

To Find out the Incidence of Tennis Elbow in Professional Tabla Players: An Observational Study

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Abstract

Objective: The study was done to find out the incidence of Tennis Elbow in Professional Tabla Players. **Method:** The study was of an observational design, with 50 subjects; all subjects were selected according to inclusion & exclusion criteria and carried out at Swarsangam school of music, Saraswati music academy, Shri Sai music academy Moradabad and Cultural department of Swami Vivekanand Subharti University, Meerut (Uttar Pradesh). All the subjects were assessed before and after plying the tabla for pain, swelling, tenderness and redness by using the VAS and other scales which were mentioned in questionnaire respectively. The collected data was analyzed by using SPSS software. Chi²-test was used to find out the incidence of reoccurrence of above said symptoms in the subjects and to analyze the significance of p-values. **Results:** It was predicted in the research before collecting data that there can be high incidence of tennis elbow in professional tabla players as there is over use of wrist extensors during playing tabla. Inflammation at common extensor origin can take place due to it. But the result show only 48% incidence of tennis elbow. So it can be assumed that tabla players are not much susceptible to tennis elbow. The results showed that there was significant difference in pain, swelling, tenderness and redness with their VAS score.

Keywords: Tennis Elbow; VAS (Visual Analog Scale).

Introduction

It is defined as a pathologic condition of the wrist extensor muscles at their origin on the lateral humeral epicondyle. The tendinous origin of the extensor carpi radialis brevis (ECRB) is the area of most pathologic change [1].

It is characterized as pain on the lateral side of the elbow and posterior aspect of forearm, sometimes referred to the wrist and into dorsum of the hand that is aggravated with movements of the wrist or by contraction of the extensor muscles of the wrist [2].

Point tenderness is present over lateral epicondyle and reduction in grip strength is also associated with tennis elbow (Pienimake et al 2002). According to

Greenfield and Webster (2002) there are 15 diagnostic tests but the most commonly used tests are pain on resisted extension of the wrist and tenderness to palpation over the lateral epicondyle at the insertion of ECRB [3].

Cyriax in 1936 found many pathologic processes described but concluded that the origin of the ECRB was major site of pathologic condition because of a partial tendon tear.

The condition occurs in middle age with incidence of the condition peaking between the age of 35-50 years and with a duration of an average episode of between 6 months and 2 years (Assendelft et al 1996, Ernst 1992, Katarinicic et al 1992) It affects the dominant arm most commonly with epidemiological studies showing a prevalence of 1% in men and 4% in women (Verhaar et al 1993, Noteboom et al 1994) [4].

Musicians often first experience tendonitis as a sharp pain located in one spot in the wrist, elbow or base of the thumb. It is characterized by a burning pain, sometimes only when the affected part is moved in a certain way, or in more severe cases, continues. Unlike simpler muscle strains, it tends to persist for

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long period of time. It not taken care of right away, it can develop into a major problem involving months of intense pain and perhaps a total in ability to play [5].

Aims and Objective

To find out the incidence of Tennis Elbow in professional tabla Players.

Materials and Method

Visual Analogue Scale

The visual analog scale is one of the most basic pain measurement tools. It consists of a 10 cm line. The clinician can measure the place on the line and convert into it a score between 0 to 10 where 0 is no pain and 10 is bad as it could be [6].

Hypothesis

Experimental Hypothesis

There is higher incidence of tennis elbow in professional tabla players.

Null Hypothesis

There is no incidence of tennis elbow in professional tabla players.

Limitation of Study

Sample size of the study is very low.

Variables

Dependent Variable: VAS

This study is an observational study.

Sample selection: Convenient sample of 50 subjects, according to the inclusion and exclusion criteria, randomly assigned into one group include in the study. This study was conducted in Swarsangam school of music, Saraswati music

academy, Shri Sai music academy Moradabad and Cultural department of Swami Vivekanand Subharti University, Meerut (Uttar Pradesh).

Inclusion Criteria

Professional tabla players who give at least twice a week stage program of minimum two hours or players who have routine of playing tabla of minimum one hour constant.

Exclusion Criteria

Players suffering from any previous injury to upper limb.

Tools used in study

Questionnaire form

Visual Analogue Scale

Stationary (pen, paper)

Stop watch

Procedure

The subjects are found by snow ball method. Their interview was taken by research fellow. Subjects for research purpose were selected using inclusion and exclusion criteria. According to the VAS, Tennis Elbow Test and questionnaire, the data of the pain, swelling, tenderness and redness, before and after playing the tabla then the data of reoccurrence was collected and table of selected variants was prepared and sorting of data was done. Then the data was analyzed by using SPSS and the value of χ^2 test was collected and the significance of p-value was checked and results were prepared.

Data Analysis

All analysis was obtained using SPSS version 13.0 (For window 7). Demo graphic data of the patients including sign and symptoms were summarized. The dependent variable for the statistical analysis was VAS. A base line data was taken and analyze. The **χ^2 -test** was used. A level of **0.05** was used to determine the statistical significance.

