

## The Prevalence of Cutaneous Drug Reactions among Patients Admitted to the Dermatology Unit of the University Hospital of the West Indies, Kingston, Jamaica

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The skin is a well recognized target organ for drug reactions. It may be the only organ affected or it may be one of several organs targeted by the drug. Any drug ingested can elicit a cutaneous drug reaction but some are more frequently implicated than others. Many of these patients will require admission or transfer to a dermatology ward to stabilize and treat their skin and systemic symptoms. Drug reactions, therefore, may account for a significant percentage of dermatology admissions, and by extension, could utilize a proportionately significant amount of hospital resources.

The proposed study which is currently in the data collection phase will be conducted retrospectively. The dermatology admission records for a nine-year period will be reviewed, and all patients admitted with a diagnosis of a cutaneous drug eruption from January 1, 1996 to December 31, 2005 will be included in the study.

If cutaneous drug eruptions are found to be a significant contributor to hospital admissions, strategies can be developed to diminish the "avoidable" cases. Careful history taking and drug selection are of paramount importance when initiating drug therapy and cannot be over-emphasized. Additionally, clinicians need to advise patients of possible serious adverse reactions and guide them through the important steps to take should this situation occur. Some drugs are more frequently implicated than others in the causation of a cutaneous drug reaction. Patients should be placed on high alert when treatment with these drugs is being initiated. When sensitivity to a particular drug is diagnosed, simple approaches like med-alert bracelets should be reinforced, and patients can be educated about disclosing known drug sensitivities to their clinicians and first degree relatives.

Health care facilities would benefit in several ways. Cost effective strategies aimed at reducing the incidence of these reactions could easily be integrated into training programmes. A greater awareness of cutaneous drug reactions would result in earlier diagnosis and interventions aimed at reducing the frequency and duration of admissions. Mortality figures would also be positively affected by the implementation of these strategies. •



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## Cardiovascular Disease, Osteoporosis and Breast Cancer in Jamaican Black Women who used Depo-Medroxy Progesterone Acetate for Contraception - A Cohort Study

**D**epot medroxy progesterone acetate (DMPA) has been in use as a method of contraception since the 1960's. The most recent survey conducted in Jamaica puts its use at 8.1% of all contraceptives used by women in the 15 to 44 age group. The method was approved for use as a contraceptive agent in the United States in 1992 and is currently the method of choice for some three million women in that country. DMPA causes, in long term users, severe reduction in the serum oestradiol levels, as well as, decreased bone density and decreased high-density lipoprotein which reduces cholesterol. This has implications for the long-term health of users worldwide. In Jamaica, we are in a good position to study the effects of DMPA on users, because of its high frequency of use and the long period of time over which it has been in use locally.

Cardiovascular disease (CVD) is one of the most important health problems faced by black women, and the main risk factors for cardiovascular disease are very prevalent among women in the 15 to 44 age group. Breast cancer is also common in Jamaican women and is the leading cause of cancer in this group. The study will evaluate women who have used the contraceptive injection (Depo-Provera) for an extended period of time in order to determine whether they have experienced any significant side effects. Some 400 women who have used Depo-provera in the past will be reviewed and compared with 400 non-users to determine if there are differences in their cardiovascular disease risk profiles and the prevalence of cardiovascular disease and osteoporosis within the group. The results may have value in advising practitioners about the future use of the drug.

Recent evidence from the Women's Health Initiative Study appears to implicate medroxyprogesterone acetate as a causative factor. The main side effects noted were due to reduced oestrogen levels. These side effects include higher cholesterol and the higher risk of cardiovascular disease which is the leading cause of death in Jamaica. The Women's Health Initiative Study further reported a decrease in bone density - an underestimated problem in Jamaica, and also a relatively small risk of breast cancer with hormone replacement using progestogens like provera. For several decades, the Jamaica Cancer registry has reported this type of hormone replacement as the leading cause of cancer in Jamaican women.

So far, 300 of the 800 women involved in the study have been investigated. •

## Xanthan Gum Production

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The sugar industry is the largest agricultural industry in Jamaica, employing some 35,000 persons and contributing approximately J\$190 million to Jamaica's GDP (STATIN, 2002). However, the increased cost of local sugar production coupled with a fall in the international prices for sugar and its many by-products have severely jeopardised the viability of this industry. This has led to a search for new and innovative ways of revitalizing and diversifying the local sugar industry such as Xanthan gum production based on the use of one of the crop's by products.

This research project successfully utilized products from the sugar industry for the production of Xanthan gum at a reasonable cost. The overall aim was to maximize the yield and quality of Xanthan gum produced, thereby increasing the efficiency of the process and, consequently, its value to industry. Process optimization, down stream processing and product purification were carried out over the life of the project.

One of the most successful outcomes of this research project on Xanthan Gum production has been the granting of a patent for a new, alternative production process. This development has led to the realization of numerous benefits for the University of the West Indies, manufacturers, the local sugar industry and the nation at large. Firstly, manufacturers are now able to obtain a cheaper and alternative source of the Xanthan Gum product. This is particularly significant as it is used as an important production input in so many industries such as the food, agricultural, pharmaceutical, petroleum, cosmetic and textile industries. On a wider level, increased production of Xanthan Gum can facilitate the growth of non-traditional Jamaican exports and ultimately result in increased foreign exchange revenues for the county. It should not be overlooked that the holding of a patent for this product can be quite profitable for the University as it can earn substantial revenue from various licencing agreements. •

## Relapse or Re-Integration: A Ten Year Outcome Study of Schizophrenia in Jamaica

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The purpose of the study is to evaluate the clinical outcome of a cohort of persons diagnosed with schizophrenia, ten years after initial contact with the mental health care system in Jamaica. The study sought to assess 317 patients diagnosed in 1992 with CATEGO± Schizophrenia. The Positive and Negative Syndrome Scale and the Present Status Examination were used to rate the current presence and severity of psychotic symptoms in those patients that were available for interview. The main outcome measures collected from case notes and patient interviews included, clinical status, contact with clinical service, employment status, outpatient clinic compliance, and relapse rate.

Actual interviews were conducted with 212 patients, while case notes and medical records were obtained for 73 of the 105 remaining patients who were unavailable for interview. The other 32 patients were deemed lost to follow-up, and included 14 persons who had died, and 11 who had migrated. The cohort consisted of approximately 64% males and 36% females. Some 125 (43%) persons were employed, while 69 (24.2%) were unemployed. The rate of relapse in the located cohort was 41.5%. The PANSS showed that 15% of patients who had relapsed were exhibiting evidence of continuing psychosis. Regarding drug use and abuse by persons in the cohort, 69 (37.7%) used Cannabis, with 11.6% of these patients reportedly being addicted.

The relapse rate of 41.5% for persons suffering from schizophrenia in Jamaica, ten years after diagnosis is significantly higher than the relapse rate of 13% found for the same cohort in 1992. However, the rate is in keeping with the worldwide relapse rate of 40% ten years after first-contact. The high percentage of good outcome found in this study suggests that Afro-Caribbean people do not have an adverse prognosis of schizophrenia in their own environment.

This study provided the first comprehensive database on the longitudinal course and prognosis of schizophrenia in the Caribbean, and particular in Jamaica. As a first assessment of schizophrenia over a ten year period in the Caribbean, the outcome of the study serves as an intrinsic guideline to the treatment of the disorder within the context of the cultural and social norms of these societies. Also, the study is an evaluation of the mental health services in Jamaica, an essential instrument necessary in affecting positive changes and improving the standard of care for mentally ill persons in the country. •