Game Changers

THE CHANGING ROLE OF THERAPEUTIC ENDOSCOPY IN GASTROENTEROLOGY: IMPROVING PATIENT OUTCOMES.

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Endoscopy plays a critical role in the staging, sampling and curative resections of gastroenterology cancers, as well as the opportunity for non-surgical palliative techniques.

Endoscopic mucosal resection (EMR) and endoscopic submucosal dissection (ESD) have been developed for the en-bloc removal of pre-cancerous and early malignant lesions in the GI tract, such as dysplastic Barrett's and early GI cancers.

EMR uses a suction cap or band ligation to snare the lesion, while ESD uses a specialised knife to dissect the submucosa below the lesion.[1] They provide the same curative outcomes with fewer complications than major surgery in early cancers and give a valuable alternative for patients who would not be fit for surgical intervention.

Radio-frequency ablation (RFA) is a technique where a circumferential ablation catheter or direct catheters use heat energy to remove dysplastic cells in Barrett's.[2] It has been shown to produce a high rate of eradication of dysplasia and decrease disease progression.

The introduction of Self Expanding Metal Stents (SEMS) for palliative oesophageal and obstructive colorectal cancer have greatly improved outcomes and decreased complication rates such as stent migration. This in turn improves patient quality of life, reduces the need for risky palliative surgical procedures and decreases re-intervention rates.

The role of endoscopy within the field of gastroenterology is always evolving giving more options for our patients with the aim of continued improvement in outcomes, now and in the future.

1. Ki-Nam Shim, Ji Young Chang. Clinical outcome of endoscopic submucosal dissection versus surgery for patients with early gastric cancer.J Clin Oncol 34, 2016 (suppl 4S; abstr 15)
2. Nicholas J. Shaheen, Prateek Sharma, et al. Radiofrequency Ablation in Barrett's Esophagus with Dysplasia. *N Engl J Med May 28*, 2009; **360 (22)**:2277

ANTIFIBROTIC THERAPY IN IDIOPATHIC PULMONARY FIBROSIS

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Idiopathic pulmonary fibrosis (IPF) is a devastatingly progressive disease, characterized by a prognosis worse than many cancers, with a median survival of 3 years. Recent data suggests that Northern Ireland has one of the highest prevalence of IPF in the UK. Over the past decade, there has been a cohesive effort from patients, physicians, scientists and industry partners to find definitive treatments for IPF. Treatment aims have shifted from reversing the disease to slowing or preventing progression.

Two effective antifbrotic therapies are now available which offer hope to patients in slowing the inexorable decline in lung function. Pirfenidone (Esbriet®) a pleiotropic molecule that has antifibrotic, anti-inflammatory and antioxidant effects and Nintedanib (Ofev®) a tyrosine Kinase Inhibitor with potent triple inhibitory properties including activity directed against PDGF, vascular endothelial growth-factor, and fibroblast growth-factor receptors. Pooled analysis of the ASCEND and CAPACITY trials and subgroup analysis of the INPULSIS and TOMORROW trials demonstrate effectiveness in mild disease, currently not recommended by NICE.[1] IPF is often misdiagnosed as COPD as the majority of patients are ex-smokers. For these reasons early and accurate diagnosis of IPF is of paramount importance and requires expertise and multidisciplinary input.

At present there are 8 compounds undergoing phase 2 clinical trials, as well as trials exploring combination therapy with available antifibrotics concomitantly in addition to sildenafil.[2] There is inequity of treatment for Northern Irish IPF patients in comparison to the rest of the UK as our uptake of currently available antifibrotics has been poor and at present patients do not have access to untested novel treatments. Given the similarities to a cancer, difficulties in securing an accurate diagnosis and limited treatment strategies currently available in NI, a regional centre is urgently needed.

1. Guidance N. Pirfenidone for treating idiopathic pulmonary fibrosis Available from: https://www. nice. org. uk/guidance/ta282/resources/guidance-pirfenidone-for-treating-idiopathic-pulmonary-fibrosis-pdf. Accessed June. 2015;19.
2. Fraser E, Hoyles RK. Therapeutic advances in idiopathic pulmonary fibrosis. *Clinical Medicine*. 2016;**16(1)**:42-51.