

# An audit of abdomino-perineal excision (APE) in patients with low rectal cancer in the South West London Cancer Network

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## Background:

Historically, tumours below 6cm from the anal verge required an abdomino-perineal excision - a decision largely based on clinical assessment by the surgeon. Highly accurate staging by MRI and effective downstaging strategies in the neoadjuvant setting coupled with technical advances in colorectal surgery have led to a paradigm shift in the management of low rectal cancers. As a consequence in our network, the only absolute indication for APE is in patients whose tumour is located within 2cm from the puborectalis sling or display involvement of the external sphincter. This relies on adequate baseline sphincter function and expertise in ultra-low Total Mesenteric Excision (TME) surgery. The safety of this approach can be accurately predicted by preoperative MRI and would be expected to correlate with the histopathological specimen.

## Standards:

Patients with low rectal cancer who have undergone an APE would be expected to demonstrate :

- Tumour located within 2cm from puborectalis muscle preventing an oncologically safe and functionally acceptable colo-anal anastomosis

and/or

- Involvement of the intersphincteric plane or external sphincter radiologically and pathologically.

Any deviation should be clearly documented and discussed within the multidisciplinary setting.

## Methods:

Retrospective audit of 71 consecutive patients with primary rectal cancer who underwent an abdominoperineal resection between January 2004 and July 2009. Patients were identified via surgical logbooks and histopathological, clinical and treatment details obtained. All patients underwent preoperative staging with MRI which was compared with histopathological findings.

## Results:

71 patients underwent an abdominoperineal excision as definitive surgery for a primary rectal cancer.

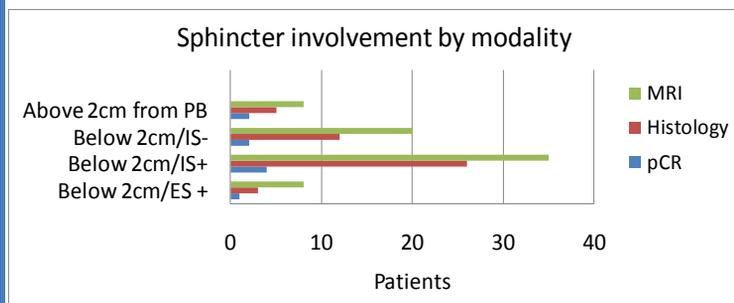
- Tumour was situated at 2cm or below from the puborectalis sling in 63/71 patients (89%):

➤ Infiltration of the intersphincteric plane and/or the external sphincter was reported on MRI in 8/63 patients (13%) and confirmed on pathology in 3 of 8 patients. The remaining 5 patients demonstrated either a complete pathological response (1 pCR) or small volume residual disease following neoadjuvant chemoradiation (4 ypT1/2).

➤ Involvement of the internal sphincter was observed in 35 patients on MRI and confirmed histopathologically in 26 out of these 35 cases, i.e. correctly predicted in 74%. A complete pathological response (4/35) or minimal residual disease with mucosal involvement only (5/35 ypT1) was seen in the remainder.

➤ The internal sphincter was uninvolved on MRI in 20 patients and confirmed pathologically to be uninvolved in 12 patients (1 not recorded, 2 pCR)

• In 8 patients (11% (8/71) tumour was shown  $\geq 20$ mm above the upper aspect of the puborectalis muscle on MRI which was confirmed histologically in 5 patients (1 pCR, 2 ypT1). The decision making process was poorly documented but more than likely based on patient choice/co-morbidities (significant in three patients) and/or poor baseline sphincter function.



## Conclusions

Our proposed audit standards were met in 89 % of patients (63/71), i.e. **the majority of patients have appropriately undergone an APE**. A deviation occurred in 8 patients who could have been treated by low anterior resection as tumour was demonstrated well above the sphincter complex. The rationale for this has been poorly documented and there is scope for improvement.

Involvement of the intersphincteric plane or external sphincter is rare.

Involvement of the internal sphincter alone occurs in only 37% of patients with a low rectal cancer and can be accurately predicted by MRI. Ultra-low TME surgery may allow sphincter-preservation in this patient population if sphincter function is considered carefully.

## Recommendations:

Distribution of these results via Tumour Working Group to MDT to improve documentation of multidisciplinary discussions and acknowledge increasing role of MRI in decision making pathways for these patients pre- and post downstaging strategies.

## References:

1. Nelson H et al. Guidelines for Colon and Rectal Cancer Surgery. JNCI 2001;93(8):583-96