Profile of patients undergoing treatment for epicondylitis

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Abstract

Introduction: Lateral epicondylitis or tennis elbow is one of the most common disorders affecting the upper extremity. The incidence of Lateral epicondylitis is 1%-3% in the general population while prevalence of up of 10% has been reported among working people aged over 45 years old with high risk jobs.

Methodology: Patients presented to the O.P.D or emergency services was recruited for the study after fulfilling the selection criteria and was accordingly followed up. Before recruiting a patient, informed written consent was taken from the patient.

Results: Out of the 60 patients, 55(91.6%) patients have tennis elbow on right side and 5(8.3%) patients on the left side.

Conclusion: In our study, the most common mode of injury was repeated stress and sudden trauma.

Keywords: epicondylitis, tennis elbow, injury

Introduction

Extensor tendinitis or lateral humeral epicondylitis was first described in Germany by Runge in 1873 [1]. Tennis elbow was first described in 1883 by Major [2] as a condition causing lateral elbow pain in tennis players. Over the years, this term has become synonymous with all lateral elbow pain, despite the fact that the condition is most often work-related and many patients who have this condition do not play tennis [3].

Lateral epicondylitis or tennis elbow is one of the most common disorders affecting the upper extremity. The incidence of Lateral epicondylitis is 1%-3% in the general population while prevalence of up of 10% has been reported among working people aged over 45 years old with high risk jobs (strenuous for the arms) [4]. It occurs with a frequency of seven to 10 times to that medical epicondylitis [3].

Bernhardt [5], is credited with the first description of the condition; he thought it was neuralgia, there were other contribution up to about 1910, when the subject received consideration by a number of German writers (Vulliet [6], Franke [7], Momburg [8], Bernhardt [9]) who attributed the cause to neuralgia, periostitis, involvement of the capsule of the joint or a strain. Further studies were made by Coues [10] in 1914, and Dubs [11] in 1920, both of whom reviewed the literature, and by Carp [12] in 1921. Schmitt [13], reported a case of calcified radiohumeral bursitis in which he performed an operation.

Cyriax (1954) [14] pointed out that since the tenderness in tennis elbow is most frequently situated in the region of the epicondyle, the fault is more likely to lie in the short radial extensor which arises mainly from this epicondyle, than in the long extensor which arises more proximally along the lateral epicondylar ridge. Garden, states that the most popular concept of the lesion today is a tear between the common extensor origin and the underlying periosteum. Such a lesion could cause pain during the contraction of any or all of the muscles which arises from the common extensor origin. He concluded that it is the unique attachment of the extensor carpi radialis brevis to the lateral collateral ligament, which in turn inserts into the orbicular ligament is believed to play a significant role in tennis elbow.

Methodology:

Study design: Prospective Case Series

Study population: Patients presented to the O.P.D or emergency services was recruited for the study after fulfilling the selection criteria and was accordingly followed up. Before
Recruiting a patient, informed written consent was taken from the patient.

Sample Size and Method of Calculation: A minimum of 30 patients each for single injection and peppered injection technique were included in the sample.

Selection Criteria
Inclusion criteria
1. Adult patients of either sex >18yr old.
2. Symptomatic lateral epicondylitis.
3. Patients with lateral epicondylitis not responding to ultrasonic / LASER therapy.

Exclusion criteria:
1. Patients younger than 18yrs.
2. Patients who had received >3 injections to that elbow in <6 months.
3. History of trauma to the elbow
4. Evidence of neurologic source of pain (radial nerve entrapment or cervical radiculopathy)
5. Intra-articular pathology (Osteochondritis Dissecans, Osteo or Inflammatory arthritis, Posteriorlateral rotatory instability or Plica).
6. Infective pathology of the elbow like tuberculosis.
7. Lytic pathology of the elbow and benign tumors of elbow.
   All patients included in the study were evaluated thoroughly using detailed history and complete physical examination with special emphasis on treatment taken so far.

Initial workup
1. Routine blood investigations including ESR, RA factor, HLA B27 if required.
2. Good quality X-Ray elbow AP & Lat view.
3. Non contrast M.R.I.

Results

Table 1: Patients Divided In 2 Groups.

<table>
<thead>
<tr>
<th>Site</th>
<th>No. Of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>30</td>
</tr>
<tr>
<td>Peppered</td>
<td>30</td>
</tr>
</tbody>
</table>

60 patients between 18-65 years of age with clinical diagnosis of lateral epicondylitis were included in the study, who underwent steroid injection 30 patients each for single injection and peppered injection technique.

Table 2: Age-Wise Distribution of Study Population

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-30</td>
<td>13</td>
<td>21.6</td>
</tr>
<tr>
<td>31-40</td>
<td>20</td>
<td>33.3</td>
</tr>
<tr>
<td>41-50</td>
<td>19</td>
<td>31.6</td>
</tr>
<tr>
<td>51-60</td>
<td>8</td>
<td>13.3</td>
</tr>
</tbody>
</table>

Average mean age of patients was 33.7 (range 18-65) years

Table 3: Gender Wise Distribution

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td>Female</td>
<td>47</td>
<td>78</td>
</tr>
</tbody>
</table>

Out of the 60 patients in the study, 13(21.6) were male, and 47(78.3%) were female.

Table 4: Mode of Injury

<table>
<thead>
<tr>
<th>Injury</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repeated Stress</td>
<td>52</td>
<td>86.6</td>
</tr>
<tr>
<td>Sudden Trauma</td>
<td>8</td>
<td>13.3</td>
</tr>
</tbody>
</table>

In our study, the most common mode of injury was repeated stress 52(86.6) and sudden trauma 8(13.3).

Table 5: Site of Injury

<table>
<thead>
<tr>
<th>Site</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right</td>
<td>55</td>
<td>91.6</td>
</tr>
<tr>
<td>Left</td>
<td>5</td>
<td>8.3</td>
</tr>
</tbody>
</table>

Out of the 60 patients, 55(91.6%) patients have tennis elbow on right side and 5(8.3%) patients on the left side.

Discussion
The mean age of our patients was 39.5 years for single injection group and 37.7 years for peppered injection group. The range was 21-60 years. 30 patients each were taken for single and peppered injection technique. In single injection group, 16.7% of the patients (n=5) were between 21-30 years, 33.3% (n=10) were in the age group 31-40 years, 36.7% (n=11) of the patients were in the age group 41-50 years while the rest 13.3% (n=4) were in the age group of 51-60 years. In peppered injection group, 26.7% of the patients (n=8) were in the age group of 21-30 years, 33.3% (n=10) were in the age group of 31-40 years, 26.7% (n=8) were in the age group of 41-50 years, 13.3% (n=4) were in the age group of 51-60 years. Maximum number of patients were between 31-40 years of age group. T. Kaleli et al [15] (Mean age= 45.2 years, range= 32-58 years), P. D. Dunkow et al [16], (Mean age=46 years, range 32-58 years), Faizal Rayan et al [17], (Mean age= 43.7 years, range= 31-60 years).

Conclusion
It is an affliction of the middle aged and occurs in the productive, working years typically in 4th or 5th decade of life.
and without predilection with regard to sex

References