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Antimicrobial property of crude Butanol, Dichloromethane, and Hexane leaf extracts of *Wrightia antidysenterica*

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Wrightia antidysenterica, belonging to family Apocynaceae, is commonly grown in lowlands of the country. Several species of the same family were reported to have medicinal properties. The research analyzes the antimicrobial properties of crude butanol, dichloromethane (DCM) and hexane leaf extracts of *Wrightia antidysenterica*. Extracts were tested against significant strains of microorganisms: *Staphylococcus aureus*, *Staphylococcus epidermidis*, and genera *Bacillus*, *Escherichia*, *Psuedomonas*, *Micrococcus*, *Streptococcus*, *Klebsiella*, *Proteus*, *Salmonella*, and *Candida*. Zones of inhibition in the agar disc diffusion method revealed that *S. pneumoniae* (14.40 mm) and *S. epidermidis* (15.70 mm) are susceptible to DCM leaf extracts. The antibiotic activity of this leaf extracts is attributed to the phytochemicals: steroids, tannins, phenols, alkaloids, saponins, coumarins, and terpenoids. The two-fold serial dilution determined that at a concentration of 100 mg/ml, the DCM leaf extract possessed antibiotic activity comparable to gentamicin against *S. pneumoniae* and *S. epidermidis*. This was recorded as the MIC. The activity of 100 mg/ml is observed to be only bacteriostatic upon streaking and 24-incubation on MHA; whereas, activity of gentamicin remained bactericidal against the two species of bacteria. Therefore, *Wrightia antidysenterica* cannot be used as an alternative bactericidal agent against *S. epidermidis* and *S. pneumoniae*. However, it can be used as a bacteriostatic agent against these two species of bacteria.

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Use of a prospective risk analysis method to improve the safety of the cancer chemotherapy process in a medical Oncology service in Algeria

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The Concord study published in the journal Lancet Oncology in July 2008 on the future of oncological diseases which covered 1.9 million people from 31 countries study led us to analyze the vulnerability of anticancer drug therapy in Algeria countries reported to have the lowest survival rates at 5 years of the study. The aim of our study was to contribute to improve the anticancer drug management in hospitals, by a prospective risk analysis. We analyzed the existing process at the Amine Zirout clinic, part of the University Hospital Beni Messous, Algiers, Algeria by the Failure Modes and Criticality Effect Analysis (FMECA) method. The process has been described, the risks have been identified, the criticality indexes (CI) calculated, the causes of identified deficiencies and the impact of improvement measures estimated by an interdisciplinary group of experts (doctors, pharmacists and nurses). The sum of the CI of 30 identified failure modes was estimated to be 6511 in a decentralized system. The main causes identified were related to an insufficient regulatory basis to secure the clinical cancer chemotherapy process in Algeria. The estimation of the impact ("FMECA after") of an organization in a centralized system gave a sum of CI = 4648 and computerization of various stages gave a sum of CI = 3154 suggesting a potential 50% security gain of the criticality of the process. Our study was the starting point of an active and dynamic continuous analysis and risk reduction approach at the Amine Zirout clinic (Algiers, Algeria). On the other hand, it will allow recommendations to secure by regulation the cancer chemotherapy process and the adequate training of those responsible for the anticancer drug process and re-engineering in a centralized and computerized system, which means economic efficiency and safety improvement for the institution.

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