Abstract

Security service must deal with various dangerous situations that occurs to the protector at the closest range, and must include elements of professional strength including agility, reaction, strength, balance, selective reaction abilities as physical requirements. Especially, close proximity guards are the last line of defense that must deal with various dangerous situations that occurs to the protector at the closest range, and at the same time, since the time, location, and methods of the dangerous situations are decided by the assailant it can be said that the most basic requirements of a close proximity security guard is martial arts abilities that deals with situations successfully.

Therefore, in order to successfully carry out a close proximity security service, one must train in martial arts based on the protection methods that will be applied during dangerous situations considering proximity protection security methods and the characteristics and principles of the security martial arts types.

One-arm shoulder throw, a technique in Judo, is a technique that throws by holding the collar or sleeve of a side that is frequently used as a surprise technique when the opponent is highly balanced and bigger in size and is a very simple technique, with also one arm, other than the one holding and pulling, free to change into another technique, making this less stressful on the arm joints than the two-arm shoulder throw, allowing beginners to easily approach this technique and easily throw the opponent. Also, as it is with the original movement of the one-arm shoulder throw, this technique is a basic technique and also an important technique that allows the holder (the guard) to use the attacking strength of the opponent in the situation when the receiver (the attacker) attacks the upper body.

Therefore, this study analyzes the differences in the EMG analysis results between the security martial arts one-arm shoulder throw movement with the left arm (attacking arm) and the right leg (balancing leg) in a dangerous situation.

Table 1 shows the results of the muscle activity of an experienced person and a non-experienced person for the pulling arm's blocking section (section 1) to locking section (section 2) during the security martial art one-arm shoulder throw. <Table 2> shows the results of the muscle mobilization of an experienced person and a non-experienced person for the right (balancing) leg during the security martial art one-arm shoulder throw. These results are considered to be so since when the security martial art one-armed shoulder throw movement progresses the knees are bent, with the attacker on the back, and when the knee straightens out, and it finally ends with by throwing the attacker, and when these happen, the muscle in use is the muscular rectus femoris.

Keywords: Security Martial Arts, Republic of Korea, Security, One-Arm Shoulder Throw, EMG

1. Introduction

Security service must deal with various dangerous situations that occurs to the protector at the closest range, and must include
elements of professional strength including agility, reaction, strength, balance, selective reaction abilities as physical requirements[1]. Especially, close proximity guards are the last line of defense that must deal with various dangerous situations[2] that occurs to the protector at the closest range, and at the same time, since the time, location, and methods of the dangerous situations are decided by the assailant it can be said that the most basic requirements of a close proximity security guard is martial arts abilities that deals with situations successfully[3].

Therefore, in order to successfully carry out a close proximity security service, one must train in martial arts based on the protection methods that will be applied during dangerous situations considering proximity protection security methods and the characteristics and principles of the security martial arts types.

One-arm shoulder throw, a technique in Judo[4], is a technique that throws by holding the collar or sleeve of a side that is frequently used as a surprise technique[5] when the opponent is highly balanced and bigger in size and is a very simple technique[6], with also one arm, other than the one holding and pulling, free to change into another technique, making this less stressful on the arm joints than the two-arm shoulder throw, allowing beginners to easily approach this technique and easily throw the opponent[7].

Also, as it is with the original movement of the one-arm shoulder throw, this technique is a basic technique and also an important technique that allows the holder(the guard) to use the attacking strength of the opponent in the situation when the receiver(the attacker) attacks the upper body[8]. Therefore, this study analyzes the differences in the EMG[9] analysis results between the security martial arts one-arm shoulder throw movement with the left arm(attacking arm) and the right leg(balancing leg) in a dangerous situation. These results are considered to be so since when the security martial art one-armed shoulder throw movement progresses the knees are bent, with the attacker on the back, and when the knee straightens out[10], and it finally ends with by throwing the attacker, and when these happen, the muscle in use is the muscular rectus femoris.

2. Research Result

<Table 1> shows the results of the muscle activity of an experienced person and a non-experienced person for the pulling arm's blocking section(section 1) to locking section(section 2) during the security martial art one-arm shoulder throw[11].

<Table 2> shows the results of the muscle mobilization of an experienced person and a non-experienced person for the right (balancing) leg during the security martial art one-arm shoulder throw[11].

| Table 1. Left arm’s muscle activity[11]. |
|-------------------------------|---|---|---|---|
| Group    | LR  | LU  | LB  | LT  |
| Experts  | M | 272.4 | 185.2 | 447.3 | 331.2 |
|          | SD | 53.8  | 50.2  | 59.8  | 90.2  |
| Non-experts | M | 425.6 | 203.6 | 492.9 | 255.7 |
|          | SD | 79.2  | 64.3  | 100.3 | 80.7  |
|          | DM | -153.2 | -18.4 | -45.6 | 75.5  |
| t-value  | 1.623 | 0.343 | 0.345 | 0.545 |

Note: *p<.05
※DM: Skilled group - non skilled group
※LR: Left flexor carpi radialis
※LU: Left extensor carpi ulnaris
※LB: Left biceps brachii
Table 2. Right leg’s muscle activity[11].

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<td>-3.375*</td>
<td>-12.878*</td>
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Note: *p<.05
※R.T.A: Right tibialis anterior
※R.B.F: Right biceps femoris
※R.R.F: Right rectus femoris
※R.G: Right gastrocneius

3. Conclusion

These results are considered to be so since when the security martial art one-armed shoulder throw movement progresses the knees are bent, with the attacker on the back, and when the knee straightens out, and it finally ends with by throwing the attacker, and when these happen, the muscle in use is the muscular rectus femoris.

4. References

4.1. Journal articles


4.2. Thesis degree


4.3. Books


4.4. Conference proceedings


4.5. Additional references
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