Diagnostic and treatment modalities in carcinoid tumours

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Carcinoid heart disease

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Möller et al.\textsuperscript{1} reported that a high peak level of urinary 5-hydroxyindoleacetic acid (5-HIAA) excretion is a predictor of carcinoid heart disease. However, the duration of exposure to elevated serotonin levels might be an even more important factor in the valvular fibrosis.

The serotonin load can be assessed as the area under the curve for urinary 5-HIAA excretion. In our series of 37 consecutive patients (19 women and 18 men) with carcinoid disease\textsuperscript{2}, the median interval between the diagnosis and cardiac ultrasonography was 28 months (range 2-121 months). There was a significant correlation between the presence of carcinoid heart disease and median level of urinary 5-HIAA excretion during the interval between diagnosis and cardiac ultrasonography (5-HIAA level, 576 µmol/24h in the patients with carcinoid heart disease, as compared with 233 µmol/24h in the those without; p=0.02). However, there was an even stronger relation between carcinoid heart disease and the serotonin load over time (i.e. the area under the curve for urinary 5-HIAA excretion during this interval) (p<0.001).

This finding supports the theory that total exposure to serotonin is even more important than the level of serotonin in the development of carcinoid heart disease.

References

