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Susceptibility of microorganisms isolated from otitis media pus to cigarette capsule and some medicinal plants

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Otitis media is a perforation of the tympanic membrane with persistent drainage of pus from the middle ear and it is a major cause of acquired hearing impairment of varying severity mostly in developing countries. This study aimed to identify bacterial isolates in patients who have otitis media and to determine their susceptibility pattern to cigarette capsule as well as testing the antimicrobial effect of some medicinal plants extract (*Nicotiana tabacum*, *Annona senegalensis*, and *Zornia glochidiata*) on the isolates. A total of 48 samples were collected from the laboratories of three Public Hospitals, males 28 (58.33%) and Females 20 (41.67%) with highest occurrence in children below the age of five years (60%) followed by 5-9 years to be (31.11%). Minimum inhibitory and minimum bactericidal concentrations of the extract were carried out. Percentage of gram negative organisms isolated was 57.78% while 42.22% are gram positive. The bacterial isolates identified were *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Streptococcus pneumoniae* and *Proteus mirabilis*. The two cigarette capsules used (Rotmass and Benson) showed significant ($P < 0.05$) zones of inhibition on *Pseudomonas aeruginosa* and *Streptococcus pneumoniae*. Results also revealed that the three medicinal plant extracts (*Nicotiana tabacum*, *Annona senegalensis*, *Zornia glochidiata*) showed significant ($P < 0.05$) zones of inhibition on *Klebsiella pneumoniae*, *Proteus mirabilis*, *Pseudomonas aeruginosa*, *Staphylococcus aureus* and *streptococcus pneumoniae* at 0.5 mg, 1.0mg and 2.0mg respectively. This research shows the promise some plants have for discovery of new classes of antibiotics which might be used in the treatment of otitis media infection.