

Editor's choice

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Clinical Epidemiology has published more than 100 papers since its start in 2009, and the journal has been indexed in PubMed. This is an expression of the journal's positive development. It emphasizes the need for a journal focusing on clinical epidemiology in a broad context, which is able to publish important papers quickly, following a thorough peer-review process.

As part of the journal's development we will in future publish a column called "Editor's choice" on a periodic basis with the purpose of putting selected papers in a clinical and developing perspective. We also encourage scientific debate within the field of the papers we publish, in terms of commentaries and letters to the editor.

This paper is the first version of "Editor's choice," in which I will cover papers reflecting developments in clinical epidemiology.

Cancer is one of the most frequent causes of morbidity and mortality worldwide. More and more patients survive the initial cancer diseases. Therefore the long-term consequences of cancer disease and complications to cancer disease are important research areas for the future. Bone metastasis is one well-known and serious complication of cancer. Li et al¹ conducted an interesting study based on the MarketScan database and fee-for-service Medicare cohort in the US estimating the prevalence of bone metastasis in the American population. Since a larger proportion of bone metastases is asymptomatic at onset, the estimate identified in the paper is a clear underestimation of the real prevalence. The study showed that at least 280,000 American adults are living with bone metastases, and breast, prostate, and lung cancer are responsible for 68% of these cases. The results show that metastatic disease is an area of great public health and clinical importance and clinical epidemiological studies of this area are urgently needed.

Syse et al² reported another aspect of the consequences of cancer disease. It is well-known that many people, for various reasons, postpone having children until later in life, entailing that more children will have parents with cancer disease. Based on impressive Norwegian register data, the study showed that cancer in parents is more frequent than formerly assumed and that the yearly incidence of parental cancer for children under 18 years is 0.3%, while 4% of all children aged 0–25 years have a parent with cancer disease.

There has been a clear decrease in the incidence of mortality in cardiovascular disease over the last 40 years in many countries,^{3,4} and acute myocardial infarct is also decreasing. The prognosis is improving, and more and more patients are living with sequelae of cardiovascular diseases such as heart failure. In an interesting study from

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Massachusetts, Park et al⁵ examined the development in the prognosis in heart disease and showed an improvement in 3-month, 1-year, and 5-year mortality after discharge following heart failure. Despite the improvement in the prognosis, the study also showed that heart failure is still a disease with high mortality.

On 16 December, 1961, McBride⁶ published a letter to the editor in *Lancet* saying that children born from mothers who used thalidomide during pregnancy had an increased risk of the rare malformation phocomelia. This caused a great concern about an important and difficult area of clinical epidemiology. The concern that drugs used during pregnancy could cause malformations was also the reason for establishing a spontaneous reporting system of suspected adverse drugs effects. Despite the concern for teratogenic effect of drug use during pregnancy, many pregnant women receive prescriptions. Stephansson et al⁷ conducted a comprehensive study based on the medical birth registry of more than 202,000 women. The study showed that nearly 58% used prescription drugs during pregnancy and 51% while breastfeeding. As expected, antibiotics were the most frequently used drugs. A very interesting finding from the study was found when comparing prescription drugs with self-reported data; there was excellent agreement between the two data sources and the use of chronic drugs while the discrepancy between the two data sources was smaller for drugs used occasionally. Bjørn et al⁸ reported similar data in a Danish study.

Studies over the last 20 years have shown that exposures early in the pregnancy may have long-term consequences in terms of the development of cancer and cardiovascular disease. Also, there is increasing evidence that drugs used during pregnancy may cause unintended effects other than the increased risk of malformations.⁹

Thus, Andersen et al¹⁰ conducted a study of nearly 200,000 pregnant Danish women showing that children of women who used paracetamol during pregnancy had increased risk of developing asthma in childhood. Since asthma is one of the most frequent chronic diseases in children, the results had public health implications. The rate ratio for development of asthma was 1.35. Paracetamol is a potential endocrine disruptor. Such endocrine disruptors are widespread in our

environment and may be the cause of the asthma epidemic seen in a number of countries.

Much clinical epidemiological research covers drug safety and effects and is conducted in close collaboration with academic institutions and the industry. Povl Riis,¹¹ who is member of the editorial board at JAMA and also one of the founders of modern medical ethics, has in a paper gone over some of the principles for the collaboration between academic institutions and the industry. The paper refers to the Singapore Statement on Research Integrity from 2010 covering four principles and 14 responsibilities in research. The reader is encouraged to read Povl Riis' paper and the Singapore Statement.

Disclosure

The author reports no conflicts of interest in this work.

References

1. Li S, Peng Y, Weinhandl ED, et al. Estimated number of prevalent cases of metastatic bone disease in the US adult population. *Clin Epidemiol.* 2012;4:87–93.
2. Syse A, Aas GB, Loge JH. Children and young adults with parents with cancer: a population-based study. *Clin Epidemiol.* 2012;4:41–52.
3. Schmidt M, Jacobsen JB, Lash TL, Bøtker HE, Sørensen HT. 25 year trends in first time hospitalisation for acute myocardial infarction, subsequent short and long term mortality, and the prognostic impact of sex and comorbidity: a Danish nationwide cohort study. *BMJ.* 2012;344:e356.
4. Nabel EG, Braunwald E. A tale of coronary artery disease and myocardial infarction. *N Engl J Med.* 2012 Jan 5;366(1):54–63.
5. Park D, McManus D, Darling C, et al. Recent trends in the characteristics and prognosis of patients hospitalized with acute heart failure. *Clin Epidemiol.* 2011;3:295–303.
6. McBride WG. Thalidomide and congenital abnormalities [letter to the editor]. *Lancet.* 1961;ii:1358.
7. Stephansson O, Granath F, Svensson T, Haglund B, Ekblom A, Kieler H. Drug use during pregnancy in Sweden—assessed by the Prescribed Drug Register and the Medical Birth Register. *Clin Epidemiol.* 2011;3:43–50.
8. Bjørn AM, Nørgaard M, Hundborg HH, Nohr EA, Ehrenstein V. Use of prescribed drugs among primiparous women: an 11-year population-based study in Denmark. *Clin Epidemiol.* 2011;3:149–156.
9. Ehrenstein V, Sørensen HT, Bakkevig LS, Pedersen L. Medical databases in studies of drug teratogenicity: methodological issues. *Clin Epidemiol.* 2010;2:37–43.
10. Andersen AB, Farkas DK, Mehnert F, Ehrenstein V, Erichsen R. Use of prescription paracetamol during pregnancy and risk of asthma in children: a population-based Danish cohort study. *Clin Epidemiol.* 2012;4:33–40.
11. Riis P. Ethical principles for project collaboration between academic professionals or institutions and the biomedical industry. *Clin Epidemiol.* 2012;4:95–97.

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