

Risk stratification for malignant progression in Barrett's esophagus: gender, age, duration and year of surveillance

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Exploration of study

The study explored the role of gender, segment length, previous biopsy findings, year of surveillance, duration of surveillance and patient age at surveillance on the risk of development of dysplasia and adenocarcinoma on the patients within the cohort.

Study methodology

This study was undertaken on a multicentre retrospective cohort of patients with Barrett's oesophagus in the UK.

Unlike many studies, instead of exploring risk with regard to patients' characteristics at index endoscopy/diagnosis, the analysis performed in this study has taken into account those features which change during the course of surveillance (patient age, year, duration of surveillance and histological features seen on the previous surveillance biopsies). This provides clinicians with a much more useful approach to patients as they undertake surveillance.

Processing of results

The data were examined graphically and then the strength of association of the factors above and the development of dysplasia and adenocarcinoma were examined using binary logistic regression.

Novel findings of the results/exploration of pre-study hypotheses

The logistic regression demonstrated that the statistically significant features which influence the risk of development of high-grade dysplasia and adenocarcinoma were age, Barrett's segment length and previous biopsy findings. Risk of development of low-grade dysplasia was associated with segment length and previous biopsy findings, but not age at surveillance. This demonstrates that age at surveillance should be incorporated into models of risk assessment in surveillance for high-grade dysplasia and cancer.

The study did not demonstrate that there was evidence that at longer follow-up there was stabilisation of the metaplastic Barrett's segment without ongoing risk of development of dysplasia (and so no group of patients were identified who could be safely discharged from surveillance).