in the family. He smoked 2-3 cigarettes per day and drank socially.

Clinical examination was unremarkable. Routine blood tests did not show any abnormality but CEA was elevated at 73. Subsequent colonoscopy revealed 4 large clusters of polyps affecting the sigmoid and mid ascending colon, splenic and hepatic flexures (as shown in the figures 1 & 2 below).

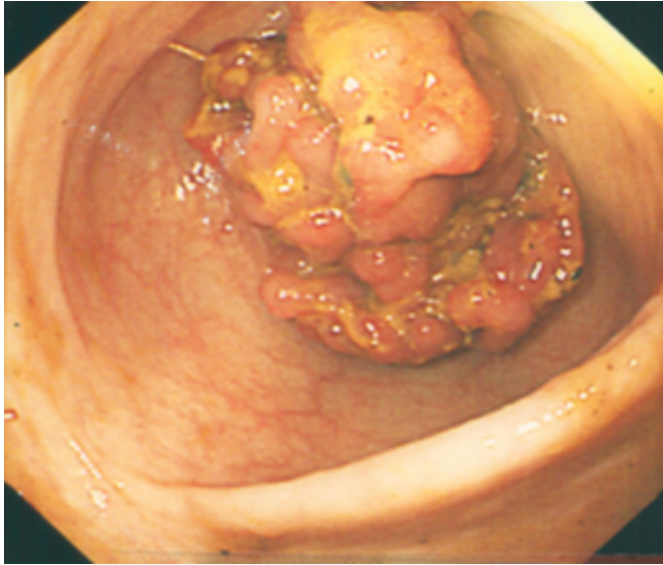
**Figure 1**

Fig 1



**Figure 2**

Fig 2



Extensive biopsies that were taken showed inflammation only and failed to reveal any malignancy. In the meantime, he developed signs of intestinal obstruction.

In view of the raised CEA and indefinite diagnosis and obstruction, a multidisciplinary decision was taken to resect the lesion. A subtotal colectomy with ileo-rectal anastomosis was performed as the rectum was normal. The final histopathology report again failed to demonstrate any malignancy amongst the inflammatory polyps except for low grade dysplasia, suggesting these polyps were DALM's.

## DISCUSSION

Viral aetiology account for 10-20% of cancers worldwide.<sup>2</sup> There are several well known associations between viruses and gastrointestinal malignancies. An example of this is the high risk of hepatocellular carcinoma with chronic Hepatitis C infection. Other less well known and understood gastrointestinal cancers in which this virus maybe implicated include cholangiocarcinoma and pancreatic cancer.<sup>3</sup> An online search failed to identify any associations between Hepatitis C and colorectal carcinoma but in view of its implications in other gastrointestinal cancers, there may well be a yet unidentified causal relationship.

Much of the literature describes DALM in the context of Ulcerative Colitis, where they are thought to contribute to the elevated risk of Colorectal Carcinoma (CRC).<sup>1</sup> Systematic reviews indicate there is a lack of evidence to suggest DALM's may be found in other conditions.

Dysplasia itself is a marker of impending cancer formation

as it forms part of the recognised chronic inflammation – dysplasia – cancer pathway. Its detection through endoscopic surveillance forms the basis for reducing the morbidity and mortality associated with CRC.

The 2 main types of dysplasia seen in UC are divided into flat or elevated depending upon whether they can be detected on endoscopy.

Elevated lesions became more readily known as DALM after Blackstone coined the term in 1981.<sup>3</sup> They have a heterogenous appearance and are further sub classified according to their resemblance to typical benign Sporadic Adenomas (SA), which can also appear coincidentally in UC and are unrelated to the underlying inflammation process.

Adenoma-like Masses (ALM's) are well circumscribed lesions that maybe smooth or papillary, non necrotic, sessile or pedunculated polyps. In contrast, non-adenoma-like masses usually appear as velvety patches, plaques, irregular bumps or nodules, wart-like thickenings, structuring lesions and broad based masses.

