

HISTORICAL ARTICLE

History of Dyspepsia in Scotland

Admissions to the Edinburgh Royal Infirmary 1729-1830, Doctoral Theses 1726-1823, and Contemporary British Publications

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Abstract

Introduction

The aim of the study was to assess whether the rise in the occurrence of dyspepsia in Scotland during the eighteenth century was a true epidemiologic phenomenon or just an increase in medical awareness.

Methods

Admissions for dyspepsia to the Edinburgh Royal Infirmary from 1729 until 1830 were analysed by consecutive five-year time periods. The titles of MD theses on dyspepsia from 1726 to 1823 were extracted from the Edinburgh University index. Monographs and articles on dyspepsia from Britain during the same time period were sought in the Catalogues of the US Surgeon-General's Library.

Results

During the eighteenth century, the annual number of dyspepsia patients admitted to the Edinburgh Royal Infirmary showed an extraordinary increase from none in 1730 to 900 per million population in 1760. About 4000 MD theses were presented to the Edinburgh University between 1726 and 1823. There were none on dyspepsia or gastritis between 1726 and 1749, after when it gradually started to rise. British publications on dyspepsia similarly appeared only in the 1790s and then rapidly increased.

Discussion

We suggest that the rise in MD theses and publications on dyspepsia were responses to a real increase in dyspepsia during the mid eighteenth century.

Introduction

We recently reported extraordinary increases in the incidences of dyspepsia in the four Scottish Royal Infirmarys during the second half of the eighteenth century.¹ We suggested that these increases were true changes in the epidemiology of an ancient disorder and not the well-publicised foibles of fashionable physicians. We have now re-examined the precise timing of the admissions for dyspepsia in one of these hospitals, the Edinburgh Royal Infirmary for the Sick Poor, and compared this

trend with both the topics of the medical doctorate (MD) theses at Edinburgh University, as well as British publications on this disorder. The aim of our historical study was to assess whether the sudden rise in the occurrence of dyspepsia in Scotland during the eighteenth century was a true epidemiologic phenomenon or just an increase in medical awareness or the emergence of a medical fad.

Methods

Criteria for the diagnosis of dyspepsia at the Edinburgh Royal Infirmary have been described in detail elsewhere.¹ In the early eighteenth century the words stomach pain and indigestion were used. In the 1770s William Cullen at the Royal Infirmary, Edinburgh, used the term dyspepsia to include anorexia, cardialgia, eructation, gastrodynia, nausea and vomiting. From then on to the end of the century the terms 'stomach complaint' and 'dyspepsia' were used as diagnoses for patient groups with symptoms of anorexia, nausea, vomiting and indigestion as revealed by Guenter Risse's upper alimentary cluster analyses of random samples of individual case records.²

The cumulative number of admissions for dyspepsia during each five consecutive years was divided by the Edinburgh resident population of the same period and expressed as average annual incidence rate per million population. Missing data were estimated by linear extrapolation between data preceding and following a period of incomplete data. The incidence rates were plotted against the time of diagnosis and smoothed by calculating a moving average of three consecutive time periods.

The titles of Edinburgh University MD theses from 1726 to 1823 were listed and indexed by topic in 1824.³ These student dissertations were in Latin, and we searched for entries on gastritis, dyspepsia and miscellaneous gastric topics. British monographs and articles on these categories as well as "gastralgia" and "gastrodynia" were sought in the various series of the Catalogues of the US Surgeon-General's Library.⁴ The number of theses or monographs and articles per decade were plotted against the period of their publication.

Results

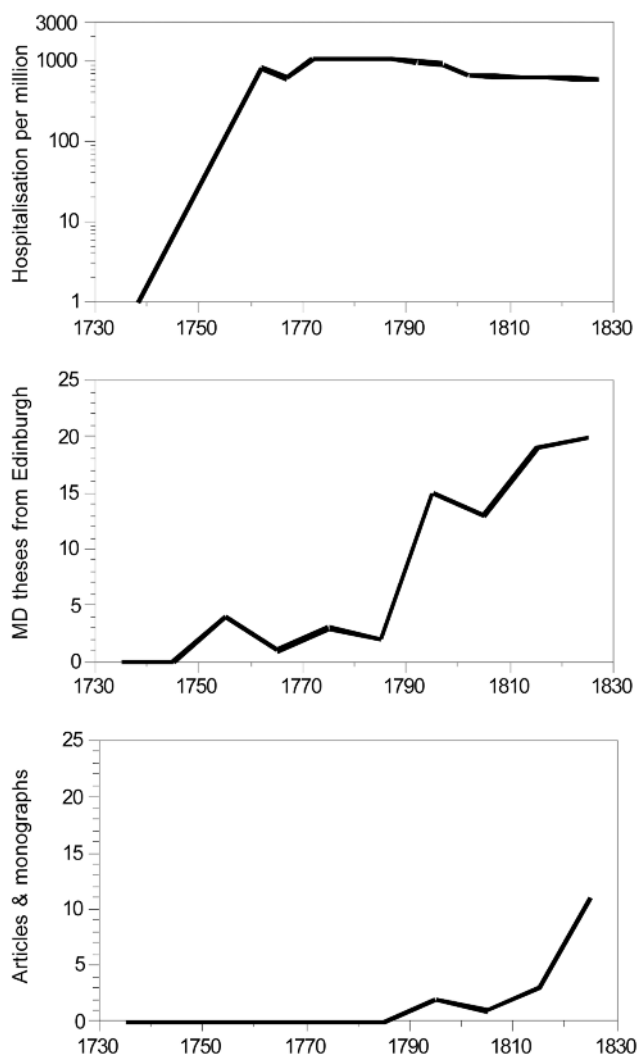
The Edinburgh Royal Infirmary opened in 1729, and in its first two years no patients with stomach disorders were admitted. During the following years, annual admissions for dyspepsia increased rapidly to about 900 per million population, remaining around this figure throughout the nineteenth century (upper panel of Figure 1).