Result

Table 1:

	PS		PE		PW		PF	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
NO	45	90.0	43	86.0	22	44.0	29	58.0
YES	5	10.0	7	14.0	28	56.0	21	42.0
Total	50	100.0	50	100.0	50	100.0	50	100.0

χ^2 - VALUE = 34.79, P- VALUE = < 0.0001

The result of Table 1 and Graph 1 shows that 10.0%, 14.0%, 56.0% and 42.0% subjects had the pain at shoulder, elbow, wrist and fingers respectively

after playing table. According to these values the Chi-Square value is 34.79 and P- value is <0.0001.

Table 2:

	SS		SE		SW		SF	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
NO	50	100.0	49	98.0	48	96.0	39	78.0
YES	0	0.0	1	2.0	2	4.0	11	22.0
Total	50	100.0	50	100.0	50	100.0	50	100.0

χ^2 - VALUE = 23.65, P- VALUE = < 0.0001

Table 3:

	TS		TE		TW		TF	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
NO	49	98.0	48	96.0	46	92.0	43	86.0
YES	1	2.0	2	4.0	4	8.0	7	14.0
Total	50	100.0	50	100.0	50	100.0	50	100.0

χ^2 - VALUE = 6.45, P- VALUE = 0.0916

Table 4:

	RS		RE		RW		RF	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
NO	50	100.0	48	96.0	46	92.0	19	38.0
YES	0	0.0	2	4.0	4	8.0	31	62.0
Total	50	100.0	50	100.0	50	100.0	50	100.0

χ^2 - VALUE = 84.72, P- VALUE = < 0.0001

Fig. 1:

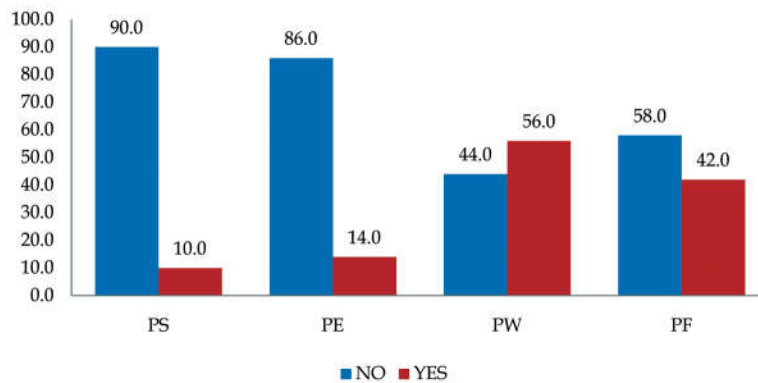
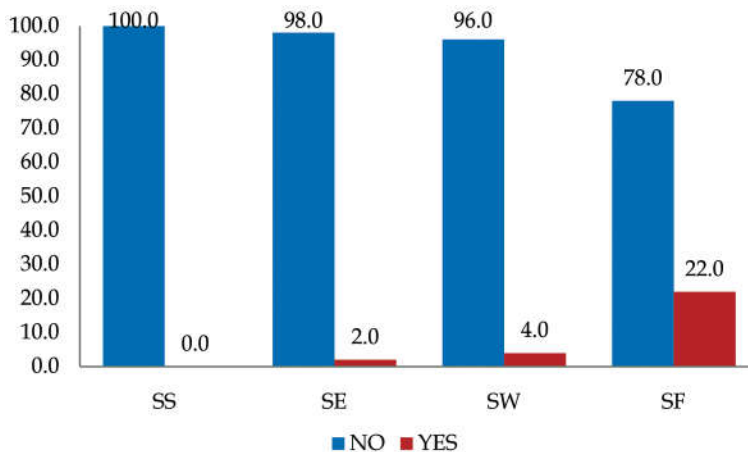


Fig. 2:



The result of Table 2 and Graph 2 shows that 0.0%, 2.0%, 4.0% and 22.0% subjects had the swelling at shoulder, elbow, wrist and fingers respectively after playing tabla. According to these values the Chi-Square value is 23.65 and P- value is <0.0001.

The result of Table 3 and Graph 3 shows that 2.0%, 4.0%, 8.0% and 14.0% subjects had the tenderness at shoulder, elbow, wrist and fingers

respectively after playing tabla. According to these values the Chi-Square value is 6.45 and P- value is 0.0916.

The result of Table 4 and Graph 4 shows that 0.0%, 4.0%, 8.0% and 62.0% subjects had the redness at shoulder, elbow, wrist and fingers respectively after playing tabla. According to these values the Chi-Square value is 84.72 and P- value is <0.0001.