These latter DALM's are associated with a much higher (36-85%) risk of synchronous or metachronous malignancy.<sup>1</sup>

The clinical problem with Sporadic Adenomas is they are similar to ALM's on endoscopy and histology when they form on areas of inflamed bowel, which complicates the diagnostic picture and leads to confusion as to whether the lesion is amenable to local polypectomy or colectomy.

Currently, there are no reliable or definitive tests available to distinguish SA's from ALM's.<sup>5</sup> Histology, immunohistochemistry and molecular studies have all been used in an attempt to differentiate between the two.

They include histology studies by Torres who showed ALM's have greater degree of inflammation in the lamina propria and a mixture of normal and dysplastic crypts at the surface of the polyps.<sup>6</sup> Walsh used immunohistochemistry to demonstrate a higher degree of p53 and  $\beta$ -catenin in ALM's whilst Odze used molecular studies to show that ALM's had a similar prevalence rates of loss of heterozygosity of 3p, APC and p16.<sup>7,1</sup>

Historical practice used to favour colectomy on finding DALM due to the associated risk of carcinoma. Early studies showed the percentage of DALM's containing carcinoma varied between 38% and 83%.<sup>5</sup>

Currently there is sufficient evidence to support managing

Adenoma-like masses with polypectomy and continued surveillance regardless of the underlying aetiology. Two studies have highlighted the low likelihood of recurrent dysplasia or adenocarcinoma on follow up. Odze found that although 58.8% of UC patients developed a further adenoma-like DALM on follow up following a polypectomy, only 1 patient developed flat low grade dysplasia whilst another developed an adenocarcinoma.<sup>8</sup> There also appeared to be no difference in the incidence rate (50%) of polyp formation in UC patients with an ALM or SA.

Rubin also had similar findings with half of the 30 patients with UC and dysplastic polyps treated with polypectomy developing further polyps but none developed flat dysplasia or adenocarcinoma after 4 years of follow up.<sup>9</sup>

These study findings subsequently lead Friedman to devise an appropriate algorithm for the management of DALM's.<sup>10</sup>

Due to the high risk of carcinoma associated with nonadenoma-like DALM's, a colectomy is recommended regardless of the grade of dysplasia. The same holds true on finding flat dysplasia, although there is ongoing debate whether flat low grade dysplasia can be managed with continued surveillance.<sup>11</sup>

On the other hand, Adenoma-like masses are associated with a lower risk of malignancy and can be removed by polypectomy and monitored with continued surveillance. Specific criteria apply when they are removed from areas of colitis, which includes:

1. a) The lesion has been excised completely by endoscopy otherwise there is a high rate of progression to cancer as indicated by a retrospective study by Vieth et al.
2. b) There is an absence of dysplasia at the margins.
3. c) Dysplasia is not found anywhere else in the colon as a colectomy would be more appropriate.
4. d) The patient should ideally be in the adenoma bearing age (>40 years old).

When these criteria are not fulfilled, a more complete

excision of the lesion or a colectomy is required.

Ultimately, it is the endoscopist who bears the burden of making the distinction between an adenoma or nonadenoma-like DALM and removing the lesion completely by polypectomy.

## **CONCLUSION**

To our knowledge and based on a systematic review, this is the first reported case of DALM occurring in a non ulcerative colitis patient. Hepatitis C virus is already a known carcinogen and through unknown mechanisms, it is strongly suspected that chronic infection predisposes to premalignant changes in the gastrointestinal system which would otherwise typically be seen in chronic colitis.

Although DALM's have been extensively described in relation to ulcerative colitis, it is probably not unreasonable to believe that they may be under reported and be a feature of other conditions.

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**Author Information**

**Adam Alleemudder**

Clinical Fellow in Urology, St Mary's Hospital, Imperial College Healthcare NHS Trust

**Ravi Kumar**

Colorectal Surgeon, Stafford General Hospital