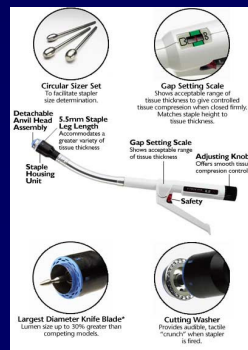


Histological Examination of Circular Stapled 'Doughnuts': Questionable Routine Practice ?

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INTRODUCTION

- Histopathological evaluation of cancer resection specimens provides pivotal **prognostic & therapeutic** information in patients with colorectal cancer
- The use of circular stapling devices is widely employed as it enables a low anastomosis with proven **safety & efficacy** and **reduces operating time**
- Many surgeons practice **routine submission** of the two 'doughnuts' produced by the gun for histological examination often to ensure adequacy of distal resection.

The AIM of this study

is to question

the NEED

for this practice

by providing our own experience of the

impact of 'doughnut' histological evaluation on
patient management

Materials & Methods :

- All patients who had undergone a stapled colorectal cancer resection anastomoses (Jan 98 - Dec 04) in whom circular stapled 'doughnuts' had been submitted for a histological examination were identified .
- Histopathological and Clinical records were reviewed and evaluation of the impact of any findings on decision making was documented on a Microsoft Access TM database merged with the cancer database.

Results :

- **100** patients were identified who fitted the inclusion criteria
- **39%** were women and **61%** men
- Median age of **77(44-88 years)**.
- Operative treatment :
 - **81%** : anterior resection
 - **8%** : left hemicolectomy
 - **11%** : total colectomy

Histopathological reports

- Differentiation :

- 6% : well
- 85% : moderately
- 9% : poorly

- Duke's Classification :

- 16% : A
- 39% : B
- 41% : C
- 4% : D

Other histological findings

- **51%** of patients had polyps in addition to the cancer
- Median distance of the tumours from the **distal resection margins (DRM) : 4 cm. (range 1-27 cm).**
- **2** abnormal sets of doughnuts:
 - Inflammatory changes
 - A metaplastic polyp.

Follow-up :

3 patients had local recurrence.

- **12, 14** and **36** months :
 - **2** had : Anterior Resection
 - **1** had : Total Colectomy
- Original histology for these patients
Did not
show any abnormalities in the doughnuts.

- The 2 patients who had **abnormal sets of Doughnuts** :
 - Inflammatory changes
 - A metaplastic polyp.

Had

No complications or recurrence

over the follow up period.

DRM , LR and abnormal Doughnuts:

DRM in cm.	1	2	3	4	5	6	7	>7
Ant. Resection	15	11	11	22	5	5	4	8
Lt. Hemicolectomy	-	1	2	1	-	-	-	4
Total Colectomy	2	-	-	2	1	1	2	3
Total	17	12	13	25	6	6	6	15
Abnormal Doughn.	-	1	-	-	-	-	-	1
Local Recurrence	-	-	-	1	-	-	1	1

The financial cost of processing the specimens

- **£70.00** per set of 'doughnuts'
£7000 for the **100** patients
- **30 minutes** of a pathologist's time
- **50-hours** for this study

which has both a
financial & resource
implication.

Discussion

- Recommendations for the appropriate distal margin following resection of a carcinoma of the rectum have **changed dramatically** .
- Studies have led clinicians to :
 - Accept a **2 cm** distal margin as adequate resection for patients who have **well or moderately differentiated** rectal carcinomas
 - And in many cases, **distal margins of 1 cm or less also prove sufficient**, especially for T1 and T2 tumours.

In this study :

3 Important points :

- **2 sets** of 'doughnuts' had abnormalities and these abnormalities had **no relation** to the grade of the tumour or local / distant recurrence of cancer
- **Neither of the abnormalities** influenced subsequent management of the patients.
- **3 patients** who had local recurrence in this study had normal 'doughnuts' on histology reporting

Literatures Review :

Analysis of the results of other 3 studies included:

125, Nottingham

485, Leicester

339 Sheffield

A total number of 949 :

routine histological examination of doughnuts is

not beneficial

in **planning management** of patients undergoing surgery
for rectal adenocarcinoma

Examination of :

deep radial margins of the tumour &
other prognostic indicators

would be a more effective use of
histopathological resources

Conclusion :

- This study has shown **no benefit** in performing **routine histological examination** of the 'doughnuts'
- It has a **considerable impact** in terms of **time and resource** use
but of **No** impact
on patients management

Recommendation

can be given to **ABANDONING** this practice

unless there is over-riding clinical concern !!

As positive or less than 2 cm DRM .

further analysis of other colorectal centres results is recommended to add to the evidence body on this subject.

Thank You !!!



Any Questions ?!!

