Control Of Bacterial contamination of bed sores by using some natural extracts

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Bed sores is a relatively common problem attacking human who are bedridden, are unable to change positions, those who use a wheelchair, advanced age, poor nutrition (obesity, underweight, protein deficiency, anemia), dehydration, poor hygiene, and diabetes are other factors that increase ones risk. Bed sores are caused by prolonged pressure on the skin, mostly over bony areas, small vessels become compressed, nutrients and oxygen are restricted to the skin and underlying tissue, tissue cells begin to die and slough off, and microorganisms can invade the damaged tissue causing it to become infected.In the present study a total of 35 samples were taken from patients in El-Wafaa & El-Amel hospital, Cairo. These samples have been isolated from different ages of males and females ranged 35-65 years of females and 45-75 years of males. These samples were immediately cultured on nutrient, MacConkey's and blood media. The isolates were characterized via microscopic examination, classified and identified to the species level according to laboratory manuals and determinative keys of bacteriology.In the present study, the results demonstrated that the most frequent isolated species from bed sores patients were Staphylococcus epidermidis (31.4%) followed by Proteus vulgaris (28.6%), Pseudomonase aeruginosa (22.8%), E. coli (8.6%), Klebsiella pneumoniae (5.8%) and S. aureus (2.8%).Regarding the resistance organisms to antimicrobial agents, the results showed that the antibiotic ofloxacin is more effective against isolated pathogenic bacterial organisms, where the percentage of sensitive organisms to ofloxacin is 68.6% followed by norefloxacin 62.8%, chloramphenicol and amikacin 51.4%, erythromycin 25.7%, ampicillin 20.0%, cephalexin 5.8% and penicillin 0.0%.In the present study, the results demonstrated that rosemary, garlic, marjoram, clove, peppermint and thyme were the most effective plant extracts against selected pathogens (E. coli, K. pneumoniae, P. vulgaris, P. aeruginosa S. epidermidis and S. aureus). However in three cases (cold water, boiling water and alcohol extract), ginger was the lowest effective plant extracts.Combination between clove extract (extraction by boiling water) and antibiotics like ofloxacin and amikacin increase the antimicrobial agent effectivity of antibiotics against isolated bacteria.In the present study, the results demonstrated that the essential oils of peppermint and garlic were the most effective against selected pathogens (E. coli, K. pneumoniae, P. vulgaris, P. aeruginosa, S. epidermidis and S. aureus). However the essential oils of fennel and eucalyptus were the lowest effective.The results of this study showed that the

highest effect of disinfectant was iodine followed by betadine paint, but gawy stain, gentian and Mercrychrome have moderate effect, while cetavlon hasn’t any effect.The present study illustrate that, date honey the most effective against bacterial isolates followed by the pond grain honey, Seder honey, citrus honey, albrdqoc honey, and clover honey.Different concentration of alcoholic extracts of propolise against bacterial isolates was prepared to prove the antibacterial activities as follow: 100, 75, 50, and 25%, where the highest concentration (100%) give the highest inhibition zones with all tested bacteria, followed by the concentration (75%) which give inhibition zones less than the highest concentration (100%), while incase the concentration (50%) it is moderate, affected only on some tested bacteria, but incase (25%) it hasn’t any effect. from that the antibacterial activities of alcoholic extracts of propolise increased with increasing the concentration.