Figure 1.

Upper panel: hospital admissions to the Edinburgh Royal Infirmary for dyspepsia, gastritis and related conditions.

Mid panel: number of MD theses awarded by Edinburgh University 1726-1823 for dyspepsia and gastritis by decade of publication.

Lower panel: British articles and monographs on dyspepsia or gastritis by decade of publication.



About four thousand MD theses were presented to the Medical Faculty of Edinburgh University in its first 98 years between 1726 and 1823. There were none on dyspepsia or gastritis between 1726 and 1749, after when there were 65, increasing rapidly from the 1790s onward, with 52 on gastritis, seven on dyspepsia, and six on miscellaneous gastric disorders (mid panel of Figure 1). Published British articles and monographs on dyspepsia increased rapidly from the 1790s onward (lower panel of Figure 1).

Discussion

Dyspepsia is currently the most frequently diagnosed gastrointestinal complaint, by far exceeding reflux symptoms, irritable bowel syndrome, peptic ulcer disease or any other common diagnosis of the digestive tract.⁵ Most physicians would be surprised to learn that complaints of dyspepsia

(unrelated to peptic ulcer or reflux disease) have been diagnosed with high frequency ever since the second half of the eighteenth century. The long time periods, for which hospital statistics are available in Scotland, render Scottish data particularly suitable for following the historic time trends of a given disorder. No cases of dyspepsia appeared in the first admission statistics of the Royal Infirmary of Edinburgh from 1729-1730. Within the short period of 30 years between 1730 and 1760 hospital admissions for dyspepsia suddenly rose from none to annual rates of about 900 per million living population. Similar trends affected other infirmaries in Scotland during the same time period.¹ The sudden rise in patients being admitted to the hospital for dyspepsia was followed by a growing interest among physicians in the new disorder, as evidenced by the number of medical doctorate theses awarded by the Edinburgh University subsequent to the initial rise in disease occurrence.

The rapid increase in admissions for dyspepsia preceded Cullen's publications,^{6,7} but could have been influenced by the opening of the new Edinburgh Infirmary with its ready availability of beds to admit the sick poor who might in previous years have simply suffered untreated at home, but who could now provide clinical material for the teachers at the illustrious medical school. This interest of the medical profession in the new disorder was also reflected by the general rise in the number of published articles and monographs from Britain dealing with dyspepsia, gastritis and related disorders. The appearance of dyspepsia as a common disorder preceded the surge of peptic ulcer by about 100 years, and dyspepsia trends remained largely unaffected by the subsequent ulcer epidemic, which reached its peak at the onset of the twentieth century.¹ It is unlikely that those diagnosed as dyspepsia actually had peptic ulcers. Otherwise, one would have expected reports of many complications from haemorrhage (there were few), many deaths from perforation (there were none), or many ulcers seen at necropsy. To our knowledge the first post mortem findings of gastric or duodenal ulcer in Scotland were in 1824. In 1837 Dr. John Home, Pathological Clerk to the Edinburgh Infirmary, reported examining 36 stomachs; 19 were normal, but two had ulcers, one on the lesser curve and one pyloric.⁸ Between 1837 and 1848 no deaths were certified as due to stomach disorders in any of the major cities of Scotland, including Edinburgh.⁹

Studies of disease time trends of diagnoses are conducted with the underlying hope that they may provide important clues about disease aetiology. Environmental, social, economical, political, technological and scientific changes often affect population behaviour with profound influences on public health and clinical disorders. The rise and fall in peptic ulcer disease between the mid nineteenth and end of twentieth century, for instance, can now be traced back to the receding infection of the general population with *Helicobacter pylori* following increasing standards of hygiene and a shift in the initial acquisition of the infection from very early childhood towards older age groups.¹⁰

Physician behaviour and standards of medical practice generally affect trends in diseases to a much lesser degree than physicians would like to believe.^{11,12} In some instances, however, physicians created pseudo-epidemics by giving names to and treating symptom complexes that, according to today's standards, represented nonexistent disease entities. Between 1880 and 1930, for instance, abdominal symptoms were frequently attributed to kinks in the small intestine or malpositions of the stomach, kidney, liver, spleen and diagnosed accordingly as "visceroptosis."¹³ The advances of bacteriology during the mid-nineteenth century also led many physicians to propose that absorption from the intestinal canal

of substances generated in it by fermentation or imperfect digestion were toxic to the host and could lead to a self-infective "auto-intoxication." Thousands of patients throughout Europe and the United States were so labeled and managed. The "new" disease models of visceroptosis and auto-intoxication swept from 1880s onward through the medical literature and were then accepted as official diagnosis before critical examination of the evidence brought these two pseudo-epidemics to an end in Britain. In British publications on auto-intoxication and visceroptosis preceded by decades hospital admissions with these diagnoses. The appearance, increase, decrease and later cessation of hospital admissions with diagnoses of auto-intoxication and visceroptosis in the early twentieth century followed 20-30 years of publications on these disorders that, in retrospective, can clearly be labeled as iatrogenic non-diseases.

By contradistinction, in Edinburgh, admissions for dyspepsia and gastritis preceded by twenty years either the subject of the MD theses or British publications on this disorder. These temporal associations suggest that the rapid rise in admissions to the Edinburgh Royal Infirmary of patients diagnosed as stomach complaints or dyspepsia during the second half of the eighteenth century represented a real increase of this new gastric disorder that has persisted in a similar fashion since then. It still remains unknown what environmental influences brought forth this sudden rise in the occurrence of dyspepsia.

References

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