CORRELATIONS BETWEEN HIP ABDUCTOR'S PERFORMANCE WITH HIP BONE MINERAL DENSITY IN ELDERLY WOMEN
(Rwahita Satyawati, Imam Subadi, Damayanti Tinduh Utama, Bayu Santoso)

14.5 kDa PROTEIN OF PLASMODIUM FALCIPARUM IS A SPECIFIC ASEXUAL STAGE ANTIGEN RECOGNIZED BY POOLED
OF MOUSE IMMUNE SERA
(Heny Arrawi, KusmaindrMahat, Yoes Priyana Dachlan)

THE EXPRESSION OF MITOCHONDRIAL HEAT SHOCK PROTEIN 10 IN ORAL LESIONS WITH HPV POSITIVE
(Adi Prayitno, Widya Asmara, Ambar Mudigdo, Mandjojo Ruiko, Suhartono Taet Putra)

NOSOCOMIAL INFECTION MONITORING USING URINE CATHETER
(Puspa Wardhani, Dijoko Siswantoro, Prihatini)

PATTERN OF COMMUNITY ROLE DEVELOPMENT AS AN EFFORT TO INCREASE TUBERCULOSIS PATIENTS COVERAGE
WITH PASSIVE CASE FINDING
(Atika, Dijihar Nuswantoro)

EFFECTIVENESS OF CIGARETTE BUTTS AS AN ALTERNATIVE MATERIAL FOR FORENSIC DNA IDENTIFICATION WITH
POLYMERASE CHAIN REACTION (PCR) IN SHORT TANDEM REPEAT (STR) LOCI
(Ahmad Yudianto)

EFFECT OF FRICTION TECHNIQUE MASSAGE FOR LEG AFTER MAXIMAL EXERCISE
ON THE REMOVAL RATE OF BLOOD LACTATE
(Yudik Prasebyo, Elyana STP Asmar)

PHYSIOLOGICAL EFFECTS OF MUSIC DURING EXERCISE SECRETION OF HORMONES CORTISOL AND ENDOPHINS
(Sugiharto)

EXPRESSION OF P53 ONCO PROTEIN IN HUMAN BREAST DUCTAL CARCINOMA (IN SITU, INVASIVE AND METASTATIC)
(Imam Susilo)

Review Article:
CONGENITAL HEART DISEASE
The Holistic Approach, Now and In The Future in Indonesia
(Teddy Ontoseno)

Review Article:
MANAGEMENT OF SUBCLINICAL VENTRICULAR DYSFUNCTION
(Rochmai Rondoni)

Review Article:
EXERCISE AND BRAIN HEALTH IN ELDERLY
(Muchsin Doewos)

Review Article and Clinical Experience:
EMERGING MULTIPLE PROPERTIES OF HIGH DOSE THIAMINE AND B6-B12 VITAMINS
Therapeutic Possibilities for Diabetic Vascular Complications
(Askandar Tjoeprowono)
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CORRELATIONS BETWEEN HIP ABDUCTORâ€™S PERFORMANCE WITH HIP BONE MINERAL DENSITY IN ELDERLY WOMEN</td>
<td>88 - 92</td>
</tr>
<tr>
<td>2</td>
<td>14.5 kDa Protein of Plasmodium falciparum is a Specific Asexual Stage Antigen Recognized by Pooled of Mouse Immune Sera</td>
<td>93 - 96</td>
</tr>
<tr>
<td>3</td>
<td>The Expression of Mitochondrial Heat Shock Protein 10 in Oral Lesions with HPV Positive</td>
<td>97 - 101</td>
</tr>
<tr>
<td>4</td>
<td>Nosocomial Infection Monitoring Using Urine Catheter</td>
<td>102 - 107</td>
</tr>
<tr>
<td>5</td>
<td>Pattern of Community Role Development as an Effort to Increase Tuberculosis Patients Coverage with Passive Case Finding</td>
<td>108 - 111</td>
</tr>
<tr>
<td>6</td>
<td>Effectiveness of Cigarette Butts as an Alternative Material for Forensic DNA Identification with Polymerase Chain Reaction (PCR) in Short Tandem Repeat (STR) Loci</td>
<td>112 - 114</td>
</tr>
<tr>
<td>7</td>
<td>Effect of Friction Technique Massage for Leg After Maximal Exercise on the Removal Rate of Blood Lactate</td>
<td>115 - 120</td>
</tr>
<tr>
<td>8</td>
<td>Physiological Effects of Music during Exercise Secretion of Hormones Cortisol and Endorphins</td>
<td>121 - 129</td>
</tr>
<tr>
<td>9</td>
<td>EXPRESSION OF P53 ONCOPROTEIN IN HUMAN DUCTAL BREAST CARCINOMA (IN SITU, INVASIVE AND METASTATIC)</td>
<td>130 - 144</td>
</tr>
<tr>
<td>10</td>
<td>Review Article: Congenital Heart Disease. The Holistic Approach, Now andÂ in the Future in Indonesia</td>
<td>145 - 154</td>
</tr>
<tr>
<td>11</td>
<td>Review Article: Management of Subclinical Ventricular Dysfunction</td>
<td>155 - 160</td>
</tr>
<tr>
<td>12</td>
<td>Review Article: Exercise and Brain Health in Elderly</td>
<td>161 - 164</td>
</tr>
<tr>
<td>13</td>
<td>Review Article and Clinical Experience: EMERGING MULTIPLE PROPERTIES OF HIGH DOSE THIAMINE AND B6-B12 VITAMINS Therapeutic Possibilities for Diabetic Vascular Complications</td>
<td>165 - 173</td>
</tr>
</tbody>
</table>
CORRELATIONS BETWEEN HIP ABDUCTOR'S PERFORMANCE WITH HIP BONE MINERAL DENSITY IN ELDERLY WOMEN

Abstract

The purpose of this study was to find correlation between hip abductor's performance (muscle strength and endurance) with hip bone mineral density (BMD) on menopausal osteoporotic women in Surabaya. This cross sectional study was done on 39 menopausal osteoporotic women 50-80 years old, which met the inclusion criteria (perform activity daily living independently, agreed join this research with signed the informed consent and cooperative) and exclusive criteria (have neuromusculoskeletal problems on both lower extremities and cardiopulmonary problems). Every woman underwent assessment for non dominant hip abductor performance with EN Tree machine and non dominant total hip bone density with bone densitometer Hologic QDR 4500. Pearson and Spearman Correlation was used to measure the correlation between hip abductor performance and total hip bone density. This study showed that age has weak negative correlation with average power concentric (r=-0.360), average power eccentric (r=-0.344), average peak power concentric (r=-0.328), peak power concentric (r=-0.319) and total hip bone density (r=-0.353). Total hip bone density has moderate positive correlation with concentric contraction on peak power (r=0.509), average power (r=0.485), peak force (r=0.476), average power eccentric (r=0.460), average peak power (r=0.452) and average peak force (r=0.450), with eccentric contraction on average power (r=0.416) and peak power (r=0.412). This study showed that total hip bone density (reflect the static bone strength) had no correlation to 1 RM (reflect the muscle strength). Total hip bone density has stronger correlation with concentric than eccentric contraction activity. Endurance exercise for maintain bone density must give rhythmic eccentric and concentric contraction As long as there are enough force and power performed by exercise (within the intensity range 40-60% of 1 RM), endurance exercise will help (included non trained person) to maintain bone density. In conclusion, the older, the weaker hip abductor and hip bone.

Keyword : elderly, women, total, hip, bone, density, hip, abductor,

Daftar Pustaka :