Fig. 3:

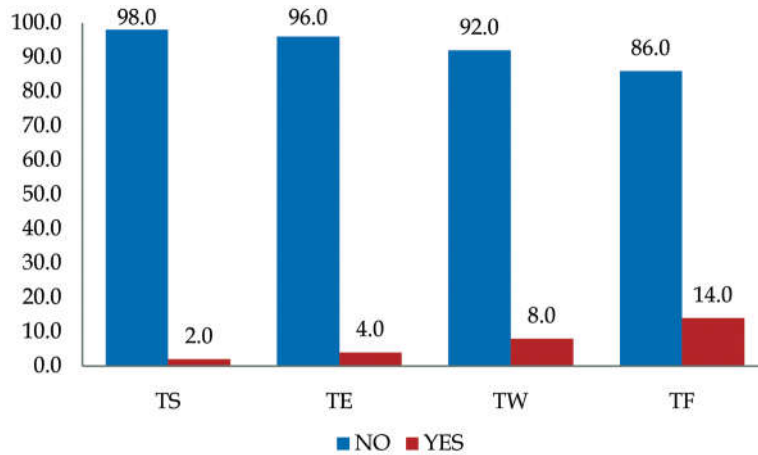
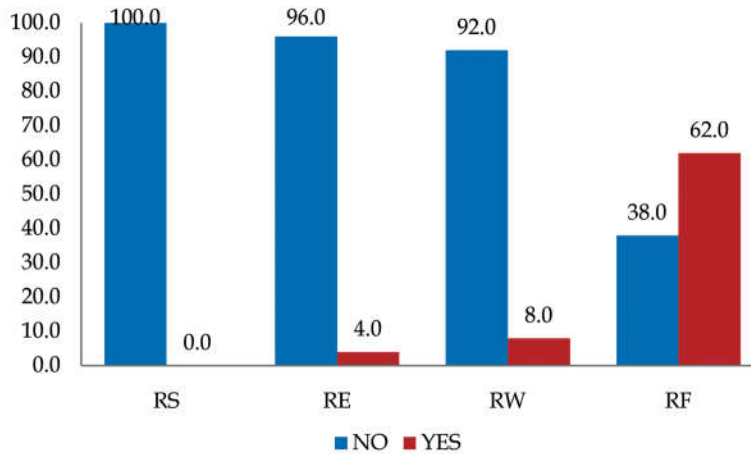


Fig. 4:



Discussion

The result of Table 1 and Graph 1 shows that 10.0%, 14.0%, 56.0% and 42.0% subjects had the pain at shoulder, elbow, wrist and fingers respectively after playing tabla. According to these values the Chi-Square value is 34.79 and P- value is <0.0001.

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tenderness at shoulder, elbow, wrist and fingers respectively after playing tabla. According to these values the Chi-Square value is 6.45 and P- value is 0.0916.

The result of Table 4 and Graph 4 shows that 0.0%, 4.0%, 8.0% and 62.0% subjects had the redness at shoulder, elbow, wrist and fingers respectively after playing tabla. According to these values the Chi-Square value is 84.72 and P- value is <0.0001.

During playing tabla, the repetitive percussion movements of fingers on the tabla is responsible for it. It also leads to redness in the fingers and the results show 62.0% occurrence of the same. If pain in fingers is neglected and repetitive striking is continued, it can lead to swelling and tenderness. The result show

22.0% and 14.0% occurrence respectively. It can be due to wrong playing pattern also.

Wrist joint is most susceptible joint to pain as the results show 56.0% occurrence of it. Continuous movements of the wrist during tabla playing is responsible for that. Repeated stress can cause swelling, redness and tenderness to the wrist joint. The incidence of their occurrence are 4.0% , 8.0% and 8.0% respectively in research result.

Result show 14.0% and 10.0% occurrence of pain at elbow and shoulder joint respectively. The reason behind that can be sustained position for a long time or wrong playing pattern. There is no evidence of swelling and redness at shoulder joint while there is 2.0% and 4.0% swelling and redness is present at elbow joint after playing table. There is 4.0% and 2.0% occurrence of tenderness on elbow and shoulder joint respectively according to the result. This can be due to over stress

Intensity of pain is not very high commonly. Most of the cases have reported score of 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 on the VAS. Their occurrence 26%, 6.0%, 14.0%, 16.0%, 4.0%, 18.0%, 6.0%, 6.0%, 2.0% and 2.0% respectively which indicates unbearable or very high intensity pain is less common among professional tabla players.

Recurrence of pain is common in 48% subjects which indicates repetitive stress on upper limb structures in professional tabla players.

It was predicted in the research before collecting data that there can be high incidence of tennis elbow in professional tabla players as there is over use of

wrist extensors during playing tabla. Inflammation at common extensor origin can take place due to it. But the result show only 48% incidence of tennis elbow. So it can be assumed that tabla players are not much susceptible to tennis elbow.

Conclusion

There is very less incidence of tennis elbow in professional tabla players. Wrist and fingers pain as well as redness in fingers are the common complaints among professional tabla players.

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