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Neurokinin A is a Sensitive Prognostic Indicator for Neuroendocrine Tumours of the Midgut and is Useful to the Clinician When Considering Treatment Options

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Background: Endocrine tumours of the midgut (MGC) are the most common NETs comprising 30% of the total. In addition to serotonin they produce tachykinins including neurokinin A (NKA). NKA is readily measured in the circulating. We have published a retrospective study of MGC, in which NKA was the only independent prognostic indicator and the most recent NKA was shown to be the most sensitive prognostic indicator (N=125). Therapeutic options for these patients are increasing and treatments lower circulating NKA, suggesting survival can be improved.

Methods: Since 2002 at the specialist NET clinic in Belfast all newly diagnosed and referred patients with the diagnosis MGC received standard work up which included measurement of circulating CgA, NKA and 24hour urinary 5HIAA. Treatment options were discussed at the multidisciplinary meeting and best option pathway was followed. NKA and CgA were measured at regular intervals post treatment, timing depending on the therapeutic pathway chosen and stability of disease. Patients continued to receive treatment in response to tumour load, symptoms, and rising NKA as appropriate. Options included surgery, hepatic targeted therapies, systemic therapies including interferon alpha. Somatostatin analogues were used in all patients.

Results: In the retrospective study median three year survival was 53%. When divided into tertiles according to circulating NKA concentration at presentation, 3 year survival was 88% (NKA <20ng/L), 66% (NKA 20-63ng/L) and 12% (NKA >63ng/L), 5 year survival was,88%, 58% and 0% respectively.
In the ongoing prospective study median three year survival is 70%. When this group was divided as above, 3 year survivals are 100%, 67% and 47% and 5 year survivals 93%, 70% and 49% respectively.

Conclusions: Circulating NKA is a sensitive prognostic indicator for MGC and is useful for the clinician. This study is showing significant survival improvement when NKA is used in therapeutic decision making.