

Predictions of the past, prepared for the future?

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The famous scientist and Nobel Prize winner Niels Bohr (1885-1962) is quoted to have said, 'Prediction is very difficult, especially about the future'. The interesting article from the Gastroenterology group from Zaandam, the Netherlands, in this issue of the Netherlands Journal of Medicine, illustrates nicely that it is also quite difficult to predict the past when trying to analyse a large database with data from two decades of an upper gastrointestinal endoscopy service.¹ The article is a retrospective analysis of a prospective database that the first author initiated when he started his practice in a medium-sized city in the Netherlands. With almost 30,000 endoscopies in the database, this provides a wealth of information; however we also miss a lot of data. Understandably but unfortunately no data about the population from which these patients were referred are presented. Did the population age, was there a change in ethnic background and more importantly: were there changes in the referral pattern of the general practitioners? All these questions are very interesting and probably important to put their findings into the right perspective.

In the 20 years the authors report on, there have been many changes in medicine as well. In the period described in this study we have seen, for instance, the rise of evidence-based medicine, the increasing use of proton pump inhibitors, the possibility of cure in *Helicobacter pylori*-related peptic ulcer disease, the dramatic improvements in the quality of diagnostic endoscopy etcetera, etcetera. The rise of evidence-based medicine led to standards of practice being published by the Royal Dutch Medical Association and undoubtedly these have changed the referral pattern for 'open access' endoscopy. In these guidelines a therapeutic trial with acid-reducing medication was advised and the remarkably stable total number of endoscopies per year should therefore be interpreted with caution. With an overall growth of the population and a higher threshold for referral, the stable number of endoscopies in this unit may actually represent a significantly reduced use of open access endoscopy in the

population. This trend was described earlier by another group in the Netherlands.²

The authors briefly describe the improvements in their equipment; however, it seems to be worth discussing this a little further. In the early 1990s, most endoscopies were still done with fibre-optic endoscopes. Although the quality was considered excellent at that time, our current fellows in training would be devastated if they ever had to use such an instrument. The optical resolution was at least a tenfold lower than that of our current systems. Besides that, the ergonomics were markedly inferior to our current standards. A full day of endoscopy was a much more tiring activity at that time than it is today. Recent studies looking into the relationship of the time of the day and the finding of relevant pathology have shown us that endoscopists tire during the day and their performance decreases, although other studies were not all able to confirm this phenomenon.³ Trying to translate those findings to the poor ergonomics of the equipment at the start of this study, one could speculate (predict?) that actually more lesions per patient should have been detected in the second half of this study, purely based on the improved ergonomics. Figure 3 of the article shows an increase in endoscopic findings which will probably also be related to the dramatically improved resolution. The endoscopy system the authors currently use is a high-definition system with very fine detail, which must have played an important role in this increasing number of relevant findings.

The cause of peptic ulcer disease was still not completely unravelled at the start of the current study, but *H. pylori* had already been described. In the early 1990s, it became clear that eradication of *H. pylori* opened the way to cure for most patients with chronic *H. pylori*-related peptic ulcer disease with a subsequent three to fourfold decrease in the rate of finding ulcers during the study period. It is interesting and to some extent maybe even worrisome that the endoscopic diagnosis of metaplastic gastric epithelium has not changed. During the study period many things

changed regarding the endoscopic diagnosis of Barrett's oesophagus. One change was that the original diagnosis of Barrett's oesophagus was reserved for a minimum of 3 cm metaplastic epithelium in the oesophagus. This definition changed over the years and a minimum length was abandoned, which one would expect to lead to a higher incidence figure for Barrett's. Secondly, the higher resolution of the equipment, as described above, could be expected to lead to an increased diagnosis of Barrett's oesophagus. Thirdly we now know that the incidence of squamous cancers of the oesophagus is decreasing whereas the incidence of oesophageal adenocarcinoma is rising rather steeply (as also demonstrated in one of the graphs of the current study). As Barrett's oesophagus is a known precursor of oesophageal adenocarcinoma, this would be another argument to expect a rise in the endoscopic diagnosis of Barrett's oesophagus in the population under study.¹

So what do we learn from this study? In my opinion, first and foremost the study shows that well-structured reporting of endoscopic procedures provides an excellent opportunity to critically look back at one's performance. In this day and age, prospective collection of endoscopic data allows benchmarking within and among hospitals. Quality assurance is the new buzzword in medicine. Our patients want to know that the doctors they visit are not

only qualified but also deliver quality.⁴ For gastrointestinal endoscopy and specifically for colonoscopy, this means that in the coming year each endoscopist in the Netherlands will have to be able to provide data on the efficacy of their bowel preparation regimens, on the percentage of patients in which they successfully reached the caecum, on the number of adenomas they detected, on the amount of sedation they used and on many other variables.⁵ Data that far exceed the data that Loffeld and others collected, but it still shows us that they were ahead of their time when they initiated the database reported on in this article.

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