

An Analysis of the Footwork Practice in College Tennis Courses

Dongliang Lv^{1, a}

¹Department of Physical Education, Tianjin Polytechnic University, Tianjin 300387, China.

^alvdongliang83@sina.com

Abstract

Tennis footwork is the general term used by players to control the body and change the position, direction and speed of reading in tennis. With the development of tennis technique, the footwork become more and more important. Good footwork help to make the relationship between the ball and the person appropriate, facilitate the effective swing, to achieve the best impact. This paper makes use of the methods of literature, investigation and interview, logic analysis and other research methods combined with the characteristics of tennis special sports to preliminarily explore the footwork exercise in college tennis elective courses.

Keywords

College, tennis elective course, footwork practice.

1. Introduction

The technical problems of tennis can be roughly divided into footwork and technique. With the continuous development of tennis, the theoretical and practical level of its various techniques have been improved comprehensively, and the research on footwork is no exception. Footwork is the most basic technical link in tennis. It is the premise of mastering other tennis techniques and plays an important role in the practical application of other techniques. Without a flexible footwork, it is impossible to grab a good position and return the ball effectively. There is a saying in tennis: technique is the foundation, footwork is the key. This shows the importance of the pace in the sport of tennis, the pace is not good, beautiful approach will also lose meaning. The theoretical practice of tennis tells us that strengthening the training of footwork is an important part of developing tennis technology [1].

2. The Type and Importance of Tennis Footwork

2.1. The Type of Tennis Footwork

Tennis footwork is the general term for all kinds of movement methods used by players to control the body and change the position, direction and speed in tennis matches. Tennis footwork consists of various movements such as running, crossing, changing direction, jumping, stopping, side footworkping, etc. The common basic footwork can be summarized as single footwork, small footwork, sliding footwork, crossing footwork, striding footwork, pad footwork, parallel footwork, etc. The elements of footwork movement are mainly composed of judgment, speed, strength and coordination.

2.2. The Importance of Tennis Footwork

A good tennis player can move quickly to a reasonable position, hit the ball and quickly return to the position while keeping his balance, not only with speed, but also with his footwork. The conventional tennis technique consists of "eye method", "foot method" and "technique". The eye method refers to observation and judgment, and the footwork refer to movement. While in the return ball, only the footwork in place, combined with the strain of the technique can be in

control and counter-control process with ease. This shows that footwork technology is the foundation of tennis technology, footwork fast in place is the premise of flexible use of technique. It is often said that "three-point method, seven-footwork method" fully demonstrates that footwork plays a vital role. They are the foundation of mastering and applying technology, and an important factor for winning the game [2].

3. Physical Training of Tennis Footwork

The training contents of tennis footwork includes speed training, strength training, endurance training, sensitivity training and flexibility training. Good physical quality is the basis for athletes to learn and master skills and tactics, and plays an important role in improving athletic ability, prolonging sports life, preventing and reducing sports injuries. The five major contents of tennis quality training are not only different from each other, but also closely related. The improvement of one quality also affects the development of other qualities to some extent, so their contact methods are complementary.

3.1. Speed Quality Training

As the speed quality includes reaction speed, movement speed and displacement speed, and these three aspects are both related and different, the way to improve the speed ability also has many characteristics. Reaction speed is often affected by the degree of central nervous system excitement, the degree of concentration, the state of preparation of muscle tissue, the degree of mastery of motor skills, the feeling and discrimination ability of signal features and time features, genetic factors, etc. In addition, the athletes' attention was directed in relation to their ability to respond quickly. Motor speed is directly restricted by the development level of strength, flexibility, agility and other physical qualities, so the practice of motor speed is also closely related to the development of other qualities. The training of motor speed can only be realized through the consolidation and improvement of technical level and the development of related physical qualities. In a sense, displacement velocity can be regarded as a kind of comprehensive human movement ability. The speed of displacement is not only related to the technical level of movement, but also closely related to the development of strength, flexibility, speed endurance and coordination. From another perspective, displacement velocity can also be regarded as a combination of movement speed, speed endurance and willpower [3].

3.2. Strength Training

Strength is a form of motor skill, the ability of the body or part of the body to overcome resistance when muscles contract and stretch. The resistance that muscle overcomes when working includes external resistance and internal resistance. Strength is produced by three factors: the maximum contraction force of the active muscle; Combined force of active and antagonistic, neutral and supportive muscles; The pulling Angle of the muscle and the relative length of each lever's resistance arm and arm. Strength training is an important method to improve serve, strike quality and displacement speed. Commonly used strength exercises include weight lifting barbells, various single-leg jumps, multi-footwork jumps and deep jumps.

3.3. Endurance Training

Endurance is the ability of the body to engage in muscle activity over a long period of time.

The common methods of developing endurance training include continuous training, interval training and altitude training. The endurance required by tennis is a kind of special endurance quality which is always in change and closely combined with speed.

