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Challenges and opportunities for pharmacovigilance in resource constrained settings

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It is estimated that 5% of all admissions to hospital can be attributed in whole or in part to the effects of drugs. Furthermore, 10-20% of all hospitalized patients may experience a serious adverse drug reaction (ADR) whilst in hospital. It has also been reported that ADRs are a major cause death in the USA while other workers report that ADRs may contribute between 5-10% of hospital costs. It has therefore been recognized that awareness and the monitoring of ADRs or pharmacovigilance is an important component of good health care delivery. In developed countries like the USA, the United Kingdom and in most of Western Europe there are specialized agencies that monitor ADRs. The information collected by these agencies is then analyzed and reported back to the health care providers. Most of the knowledge of drugs and their effects have therefore come from these countries. To our knowledge, in Zambia, as in most other resource constrained settings, pharmacovigilance is an emerging science and to a large extent there are few reports about drug use and ADRs. This paper will look at the challenges and opportunities for pharmacovigilance in these settings. It is proposed that spontaneous reporting the prime methodology for ADR monitoring should go hand in hand with robust cohort event monitoring (CEM) in order to maximize limited resources that may affect health delivery in these regions.

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Antibacterial activity and two-dimensional gas chromatography of *Celtis africana* extracts

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New infectious diseases and microorganisms resistant to our antibiotics emerge all the time. There is therefore constantly a need for new drugs that will eradicate these infections. Plants are considered as one of the main sources of biologically active compounds. *Celtis Africana* is a multipurpose tree used as an ornamental and medicinal plant; it is traditionally used for the treatment of cancer, pains, rheumatism and syphilis. In the current study aerial parts of the plant were dried and extracted with organic solvents of different polarities. The crude extracts were analysed using two-dimensional gas chromatography coupled with time-of-flight mass spectrophotometry (GCxGC TOF-MS) and they were further tested for antimicrobial activity. The plant showed activity against five significant pathogenic test organisms. The antimicrobial activity results correlate with the traditional medicinal uses of the plant. These results show potential for drug development using compounds produced by the plant.

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