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ABSTRACTS

GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY
RATMALANA 10390
SRI LANKA
www.kdu.ac.lk

ROLE OF MICROORGANISMS IN LUMBAR DISC HERNIATION

ND Withanage[1], MVSC Pathirage[2], S Perera[3], H Peiris[4] and LV Athiththan[4#]

[1]Department of Allied Health Sciences, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka

[2]Medical Research Institute, Colombo 8

[3]The Central Hospital, Colombo 8

[4]Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka

[#]lohinia@sjp.ac.lk

Microorganisms in association with osteomyelitis and tuberculosis affecting the vertebral column are not very rare. But recent studies have suggested the involvement of microorganisms in lumbar disc herniation. The objective of the study was to identify the involvement of microorganisms in lumbar disc herniation and to differentiate between them. After confirmation of lumbar disc herniation with Magnetic Resonance Imaging, fifty patients admitted for lumbar discectomy, who volunteered to participate in this study, were recruited from a selected hospital in Colombo. A standardized interviewer administered questionnaire was given to each patient. Standard protocol for disinfection of skin and use of surgical instruments were adhered to. Skin scrapings and muscle biopsies were transferred into individual Robertson's cooked meat enrichment broth (RCM) using sterile forceps. The surgically removed discs were transferred into RCM for anaerobic analysis whilst excised disc material was taken for aerobic analysis. Anaerobic cultures were carried out for skin scrapings, muscle biopsy and disc samples whereas aerobic cultures were only carried out for muscle biopsy and disc tissues. Anaerobic isolates were done using RAPID ANA ID kit. Gram stain, Catalase, DNAase and Coagulase tests were used for identification of aerobic *Staphylococcus* spp. Among the study subjects the disc cultures of six patients showed positive growth for anaerobic microorganism from which three were identified. Two disc tissue samples showed *Propionibacterium acnes* (*P.acnes*); 1 disc sample had *Gemella morbillorum*) and other three showed slow growth of colonies. In the aerobic culture analysis discs of five patients showed positive growth for aerobic microorganisms that were identified as coagulase negative *Staphylococcus* spp. Although other studies carried out worldwide have identified *P.acnes* and coagulase negative *Staphylococcus* spp in relation with lumbar disc herniation, this is the first reported study to isolate and identify *Gemella morbillorum* in the intervertebral tissue following lumbar discectomy.

Keywords: Lumbar Disc Herniation, *P.acnes*, Coagulase Negative *Staphylococcus* spp, *G. morbillorum*