

## **Symptom scores, serotonin and 5-hydroxyindole acetic acid levels in cancer patients with and without bowel obstruction**

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Abstract :

To investigate the relationship between nausea and vomiting scores with levels of serum serotonin and 5 hydroxyindole acetic acid levels in cancer patients

A prospective longitudinal study was done with 4 group of patients with their nausea symptom scores over 2 years. The first group (n=10) is consists of advanced ovarian cancer patients with malignant bowel obstruction, 2<sup>nd</sup> group (n=15) is made up of ovarian cancer patients receiving chemotherapy.

The 3<sup>rd</sup> group (n=15) consists of advanced ovarian cancer patients without obstruction nor going for chemotherapy and the 4<sup>th</sup> group (n=15) is made up of advanced non-ovarian cancer patients.

All four groups had their serotonin and 5 hydroxyindole acetic biochemical serum markers taken. The results seem to indicate that the baseline serotonin biochemical markers were definitely higher in all 4 groups but there was no correlation between the nausea/ vomit episodes and the biochemical markers. It is also noted that the obstructed group and advanced non ovarian cancer group had more nausea and vomiting compared to the chemotherapy and non-obstructed ovarian cancer patients.

Strengths

- 1) This is a very helpful study to show that there is no relationship between nausea and vomiting in cancer and serotonin and 5 hydroxyindole acetic levels. This might indicate a less of a role for 5 HT3 antagonist like odansetron for nausea in Palliative patients.
- 2) The separation into the various groups resembles quite closely to the clinical picture we see in our patients.

Weakness

- 1) The small numbers makes the study underpowered and reflects the difficulty in recruiting terminally ill patients.
- 2) The short observation period of nausea and vomiting over the previous 4 hours might make the symptom assessment less representative of the patients symptoms.

- 3) Serum biochemical markers of serotonin and its metabolites do not reflect the paracrine effects.
- 4) The collection of urinary markers might be helpful in the future.
- 5) There was no mention, besides the chemotherapy group, whether the other patient groups received breakthrough anti-nausea medications during the observation period.