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The creation of the concept of an antidepressant: An historical analysis

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Abstract

The concept of an ''antidepressant'' implies a drug that acts in a disease specific way to reverse the neuropathological basis of the symptoms of depression. However, there is little scientific research that could confirm this view. This paper reports an historical study of the emergence of the concept of the antidepressant and the social forces that influenced its adoption. Historical literature documents the increasing importance of the specificity of medical treatments in the 20th century and the increased power that they conferred on medical practitioners. In the case of depression, stimulants were used as treatment from the 1940s. During the 1950s the anti-tuberculous drugs iproniazid and isoniazid started to be portrayed as more specific than stimulants, even though their stimulant effects were well documented. When imipramine was suggested to be effective in depression, it was presented solely as acting in a disease specific way and it was soon referred to as an ''antidepressant''. The idea that some drugs have a specific action on the underlying basis of depression caught on rapidly and was well established by the 1960s before any evidence was available to support this view. Forces that could have driven the adoption of this view include the psychiatric profession's desire to integrate with general medicine to improve its social status and to move away from the asylum into the community. Physical interventions and drug treatments helped to boost its medical credentials and antidepressant drugs provided a convenient form of medical treatment for community-based distress. They also helped the profession to counter attacks from the antipsychiatry movement. The pharmaceutical industry too helped to establish and disseminate the view of antidepressants as disease specific treatments in order to distinguish them from non-specific drugs. This study raises questions about the view that psychiatry was transformed into a modern medical enterprise in the 1950s and 1960s by the introduction of disease specific drugs.

Keywords: Antidepressants; Depression; History of psychiatry; Pharmaceutical industry; Psychiatric profession

Introduction

Intense marketing of antidepressants over recent decades has resulted in a dramatic rise in their use, and in the widespread acceptance that depression is caused by a chemical imbalance that can be rectified by drugs. In 2002, 11% of women and over 5% of men were taking antidepressants in the United States (Stagnitti, 2005). This situation led Nikolas Rose (2004) to conclude that a large proportion of people have come to ''recode their moods and their ills in terms of their brain chemicals''. Although there has been some criticism of levels of prescribing, and recent guidelines recommend that use of antidepressants is restricted to people with more severe conditions (National Institute for Clinical Excellence, 2004), the idea that an antidepressant drug can reverse depression has not been scrutinised.

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Certain drugs have been known as ''antidepressants'' since the 1950s. Since that time they have been thought to act as specific treatments for depression according to what can be called a ''disease centred'' theory of drug action (Moncrieff & Cohen, 2006). This theory or model suggests that drugs exert their effects by reversing the abnormal brain state that gives rise to symptoms, or by rectifying a biochemical imbalance. This contrasts with an earlier understanding of the action of drugs in psychiatric conditions, which can be called a ''drug centred'' model. This is the idea that rather than correcting abnormal brain states, psychiatric drugs induce abnormal states such as sedation or stimulation. These states may sometimes be helpful in psychiatric conditions or alternatively drug induced effects may mask the manifestations of the disorder and so create the impression of improvement.

Views about how psychiatric drugs worked changed during the 1950s. Prior to this drugs were understood as acting in a drug centred fashion, usually acting as chemical restraints. However, the new range of psychiatric drugs introduced from the 1950s onwards came to be seen as having disease specific actions. Although at first drugs like chlorpromazine, first referred to as ''neuroleptics,'' were believed to act through inducing an abnormal neurological state, they soon came to be seen as treating the underlying basis of psychotic symptoms and even of schizophrenia itself (The National Institute of Mental Health Psychopharmacology Service Center Collaborative Study Group, 1964; Whitaker, 2002). In line with this view they became known as ''antipsychotics''. Drugs that became known as ''antidepressants'' were also introduced in the late 1950s.

Foucault (1973) suggests that modern disease theory started to emerge at the beginning of the 19th century when diseases came to be seen as discrete processes that could be located within particular parts of the body. This view contrasted with the older ''humoral'' notion of disease as a general state of bodily imbalance. However, historians Edmund Pellegrino and Charles Rosenberg suggest that it was only during the late 19th and early 20th century that the new outlook was widely accepted. The idea that substances might have specific actions on disease processes was first clearly articulated at the end of the 19th century by Paul Erlich, the discoverer of tetanus antitoxin and arsenic treatment of syphilis. He described the new drug therapies as ''magic bullets'' that could chemically target the infective agent without affecting the rest of the body (Mann, 1999). At first these ideas were greeted by scepticism among medical practitioners and their patients and much medical practice continued along humeral lines. However, over the first decades of the 20th century confidence in science and scientific medicine grew. There was an acceptance of the disease theory of medicine and therapeutics among professionals and the public even before many effective medical treatments were available. Medicine became strongly associated with specialism and ''cure by specific therapy'' became the ''only really proper sphere for the physician'' (Pellegrino, 1979, P 255).

The new ideas brought with them a change in the nature and status of the medical profession and its relation to science. Prior to modern conceptions of disease and treatment, drug taking and prescribing were part of a ''fundamental cultural ritual'' based on the shared humeral model of bodily health and disease (Rosenberg, 1977). In this context, patients and doctors had a more equal relationship than today. People took home remedies to produce purging and frequented quacks as well as regular physicians and all treatments were based on the same principles. By contrast, modern ideas about disease and its treatment require a detailed technical understanding of the specific mechanisms of disease that is not available to the layman. Through the exclusive possession of this technical knowledge, the medical profession acquired ''enormous social power'' (Rosenberg, 1986, P 25). In return doctors were expected to deliver more potent therapies.

Therefore, from the late 19th century the whole of medicine was seeking disease specific treatments, a process that resulted in some very effective drugs being developed starting with antibacterials like sulphonamides and hormones including thyroxin and insulin. Thus, in developing disease specific models of treatment, psychiatry was following a general trend within medicine; one that offered the hope of more effective therapies and promised to empower medical professionals. Most research on the history of psychiatry has accepted the portrayal of modern psychiatric drugs as specific or disease centred agents. Hence drugs are often credited with revolutionising psychiatry by bringing it in line with medical science and breaking the influence of psychoanalysis and social psychiatry (Shorter, 1997).

However, elsewhere I have pointed out that there is little evidence to support the assumption that psychiatric drugs act in a specific, disease centred manner (Moncrieff & Cohen, 2005; Moncrieff & Cohen, 2006). In the case of antidepressants, recent meta-analyses suggest that their advantage over a placebo pill is small, and possibly clinically meaningless (Kirsch, Moore, Scoboria, & Nicholls, 2002; National Institute for Clinical Excellence, 2004), and it has never been demonstrated that they have consistently superior