3.4. Sensitive Quality Training

The sensitive quality refers to the athlete's ability to quickly change position, change movement and adapt to changes. It is also a special quality which cannot be covered by various qualities. It is related to people's ability to predict and respond to space orientation and time perception. Agility is achieved on the basis of extremely solid athletic skills. Sensitivity training is closely related to speed. Sensitivity training should be based on speed training.

3.5. Flexibility Training

Factors that affect the range of motion of a joint, namely, the bone structure of the joint, the volume of surrounding tissue, and the extension of ligaments, tendons, muscles and skin. The last of these has the greatest impact on improving flexibility. Flexibility depends not only on structural changes, but also on the regulation of skeletal muscle by nerves, especially the coordination of muscle relaxation and tension. Better coordination ensures greater movement. Improving flexibility can be achieved by stretching muscles, tendons and ligaments, both explosively and gradually. Progressive muscle relaxation allows the tendons to stretch slowly without injury. It is worth mentioning that flexibility can be divided into active flexibility and passive flexibility. Active flexibility refers to the range where muscles can be used to make joints move, while passive is simply the maximum range of motion.

4. Tennis Special Footwork Training

4.1. The Training Method of Single Footwork

Single footwork training is the foundation of footwork training, and its quality is directly proportional to skill level. Coach should grasp the combination of footwork, reduction footwork and other techniques to repeat the process of training in early training. With the deepening of training, it is required to master the more difficult footwork such as side footwork and cross footwork, so that the athletes know how to choose footwork according to the ball. At the same time, multiple ball exercises are adopted to strengthen the single footwork, and improve the proficiency, speed, range and frequency of movement.

4.2. The Training Method of Compound Footwork

Multiple footwork refer to the use of two or more different footwork during a stroke. Its teaching focuses on the organic combination of different footwork, so the compound footwork is also called comprehensive footwork. The training of compound footwork should also follow the principle from easy to difficult, and grasp the practice of using more combined footwork to practice repeatedly. These footwork training and the technique training mutually correspond. In the case of a cross footwork on the side of the body, the corresponding method is the volley ball connected to hit the high pressure ball; Side slip and turn run, the corresponding technique is that the baseline is patted and the backstroke is connected to the backstroke[4].

5. Tennis Footwork Graded Exercises

5.1. Improve the Pace of the Main Exercise

The main purpose is to train the pace of a player's footwork. Main content has: (1) fast sit up sprint run: the player sits on the bottom line. Behind your hands. When you hear the password, get up quickly and sprint for the net. (2) pushups: player A does pushups on the baseline against the net, and player B or the trainer rolls the ball forward from A's two legs. Player A sprints and grabs the ball before the ball passes the service line.

5.2. Exercise with Increased Flexibility

The main purpose of this paper is to consider the player's ability to change direction with minimum speed loss. Main contents: (1) skipping exercise: skipping is of great help to improve flexibility, coordination, balance, rhythm and quick reaction ability. The usual intensity of the exercise is recording the number of jumps for 30 seconds and then taking a break for 30 seconds. This alternates groups. There are many ways to jump rope, such as jumping, jumping on one foot, raising the leg, moving forward and back. (2) volley balance practice: one player holds a water glass with his non-holding hand and practices forehand and backhand against the net with the other player. The water in the glass should not be spilled when changing the direction of the volley[5].

5.3. The Main Exercise is to Change the Gait pattern

The main goal is for players to be able to quickly move from one mode of footwork to another. Main content has: the player stands in the bottom line, listens to the coach password after several different footwork. Every time a player moves from the baseline to the net, he must follow the instructions given by the coach to make a footwork until he touches the net. For example, when a player reaches the service line, the coach will issue instructions such as sprint, slide, back, cross, and stride. As long as you don't hear the stop command, players quickly change their footwork.

5.4. Speed Endurance - Based Exercise

The main purpose of a player is to maximize, or come close to maximizing, all of his energy in a game. The main content is as follows: (1) gradual acceleration: walk slowly along the length of the field -- walk along the width of the field -- sprint along the length of the field -- walk at the normal speed along the width of the field, and repeat this many times. (2) sudden acceleration: walk slowly along the length of the field -- sprint along the length of the field, and repeat this many times. A player's movement speed on the field should not only depend on the flexibility of a quality, and coordination and speed endurance are also indispensable in good footwork. Therefore, we should train all kinds of qualities comprehensively.

To sum up, in the footwork of the optional course of tennis in colleges and universities, first of all, it should be clear that the footwork of tennis footwork is complementary to the method of quality training to a certain extent, and attention should be paid to the training of physical quality. Secondly, the training method of single footwork and the training method of compound footwork provide a variety of effective training methods for tennis footwork training and should enrich the content of tennis footwork training. Thirdly, tennis footwork grading practice is set for tennis enthusiasts of different levels. Through this progressive practice method, the level of tennis footwork can be improved.

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