

Clinical Therapeutics

24.6% knew they act only against bacterial infections. 77.3% identified amoxicillin as an antibiotic. Majority (88.5%) did not know about antimicrobial resistance. 98.1% agreed that they should know whether there is any allergy to the drug before taking it. 88.5% indicated that type and dose of the antibiotic should change based on the age. 95.9% knew that if a woman is going to take an antibiotic, it is important to know whether she is pregnant or lactating. 62.6% agreed that they should know about the liver & kidney function before taking a drug.

Conclusions: In this population with high rates of antibiotic self-medication, the knowledge related to indications for antibiotics and antimicrobial resistance was poor. However the majority of the participants were knowledgeable about the important precautions. Improving public awareness and knowledge is needed to prevent antibiotic misuse.

ADVERSE DRUG REACTIONS IN A COHORT OF SRI LANKAN PATIENTS WITH NON-COMMUNICABLE CHRONIC DISEASES

C.N. Wijekoon¹; L.G.T. Shanika^{1*}; S. Jayamanne¹; J. Coombes¹; and A. Dawson^{2,3}

¹Faculty of Medical Sciences, University of Sri Jayewardenapura, Sri Lanka; ²South Asian Clinical Toxicology Research Collaboration, Sri Lanka; ³Faculty of Medicine, University of Kelaniya, Sri Lanka; ⁴University of Queensland, Australia; and ⁵University of Sydney, Australia

Background: Adverse drug reactions (ADRs) pose a major problem in medication use. This study was done to describe incidence, nature and associated factors of ADRs in a cohort of Sri Lankan patients with non-communicable chronic diseases (NCCDs).

Methods: The prospective observational data presented here are obtained as a part of a large study conducted in a tertiary-care hospital in Sri Lanka. In-ward patients with NCCDs were recruited systematically using the admission register in the ward as the sampling frame. All ADRs occurred during the index hospital admission and 6-month post-discharge period were detected by active surveillance.

Results: 715 patients were studied (females – 50.3%; mean age – 58.3±15.4years). 35.4% were aged ≥65years. Mean number of drugs prescribed per patient was 6.11±2.97. Most prevalent NCCDs were hypertension (48.4%), diabetes (45.3%) and ischemic heart disease (29.4%). 154 ADRs [33 (21.4%) during index hospital admission; 121 (78.6%) during 6-month post-discharge period] were detected involving 112 (15.7%) patients. 51.9% (80/154) of them were potentially avoidable. 47% (73/154) of ADRs were serious adverse events (SAEs); 13 were life threatening, 46 caused hospitalization and 14 caused disability. The most common causes for re-hospitalization due to ADRs were hypoglycemia due to anti-diabetic drugs (17/46), bleeding due to warfarin (6/46) and hypotension due to anti-hypertensives (6/46). ADRs were more common in elderly (34% vs 14.7%, p<0.001), in those who were on ≥5 drugs (25.9% vs 12.7%, p<0.001) and among those with diabetes (28.5% vs 15.6%, p<0.001).

Conclusions: Incidence of ADRs was high in the study population. A large proportion of them were SAEs. The majority of ADRs that required re-hospitalization were caused by widely used drugs and were potentially avoidable. Factors associated with a higher incidence of ADRs were age ≥65years, ≥5drugs in the prescription and presence of diabetes. The healthcare system in the study setting needs improvement in order to minimize ADRs.

CANNABINOID TOXICITY POST THERAPEUTIC INTRAPERITONEAL INJECTION

J.H. Martin; C. Lucas; and P. Galettis

Discipline of Clinical Pharmacology, University of Newcastle, New South Wales, Australia

Background: Since November 2016, medicinal cannabis has been able to be prescribed under the provision of a controlled drug in the Australian Poisons Standard. However there are multiple state and federal laws required for patients to navigate access, and imported products can be expensive. Some patients are growing and using their own supply while awaiting the health outcomes research required for streamlined access.

Results: A 56 year old female with stage IV ovarian cancer with peritoneal metastases presented to hospital with fevers, abdominal distension and severe pain, vomiting, anorexia, dehydration and confusion. The patient reported receiving an intraperitoneal injection on two days prior to presentation (administered by a deregistered medical practitioner) containing 12 g of cannabis oil. Plasma concentrations of THC and OH-THC (active metabolite) were 43 ng/mL and 25 ng/mL. A week post admission THC and OH-THC remained elevated at 34 ng/mL and 33 ng/mL. Pharmacokinetics showed THC concentrations consistent with the clinical state but not with the known pharmacokinetics of cannabis.

Discussion: The pharmacokinetics of this case suggested there is a large amount unknown about cannabis pharmacokinetics. In particular: the human intraperitoneal pharmacokinetics of a cannabinoid emulsion, the effect of peritoneal metastases, inflammation and altered vasculature, reservoirs, the role of the excipient (*coconut oil in this case*), the concentration at which saturation of hepatic glucuronyl transferase system responsible for conjugation occurs, cell transport characteristics within tumors considering both theoretical predictions and experimental measurements suggest very limited penetration of drugs into tissues including tumors adjacent to the peritoneal cavity, the effect of cachexia, role of the liver and liver metastases in metabolism, possible vehicle-induced inhibition of cannabidiol metabolism and/or transport processes as well as direct enhancement of tissue permeability for micellous surfactants. These and the pharmacokinetic data presented are all relevant to understanding the altered pharmacokinetics of cannabinoids in the severe cancer setting.

ANTIBIOTIC CONSUMPTION IN A SPECIALISED TEACHING HOSPITAL IN ETHIOPIA

E.L. Toverud¹; G. Gutema¹; E. Engidawork²; and H. Håkonsen¹

¹School of Pharmacy, University of Oslo, Norway; and ²School of Pharmacy, Addis Ababa University, Ethiopia

Background: Like in many developing countries most people in Ethiopia never see a doctor and use few western drugs. In hospitals, however, especially antibiotics are extensively used. High resistance rates are documented. In the present study the antibiotic consumption was investigated in three clinical wards in a big hospital in Addis Ababa.

Methods: The material was 2231 medical charts for the period 11/9-13 to 10/9-14 from the wards internal medicine, surgery and gynecology/obstetrics in Tikur Anbessa Specialised Hospital.

Data collection was carried out from January to April 2015 by pharmacists from the hospital.

Results: Each of the medical charts represented one patient due to no readmissions. About 60% of the patients were admitted to internal medicine, about 20% to each of the two other wards. The number of bed days was high with an average of 16.5 (s.d. 16.3). Fourteen percent had been hospitalised for more than 30 days. Antibiotics for systemic use were prescribed to 1645 patients (73.7%), of whom 79 were treated for nosocomial infections. Sensitivity tests were performed for only 3.8% of the patients; hence, empirical prescribing was therefore the common situation. As much as forty percent had been prescribed one antibiotic, 33.6% two, and the remaining three to nine. The average number of antibiotics per patient was 2.1